La télémédecine

L'expérience des patients et des professionnels de santé en télésurveillance

Bibliographie thématique

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Centre de documentation de l'Irdes

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Synthèses & Bibliographies

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Problématique

La télémédecine a permis depuis le début des années 1990 le suivi des femmes enceintes isolées, l'appui de spécialistes aux médecins généralistes, ainsi que l'amélioration du suivi des patients hypertendus et des dialysé. La loi relative à l'assurance maladie du 13 août 2004 la mentionne comme un acte à distance. En 2009, la loi portant réforme de l'hôpital et relative aux patients, à la santé et aux territoires (loi HPST) définit le mot télémédecine comme « une forme de pratique médicale à distance utilisant les technologies de l'information et de la communication »et le décret n° 2010-1229 du 19 octobre 2010 introduit les termes suivants :

-   Téléconsultation : un médecin donne une consultation à distance (via des outils sécurisés) ;
-   Télé-expertise : un médecin sollicite à distance l'avis d'un ou de plusieurs confrères ;
-   Télésurveillance médicale : un médecin surveille à distance les paramètres médicaux d'un patient ;
-   Téléassistance médicale : un médecin assiste à distance un autre professionnel de santé au cours de la réalisation d'un acte ;
-   Régulation médicale : réponse médicale apportée dans le cadre de l'activité des centres 15.

Depuis la loi de financement de la sécurité sociale pour 2014, des expérimentations de la télémédecine ont été lancées dans différentes régions françaises. L'année 2018 marque un pas nouveau avec le basculement dans un financement de droit commun des actes de téléconsultation (TLC) et de télé expertise (TLE) par accord conventionnel entre l'Assurance Maladie et les syndicats de médecins. La téléconsultation s'inscrit dans le respect du parcours de soins coordonné, le patient doit être connu du médecin depuis 12 mois et donner son consentement à la TLC. La TLE quant à elle est réservée jusqu'à fin 2020, aux patients pour lesquels l'accès aux soins doit être facilité au regard de leur état de santé ou de leur situation géographique. Enfin, le projet de loi d'organisation et de transformation du système de santé 2019 prévoit d'étendre le télé soin à d'autres professions de santé : pharmaciens d'officine, auxiliaires médicaux. En mars 2019, la Caisse nationale d'assurance maladie (Cnam) a établi un premier bilan à six mois des téléconsultations[1].

L'objectif de cette bibliographie est de recenser de la littérature scientifique portant sur l'expérience des patients et des professionnels de santé dans le domaine de la télémédecine, et plus particulièrement de la télésurveillance. Les recherches bibliographiques ont été effectuées sur les bases de données et portails suivants : Medline, Science direct et Web of science, sur la période allant de 2013 à mars 2019. Les références sont accompagnées de résumés et classées par ordre alphabétique d'auteurs. Cette bibliographie ne prétend pas à l'exhaustivité.

Les mots clés principalement interrogés pour cette recherche sont les suivants : telemedicine, telemonitoring, telehealth, tele homecare, remote monitoring, self monitoring, self care… patient participation, patient preference, patient compliance, patient engagement, patient experience, patient involvement, patient perception, patient use, disease management, chronic diseases, attitude of health personnel, physicians, qualitative research or qualitative studies.

Les dates clefs de la télémédecine en France

Loi n° 2004-810 relative à l'assurance maladie du 13 août 2004 : la télémédecine est définie comme un acte à distance dans l'article 32.

Loi Hôpital Patients Santé et Territoire (HPST) n° 2009-879 du 21 juillet 2009 : la télémédecine est définie comme une pratique médicale à distance faisant intervenir au moins un médecin.

Décret n° 2010-1229 du 19 octobre 2010 : il précise sa définition et sa mise en oeuvre. Cinq types d'actes sont mentionnés : la téléconsultation, la télé-expertise, la télésurveillance médicale, la téléassistance médicale et la réponse médicale apportée dans le cadre de la régulation médicale des urgences et de la permanence de soins.

Loi n° 2013-1203 de financement de la sécurité sociale pour 2014 du 23 décembre 2013 prévoit la mise en place d'expérimentations de financement dérogatoire de la télémédecine (téléconsultation, télé-expertise et télésurveillance) dans neuf régions (Article 36).

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[1] Communiqué de presse de la Cnam, 26 mars 2019

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Loi n° 2016-1827 du 23 décembre 2016 de financement de la sécurité sociale pour 2017: elle proroge d'un an le financement des expérimentations et acte leur élargissement à l'ensemble du territoire.

Loi n° 2017-1836 du 30 décembre 2017 de financement de la sécurité sociale pour 2018 : l'article 54 bascule le financement de la télémédecine dans le droit commun de la sécurité sociale (tarification conventionnelle).

Avenant n° 6 à la convention nationale des médecins du 14 juin 2018 : il fixe les modalités de mise en oeuvre et de tarification de la télémédecine (actes de téléconsultation et de télé-expertise).

Décret n° 2018-788 du 13 septembre 2018 : il fixe les modalités de la mise en oeuvre des activités de la télémédecine et poursuit les expérimentations dans le domaine de la télésurveillance.

Arrêté du 27 octobre 2018 : il proroge pour quatre ans les expérimentations de télésurveillance pour cinq pathologies (diabète, prothèse cardiaque implantable, insuffisance rénale, cardiaque ou respiratoire chroniques).

Projet de loi d'organisation et de transformation du système des ante 2019 (version adoptée le 20 juin 2019 par la Commission mixte paritaire du Sénat) : l'article 13 définit le télé soin comme pratique de soin à distance utilisant les technologies de l'information et de la communication qui met en rapport un ou plusieurs pharmaciens ou auxiliaires médicaux en complément de la télémédecine réservée aux professions médicales.

Arrêté du 14 juin 2019 relatif à l'expérimentation pour la prise en charge par la télésurveillance du diabète gestationnel.

L'expérience des patients

Abdullah, A., Liew, S. M., Hanafi, N. S., et al. (2016). "What influences patients' acceptance of a blood pressure telemonitoring service in primary care? A qualitative study." Patient Preference and Adherence **10**: 99-106.

> Background: Telemonitoring of home blood pressure (BP) is found to have a positive effect on BP control. Delivering a BP telemonitoring service in primary care offers primary care physicians an innovative approach toward management of their patients with hypertension. However, little is known about patients' acceptance of such service in routine clinical care. Objective: This study aimed to explore patients' acceptance of a BP telemonitoring service delivered in primary care based on the technology acceptance model (TAM). Methods: A qualitative study design was used. Primary care patients with uncontrolled office BP who fulfilled the inclusion criteria were enrolled into a BP telemonitoring service offered between the period August 2012 and September 2012. This service was delivered at an urban primary care clinic in Kuala Lumpur, Malaysia. Twenty patients used the BP telemonitoring service. Of these, 17 patients consented to share their views and experiences through five in-depth interviews and two focus group discussions. An interview guide was developed based on the TAM. The interviews were audio-recorded and transcribed verbatim. Thematic analysis was used for analysis. Results: Patients found the BP telemonitoring service easy to use but struggled with the perceived usefulness of doing so. They expressed confusion in making sense of the monitored home BP readings. They often thought about the implications of these readings to their hypertension management and overall health. Patients wanted more feedback from their doctors and suggested improvement to the BP telemonitoring functionalities to improve interactions. Patients cited being involved in research as the main reason for their intention to use the service. They felt that patients with limited experience with the internet and information technology, who worked out of town, or who had an outdoor hobby would not be able to benefit from such a service. Conclusion: Patients found BP telemonitoring service in primary care easy to use but needed help to interpret the meanings of monitored BP readings. Implementations of BP telemonitoring service must tackle these issues to maximize the patients' acceptance of a BP telemonitoring service.

Albert, N. M., Dinesen, B., Spindler, H., et al. (2017). "Factors associated with telemonitoring use among patients with chronic heart failure." J Telemed Telecare **23**(2): 283-291.

> Background In adults with chronic heart failure (HF; defined as people with previously diagnosed left ventricular dysfunction) telemonitoring randomized controlled trials (RCTs) failed to consistently

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demonstrate improved clinical outcomes. We aimed to examine if patient and HF characteristics are associated with device preferences and use. Methods Using a cross-sectional, multicenter, international design, ambulatory and hospitalized adults with HF in Ohio, California, and Denmark viewed a six-minute video of telemonitoring configurations (tablet, smart phone, and key fob) and completed questionnaires. Comparative analyses were performed and when significant, pairwise comparisons were performed using Bonferroni-adjusted significance levels. Results Of 206 participants, 48.2% preferred smart phones for telemonitoring, especially when traveling (54.8%), with new/worsening symptoms (50%), for everyday use (50%), and connecting with doctors (48.5%). Participants preferred two-way communication and a screen with words over voice or number pads. Of device purposes, allowing for nurse communication ranked highest, followed by maintaining overall health. Very few patient and HF factors were associated with device preferences. Patients with higher health literacy (p = 0.007), previous/current device use history (p = 0.008), higher education level (p = 0.035), and married/cohabitating status (p = 0.023) had higher perceptions of ease of using devices. Those who were asymptomatic or had mild HF had higher self-confidence for health devices (p = 0.024) and non-white patients perceived devices as more useful (p = 0.033). Conclusion Telemonitoring use may be enhanced by simple plug-and-play type devices, two-way communication, and features that meet patients' personal learning and use needs.

Ancker, J. S., Witteman, H. O., Hafeez, B., et al. (2015). ""You Get Reminded You're a Sick Person": Personal Data Tracking and Patients With Multiple Chronic Conditions." J Med Internet Res **17**(8): e202.

BACKGROUND: Consumer health information technologies (HIT) that encourage self-tracking, such as diet and fitness tracking apps and disease journals, are attracting widespread interest among technology-oriented consumers (such as "quantified self" advocates), entrepreneurs, and the health care industry. Such electronic technologies could potentially benefit the growing population of patients with multiple chronic conditions (MCC). However, MCC is predominantly a condition of the elderly and disproportionately affects the less affluent, so it also seems possible that the barriers to use of consumer HIT would be particularly severe for this patient population. OBJECTIVE: Our aim was to explore the perspectives of individuals with MCC using a semistructured interview study. Our research questions were (1) How do individuals with MCC track their own health and medical data? and (2) How do patients and providers perceive and use patient-tracked data? METHODS: We used semistructured interviews with patients with multiple chronic diseases and providers with experience caring for such patients, as well as participation in a diabetes education group to triangulate emerging themes. Data were analyzed using grounded theory and thematic analysis. Recruitment and analysis took place iteratively until thematic saturation was reached. RESULTS: Interviews were conducted with 22 patients and 7 health care providers. The patients had an average of 3.5 chronic conditions, including type 2 diabetes, heart disease, chronic pain, and depression, and had regular relationships with an average of 5 providers. Four major themes arose from the interviews: (1) tracking this data feels like work for many patients, (2) personal medical data for individuals with chronic conditions are not simply objective facts, but instead provoke strong positive and negative emotions, value judgments, and diverse interpretations, (3) patients track for different purposes, ranging from sense-making to self-management to reporting to the doctor, and (4) patients often notice that physicians trust technologically measured data such as lab reports over patients' self-tracked data. CONCLUSIONS: Developers of consumer health information technologies for data tracking (such as diet and exercise apps or blood glucose logs) often assume patients have unlimited enthusiasm for tracking their own health data via technology. However, our findings potentially explain relatively low adoption of consumer HIT, as they suggest that patients with multiple chronic illnesses consider it work to track their own data, that the data can be emotionally charged, and that they may perceive that providers do not welcome it. Similar themes have been found in some individual chronic diseases but appeared more complex because patients often encountered "illness work" connected to multiple diseases simultaneously and frequently faced additional challenges from aging or difficult comorbidities such as chronic pain, depression, and anxiety. We suggest that to make a public health impact, consumer HIT developers should engage creatively with these pragmatic and emotional issues to reach an audience that is broader than technologically sophisticated early adopters. Novel technologies are likely to be successful only if they clearly reduce patient inconvenience and burden, helping them to accomplish their "illness work" more efficiently and effectively.

Anderson, K., Burford, O. et Emmerton, L. (2016). "Mobile Health Apps to Facilitate Self-Care: A Qualitative Study of User Experiences." PLoS One **11**(5): e0156164.

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OBJECTIVE: Consumers are living longer, creating more pressure on the health system and increasing their requirement for self-care of chronic conditions. Despite rapidly-increasing numbers of mobile health applications ('apps') for consumers' self-care, there is a paucity of research into consumer engagement with electronic self-monitoring. This paper presents a qualitative exploration of how health consumers use apps for health monitoring, their perceived benefits from use of health apps, and suggestions for improvement of health apps. MATERIALS AND METHODS: 'Health app' was defined as any commercially-available health or fitness app with capacity for self-monitoring. English-speaking consumers aged 18 years and older using any health app for self-monitoring were recruited for interview from the metropolitan area of Perth, Australia. The semi-structured interview guide comprised questions based on the Technology Acceptance Model, Health Information Technology Acceptance Model, and the Mobile Application Rating Scale, and is the only study to do so. These models also facilitated deductive thematic analysis of interview transcripts. Implicit and explicit responses not aligned to these models were analyzed inductively. RESULTS: Twenty-two consumers (15 female, seven male) participated, 13 of whom were aged 26-35 years. Eighteen participants reported on apps used on iPhones. Apps were used to monitor diabetes, asthma, depression, celiac disease, blood pressure, chronic migraine, pain management, menstrual cycle irregularity, and fitness. Most were used approximately weekly for several minutes per session, and prior to meeting initial milestones, with significantly decreased usage thereafter. Deductive and inductive thematic analysis reduced the data to four dominant themes: engagement in use of the app; technical functionality of the app; ease of use and design features; and management of consumers' data. CONCLUSIONS: The semi-structured interviews provided insight into usage, benefits and challenges of health monitoring using apps. Understanding the range of consumer experiences and expectations can inform design of health apps to encourage persistence in self-monitoring.

Apolinario-Hagen, J., Menzel, M., Hennemann, S., et al. (2018). "Acceptance of Mobile Health Apps for Disease Management Among People With Multiple Sclerosis: Web-Based Survey Study." JMIR Form Res **2**(2): e11977.

BACKGROUND: Mobile health (mHealth) apps might have the potential to promote self-management of people with multiple sclerosis (MS) in everyday life. However, the uptake of MS apps remains poor, and little is known about the facilitators and barriers for their efficient utilization, such as technology acceptance. OBJECTIVE: The aim of this study was to examine the acceptance of mHealth apps for disease management in the sense of behavioral intentions to use and explore determinants of utilization among people with MS based on the Unified Theory of Acceptance and Use of Technology (UTAUT). METHODS: Participants for this Web-based cross-sectional study were recruited throughout Germany with the support of regional MS associations and self-help groups. To identify determinants of intention to use MS apps, a measure based on the UTAUT was adapted with 4 key determinants (performance expectancy, effort expectancy, social influence, and facilitating conditions) and extended by Intolerance of Uncertainty (IU) and electronic health literacy. Potential influencing effects of both MS and computer self-efficacy (C-SE) as mediators and fatigue as a moderator were analyzed using Hayes's PROCESS macro (SPSS version 3.0) for IBM SPSS version 24.0. RESULTS: A total of 98 participants (mean age 47.03 years, SD 10.17; 66/98, 67% female) with moderate fatigue levels completed the survey. Although most participants (91/98, 92%) were daily smartphone users, almost two-thirds (62/98, 63%) reported no experience with MS apps. Overall, the acceptance was moderate on average (mean 3.11, SD 1.31, minimum=1 and maximum=5), with lower scores among persons with no experience (P=.04) and higher scores among current users (P<.001). In multiple regression analysis (R(2)=63% variance explained), performance expectancy (beta=.41) and social influence (beta=.33) were identified as significant predictors of acceptance (all P<.001). C-SE was confirmed as a partial mediator in the relationship between IU and acceptance (indirect effect: B=-.095, 95% CI -0.227 to -0.01). Furthermore, a moderated mediation by C-SE was shown in the relationship between IU and behavioral intentions to use MS apps for low (95% CI -0.42 to -0.01) and moderate levels (95% CI -0.27 to -0.01) of fatigue. CONCLUSIONS: Overall, this exploratory pilot study indicates for the first time that positive expectations about the helpfulness for self-management purposes and social support might be important factors to be considered for improving the acceptance of MS apps among smartphone users with MS. However, given some inconsistent findings, especially regarding the role of effort expectancy and IU and self-efficacy, the conceptual model needs replication with a larger sample of people with MS, varying more in fatigue levels, and a longitudinal assessment of the actual usage of MS apps predicted by acceptance in the sense of behavioral intentions to use.

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Barello, S., Triberti, S., Graffigna, G., et al. (2015). "eHealth for Patient Engagement: A Systematic Review." Front Psychol **6**: 2013.

> eHealth interventions are recognized to have a tremendous potential to promote patient engagement. To date, the majority of studies examine the efficacy of eHealth in enhancing clinical outcomes without focusing on patient engagement in its specificity. This paper aimed at reviewing findings from the literature about the use of eHealth in engaging patients in their own care process. We undertook a comprehensive literature search within the peer-reviewed international literature. Eleven studies met the inclusion criteria. eHealth interventions reviewed were mainly devoted to foster only partial dimensions of patient engagement (i.e., alternatively cognitive, emotional or behavioral domains related to healthcare management), thus failing to consider the complexity of such an experience. This also led to a great heterogeneity of technologies, assessed variables and achieved outcomes. This systematic review underlines the need for a more holistic view of patient needs to actually engage them in eHealth interventions and obtaining positive outcomes. In this sense, patient engagement constitute a new frontiers for healthcare models where eHealth could maximize its potentialities.

Bar-Shai, A., Rotem-Green, M. et Gross, N. (2017). "A small-scale trial of home telemonitoring in patients with COPD-The Israeli patient experience." European Respiratory Journal **50**: 1.
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Bastiaansen, J. A., Meurs, M., Stelwagen, R., et al. (2018). "Self-monitoring and personalized feedback based on the experiencing sampling method as a tool to boost depression treatment: a protocol of a pragmatic randomized controlled trial (ZELF-i)." BMC Psychiatry **18**(1): 276.

> BACKGROUND: Depression is a leading cause of disability worldwide. To reduce the societal burden and improve quality of life for individual patients, treatments for depression need to be optimized. There is a particular need for person-tailored interventions that reinforce self-management of patients. Systematic self-monitoring and personalized feedback through the Experience Sampling Method (ESM) could provide such a person-tailored, empowering intervention that enhances treatment outcomes. The primary aim of this study is to investigate the efficacy of self-monitoring and personalized feedback as an add-on tool in the treatment of depressive complaints in a natural setting. METHODS: The ZELF-i study is a pragmatic multi-site randomized controlled trial (RCT). We aim to recruit 150 individuals with depressive symptoms aged between 18 and 65 years, who have an intake for outpatient basic or specialized treatment at a mental health care organization in the North of the Netherlands. After the intake, participants will be randomly allocated to one of three study arms: two experimental groups engaging in 28 days of systematic self-monitoring (5 times per day) and receiving weekly personalized feedback on positive affect and activities ("Do"-module) or on negative affect and thinking patterns ("Think"-module), and a control group receiving no additional intervention. Self-report inventories of depressive symptoms, psychosocial functioning and feelings of empowerment will be administered before and after the intervention period, and at follow-up measurements at 1, 2, 3 and 6 months. The patient-experienced utility of the intervention will be investigated by a combination of quantitative and qualitative research methods. DISCUSSION: The present study is the first to examine the effects of add-on self-monitoring and personalized feedback on depressive complaints in clinical practice. It is also the first to evaluate two different ESM modules targeted at both of depression's core symptoms. Lastly, it is the first study that uses a combination of qualitative and quantitative methods to evaluate the patient-experienced utility of ESM with personalized feedback as an intervention for depression. Results of the present study may improve treatment for depression, if the intervention is found to be effective. TRIAL REGISTRATION: Dutch Trial Register, NTR5707 , registered prospectively 1 February 2016.

Bengtsson, U., Kjellgren, K., Hallberg, I., et al. (2018). "Patient contributions during primary care consultations for hypertension after self-reporting via a mobile phone self-management support system." Scand J Prim Health Care **36**(1): 70-79.

> OBJECTIVE: This paper reports on how the clinical consultation in primary care is performed under the new premises of patients' daily self-reporting and self-generation of data. The aim was to explore and describe the structure, topic initiation and patients' contributions in follow-up consultations after eight

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weeks of self-reporting through a mobile phone-based hypertension self-management support system. DESIGN: A qualitative, explorative study design was used, examining 20 audio- (n = 10) and video-recorded (n = 10) follow-up consultations in primary care hypertension management, through interaction analysis. Clinical trials registry: ClinicalTrials.gov NCT01510301. SETTING: Four primary health care centers in Sweden. SUBJECTS: Patients with hypertension (n = 20) and their health care professional (n = 7). RESULTS: The consultations comprised three phases: opening, examination and closing. The most common topic was blood pressure (BP) put in relation to self-reported variables, for example, physical activity and stress. Topic initiation was distributed symmetrically between parties and BP talk was lifestyle-centered. The patients' contributed to the interpretation of BP values by connecting them to specific occasions, providing insights to the link between BP measurements and everyday life activities. CONCLUSION: Patients' contribution through interpretations of BP values to specific situations in their own lives brought on consultations where the patient as a person in context became salient. Further, the patients' and health care professionals' equal contribution during the consultations showed actively involved patients. The mobile phone-based self-management support system can thus be used to support patient involvement in consultations with a person-centered approach in primary care hypertension management Key points The clinical consultation is important to provide opportunities for patients to gain understanding of factors affecting high blood pressure, and for health care professionals to motivate and promote changes in life-style. This study shows that self-reporting as base for follow-up consultations in primary care hypertension management can support patients and professionals to equal participation in clinical consultations. Self-reporting combined with increased patient-health care professional interaction during follow-up consultations can support patients in understanding the blood pressure value in relation to their daily life. These findings implicate that the interactive mobile phone self-management support system has potential to support current transformations of patients as recipients of primary care, to being actively involved in their own health.

Berrios-Thomas, S., Engel, R., McCall, J., et al. (2018). "Assessing Knowledge Regarding Managing Congestive Health Failure Symptoms: Differences in Patient and Professional Scores." J Patient Exp **5**(4): 289-295.

Objective: To assess whether patients with congestive heart failure (CHF) and health coaches agree about patient knowledge of health-enhancing practices related to CHF after ongoing telehealth coaching. Methods: Forty patients with CHF and eligible for both Medicare and Medicaid were recruited from a regional managed care organization for this pilot study. Telecoaching sessions via a health insurance portability and accountability act(HIPAA)-compliant tablet-based platform focused on educational information designed to improve patient self-care. Social workers administered the 13-item Member Confidence Measure at baseline and at 30 and 180 days into the intervention. Patients and social workers provided separate ratings. Results: As expected at baseline, patient and coach scores differed, with patients reporting higher perceived knowledge scores (P < .01). Contrary to expectation, patient and coach scores did not converge at 30 and 180 days. Patient scores continued to increase at 30 and 180 days, while coaches' scores increased at 30 days, but not at 180 days. Conclusion: Overall, patients continued to overrate their understanding about CHF. A telecoaching platform provides an opportunity to enhance patient's knowledge of their chronic disease and for patients to sustain that knowledge over time. Practice Implications: Addressing a patient's misperception of their knowledge to manage a chronic disease is critical for enhancing well-being. Coaches' scores did increase at 30 days suggesting that telecoaching is effective, but more monitoring may be required to ensure that these gains persist over time.

Bonner, A., Gillespie, K., Campbell, K. L., et al. (2018). "Evaluating the prevalence and opportunity for technology use in chronic kidney disease patients: a cross-sectional study." BMC Nephrol **19**(1): 28.

BACKGROUND: Chronic kidney disease (CKD) is increasing worldwide and early education to improve adherence to self-management is a key strategy to slow CKD progression. The use of the internet and mobile phone technologies (mHealth) to support patients is considered an effective tool in many other chronic disease populations. While a number of mHealth platforms for CKD exist, few studies have investigated if and how this population use technology to engage in self-management. METHODS: Using a cross-sectional design across five health districts in Queensland (Australia), a 38-item self-report survey was distributed to adults with CKD attending outpatient clinics or dialysis units to measure current use and type of engagement with mHealth, perceived barriers to use, and opportunities to support CKD self-

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management. Odds ratio (OR) were calculated to identify associations between demographic characteristic and mHealth use. RESULTS: Of the 708 participants surveyed, the majority had computer access (89.2%) and owned a mobile phone (83.5%). The most likely users of the internet were those aged </= 60 years (OR: 7.35, 95% confidence interval [CI]: 4.25-12.75, p < 0.001), employed (OR: 7.67, 95% CI: 2.58-22.78, p < 0.001), from non-indigenous background (OR: 6.98, 95% CI: 3.50-13.93, p < 0.001), or having completed higher levels of education (OR: 3.69, CI: 2.38-5.73, p < 0.001). Those using a mobile phone for complex communication were also younger (OR: 6.01, 95% CI: 3.55-10.19, p < 0.001), more educated (OR: 1.99, 95% CI: 1.29-3.18, p < 0.01), or from non-indigenous background (OR: 3.22, 95% CI: 1.58-6.55, p < 0.001). Overall, less than 25% were aware of websites to obtain information about renal healthcare. The mHealth technologies most preferred for communication with their renal healthcare teams were by telephone (56.5%), internet (50%), email (48.3%) and text messages (46%). CONCLUSION: In the CKD cohort, younger patients are more likely than older patients to use mHealth intensively and interactively although all patients' technology literacy ought to be thoroughly assessed by renal teams before implementing in practice. Further research testing mHealth interventions to improve self-management in a range of patient cohorts is warranted.

Bradford, N. K., Caffery, L. J. et Smith, A. C. (2015). "Awareness, experiences and perceptions of telehealth in a rural Queensland community." BMC Health Serv Res **15**: 10.
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Background: Telehealth can offer alternative options for receiving healthcare services in rural locations, improving access and reducing costs associated with traveling for services. However, the full potential of telehealth has not been realised with slow and fragmented uptake. This study describes the awareness, experiences and perceptions of telehealth in an Australian rural community. Methods: Semi-structured interviews were undertaken with 47 participants from three rural towns in the Darling Downs region of Queensland. Content analysis was used to abstract themes and core concepts from the interviews. Results: Three participants were healthcare providers who had all previously used telehealth in their clinical practice. Twenty-seven (57 %) participants regularly travelled to access specialist healthcare. While 28 (60 %) participants were aware of telehealth, only six (13 %) had actually used telehealth services; three as patients and three as healthcare providers. Major themes evident included: acceptance of the need to travel; paternalism and empowerment; and trust and misconceptions. Conclusions: For telehealth initiatives to be successful, there needs to be greater public awareness and understanding of the potential benefits of telehealth. Empowering patients as partners in the delivery of healthcare may be an important factor in the growth of telehealth services.

Brunton, L., Bower, P. et Sanders, C. (2015). "The Contradictions of Telehealth User Experience in Chronic Obstructive Pulmonary Disease (COPD): A Qualitative Meta-Synthesis." PLoS One **10**(10): e0139561.

OBJECTIVE: As the global burden of chronic disease rises, policy makers are showing a strong interest in adopting telehealth technologies for use in long term condition management, including COPD. However, there remain barriers to its implementation and sustained use. To date, there has been limited qualitative investigation into how users (both patients/carers and staff) perceive and experience the technology. We aimed to systematically review and synthesise the findings from qualitative studies that investigated user perspectives and experiences of telehealth in COPD management, in order to identify factors which may impact on uptake. METHOD: Systematic review and meta-synthesis of published qualitative studies of user (patients, their carers and clinicians) experience of telehealth technologies for the management of Chronic Obstructive Pulmonary Disease. ASSIA, CINAHL, Embase, Medline, PsychInfo and Web of Knowledge databases were searched up to October 2014. Reference lists of included studies and reference lists of key papers were also searched. Quality appraisal was guided by an adapted version of the CASP qualitative appraisal tool. FINDINGS: 705 references (after duplicates removed) were identified and 10 papers, relating to 7 studies were included in the review. Most authors of included studies had identified both positive and negative experiences of telehealth use in the management of COPD. Through a line of argument synthesis we were able to derive new insights from the data to identify three overarching themes that have the ability to either impede or promote positive user experience of telehealth in COPD: the influence on moral dilemmas of help seeking-(enables dependency or self-care); transforming interactions (increases risk or reassurance) and reconfiguration of 'work' practices (causes burden or empowerment). CONCLUSION: Findings from this meta-synthesis have implications for the

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future design and implementation of telehealth services. Future research needs to include potential users at an earlier stage of telehealth/service development.

Carland, J. E., Frensham, L. J., Nguyen, A. D., Day, R. O. et Baysari, M. T. (2018). "Patients' use of mobile health applications: what general practitioners think." Family Practice **36**(2): 214-218. https://doi.org/10.1093/fampra/cmy052

Chronic disease patients are adopting self-management techniques, such as using mobile health applications (apps). As GPs are the main caregivers of chronic disease patients, obtaining GP perspectives regarding patient use of mobile health apps is vital in understanding longer term value and feasibility of these apps.The aim was to determine GP perceptions of their current and potential roles in the use of health apps by their patients and how patient-focused apps affect patient management.Ten GPs participated in semi-structured, face-to-face interviews, which focused on their perceptions of, and involvement in, the use of patient-focused health apps. Interviews were transcribed verbatim and thematically analysed by two independent reviewers.GPs found that apps complemented their role in patient management as additional sources of medical information of their patients. They perceived that patient-focused apps would be part of their future practices; however they noted that further work was required to incorporate them into their current practices. Currently, the main role of GPs was in promoting apps to patients. Suggestions for further engagement in mobile health included regularly reviewing patient data entered into health apps during consultations.GPs view patient-focused health apps positively, particularly to support them in providing patient care. Discussing information recorded in apps during consultations and frequent promotion of apps are feasible ways to integrate apps into their current work practices. Further studies involving evaluations of apps in improving health care delivery and patient communication in general practice are required.

Casper, G. R., Brennan, P. F., Arnott Smith, C., et al. (2016). "Health@Home Moves All About the House!" Stud Health Technol Inform **225**: 173-177.

It is now well recognized that patients play an important and active role in self-care and disease management, and many of these activities happen in their homes. Information technologies to support such care might be better used if they were designed taking into account the physical context of the home and the health information management needs of the residents. We conducted home-based interviews of 20 adults including an extensive analysis of their personal health information management (PHIM) tasks. Here we present these task descriptions, locations of their performance, and distribution across space and time. Implications for the informatics community include accommodating the distributed nature of tasks in the design of consumer technologies.

Celler, B., Argha, A., Varnfield, M., et al. (2018). "Patient Adherence to Scheduled Vital Sign Measurements During Home Telemonitoring: Analysis of the Intervention Arm in a Before and After Trial." JMIR Med Inform **6**(2): e15.

BACKGROUND: In a home telemonitoring trial, patient adherence with scheduled vital signs measurements is an important aspect that has not been thoroughly studied and for which data in the literature are limited. Levels of adherence have been reported as varying from approximately 40% to 90%, and in most cases, the adherence rate usually dropped off steadily over time. This drop is more evident in the first few weeks or months after the start. Higher adherence rates have been reported for simple types of monitoring and for shorter periods of intervention. If patients do not follow the intended procedure, poorer results than expected may be achieved. Hence, analyzing factors that can influence patient adherence is of great importance. OBJECTIVE: The goal of the research was to present findings on patient adherence with scheduled vital signs measurements in the recently completed Commonwealth Scientific and Industrial Research Organisation (CSIRO) national trial of home telemonitoring of patients (mean age 70.5 years, SD 9.3 years) with chronic conditions (chronic obstructive pulmonary disease, coronary artery disease, hypertensive diseases, congestive heart failure, diabetes, or asthma) carried out at 5 locations along the east coast of Australia. We investigated the ability of chronically ill patients to carry out a daily schedule of vital signs measurements as part of a chronic disease management care plan over periods exceeding 6 months (302 days, SD 135 days) and explored different levels of adherence for different measurements as a function of age, gender, and supervisory models. METHODS: In this study, 113 patients forming the test arm of a Before and After Control Intervention (BACI) home telemonitoring trial

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were analyzed. Patients were required to monitor on a daily basis a range of vital signs determined by their chronic condition and comorbidities. Vital signs included noninvasive blood pressure, pulse oximetry, spirometry, electrocardiogram (ECG), blood glucose level, body temperature, and body weight. Adherence was calculated as the number of days during which at least 1 measurement was taken over all days where measurements were scheduled. Different levels of adherence for different measurements, as a function of age, gender, and supervisory models, were analyzed using linear regression and analysis of covariance for a period of 1 year after the intervention. RESULTS: Patients were monitored on average for 302 (SD 135) days, although some continued beyond 12 months. The overall adherence rate for all measurements was 64.1% (range 59.4% to 68.8%). The adherence rates of patients monitored in hospital settings relative to those monitored in community settings were significantly higher for spirometry (69.3%, range 60.4% to 78.2%, versus 41.0%, range 33.1% to 49.0%, P<.001), body weight (64.5%, range 55.7% to 73.2%, versus 40.5%, range 32.3% to 48.7%, P<.001), and body temperature (66.8%, range 59.7% to 73.9%, versus 55.2%, range 48.4% to 61.9%, P=.03). Adherence with blood glucose measurements (58.1%, range 46.7% to 69.5%, versus 50.2%, range 42.8% to 57.6%, P=.24) was not significantly different overall. Adherence rates for blood pressure (68.5%, range 62.7% to 74.2%, versus 59.7%, range 52.1% to 67.3%, P=.04), ECG (65.6%, range 59.7% to 71.5%, versus 56.5%, range 48.7% to 64.4%, P=.047), and pulse oximetry (67.0%, range 61.4% to 72.7%, versus 56.4%, range 48.6% to 64.1%, P=.02) were significantly higher in males relative to female subjects. No statistical differences were observed between rates of adherence for the younger patient group (70 years and younger) and older patient group (older than 70 years). CONCLUSIONS: Patients with chronic conditions enrolled in the home telemonitoring trial were able to record their vital signs at home at least once every 2 days over prolonged periods of time. Male patients maintained a higher adherence than female patients over time, and patients supervised by hospital-based care coordinators reported higher levels of adherence with their measurement schedule relative to patients supervised in community settings. This was most noticeable for spirometry. TRIAL REGISTRATION: Australian New Zealand Clinical Trials Registry ACTRN12613000635763; https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=364030&isReview= true (Archived by WebCite at http://www.webcitation.org/6xPOU3DpR).

Chang, C. P., Lee, T. T. et Mills, M. E. (2017). "Experience of Home Telehealth Technology in Older Patients With Diabetes." Comput Inform Nurs **35**(10): 530-537.

The incidence of diabetes, a common chronic disease among older adults, is increasing annually. The lack of blood glucose regulation can result in severe diabetes-related complications and substantial healthcare costs, making self-care programs specific to this population especially important. Combined with reduced numbers of healthcare professionals, the integration of healthcare and information technology and the older adults' adoption of telehealth services have become increasingly important. This study used a qualitative method to interview 18 older study participants who used a telehealth service. Subject perceptions and suggestions regarding using such a service for diabetes management were investigated. Content analysis was used to examine the interview data and determine the older patients' acceptance and perceived benefits of telehealth service. Four main themes emerged: (1) initial trial encouragement from the doctors, nurses, and financial incentives; (2) enhanced self-management capability through continuous device use for better outcomes; (3) ambivalent feelings regarding dependence on others for problem solving; and (4) consideration for continual technology use for an uncertain future. These results serve as a reference for promoting, assessing, and verifying telehealth models for older patients with diabetes.

Claborn, K. R., Meier, E., Miller, M. B., et al. (2018). "Improving adoption and acceptability of digital health interventions for HIV disease management: a qualitative study." Transl Behav Med **8**(2): 268-279.

Disease management remains a challenge for many people living with HIV (PLWH). Digital health interventions (DHIs) may assist with overcoming these challenges and reducing burdens on clinical staff; however, there is limited data regarding methods to improve uptake and acceptability of DHIs among PLWH. This qualitative study aimed to assess patient and provider perspectives on the use of DHIs and strategies to promote uptake among PLWH. Eight focus groups with patients (k = 5 groups; n = 24) and providers (k = 3 groups; n = 12) were conducted May through October of 2014. Focus groups (~90 min) followed a semi-structured interview guide. Data were analyzed using thematic analysis on three main themes: (a) perspectives towards the adoption and use of DHIs for HIV management; (b) perceptions of

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barriers and facilitators to patient usage; and (c) preferences regarding content, structure, and delivery. Analyses highlighted barriers and facilitators to DHI adoption. Patients and providers agreed that DHIs feel "impersonal" and "lack empathy," may be more effective for certain subpopulations, should be administered in the clinic setting, and should use multimodal delivery methods. Emergent themes among the providers included development of DHIs for providers as the target market and the need for culturally adapted DHIs for patient subpopulations. DHIs have potential to improve HIV management and health outcomes. DHIs should be developed in conjunction with anticipated consumers, including patients, providers, and other key stakeholders. DHIs tailored for specific HIV subpopulations are needed. Future studies should evaluate dissemination methods and marketing strategies to promote uptake.

Cottrell, E., Cox, T., O'Conne, P., et al. (2015). "Patient and professional user experiences of simple telehealth for hypertension medication reminders and smoking cessation: a service evaluation." BMJ Open **5**(3): 9.
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Objectives: To establish patient and professional user satisfaction with the Advice & Interactive Messaging (AIM) for Health programme delivered using a mobile phone-based, simple telehealth intervention, 'Florence'. Design: A service evaluation using data extracted from Florence and from a professional user electronic survey. Setting: 425 primary care practices across 31 Clinical Commissioning Groups in England. Participants: 3381 patients registered on 1 of 10 AIM protocols between March 2013 and January 2014 and 77 professional users. Intervention: The AIM programme offered 10 clinical protocols, in three broad groups: (1) hypertension diagnosis/monitoring, (2) medication reminders and (3) smoking cessation. Florence sent patients prompts to submit clinical information, educational messages and user satisfaction questions. Patient responses were reviewed by their primary healthcare providers. Primary outcome measures: Patients and professional user experiences of using AIM, and within this, Florence. Results: Patient activity using Florence was generally good at month 1 for the hypertension protocols (71-80%), but reduced over 2-3 months (31-60%). For the other protocols, patient activity was 0-39% at 3 months. Minimum target days of texting were met for half the hypertension protocols. 1707/2304 (74%) patients sent evaluative texts responded at least once. Among responders, agreement with the adapted friends and family statement generally exceeded preproject aspirations. Professional responders were generally positive or equivocal about the programme. Conclusions: Satisfaction with AIM appeared optimal when patients were carefully selected for the protocol; professional users were familiar with the system, the programme addressed a problem with the previous service delivery that was identified by users and users took an active approach to achieve clinical goals. However, there was a significant decrease in patients' use of Florence over time. Future applications may be optimised by identifying and addressing reasons for the waning use of the service and enhancing support during implementation of the service.

Cox, A., Lucas, G., Marcu, A., et al. (2017). "Cancer Survivors' Experience With Telehealth: A Systematic Review and Thematic Synthesis." J Med Internet Res **19**(1): e11.

BACKGROUND: Net survival rates of cancer are increasing worldwide, placing a strain on health service provision. There is a drive to transfer the care of cancer survivors-individuals living with and beyond cancer-to the community and encourage them to play an active role in their own care. Telehealth, the use of technology in remote exchange of data and communication between patients and health care professionals (HCPs), is an important contributor to this evolving model of care. Telehealth interventions are "complex," and understanding patient experiences of them is important in evaluating their impact. However, a wider view of patient experience is lacking as qualitative studies detailing cancer survivor engagement with telehealth are yet to be synthesized. OBJECTIVE: To systematically identify, appraise, and synthesize qualitative research evidence on the experiences of adult cancer survivors participating in telehealth interventions, to characterize the patient experience of telehealth interventions for this group. METHODS: Medline (PubMed), PsychINFO, Cumulative Index for Nursing and Allied Health Professionals (CINAHL), Embase, and Cochrane Central Register of Controlled Trials were searched on August 14, 2015, and March 8, 2016, for English-language papers published between 2006 and 2016. Inclusion criteria were as follows: adult cancer survivors aged 18 years and over, cancer diagnosis, experience of participating in a telehealth intervention (defined as remote communication or remote monitoring with an HCP delivered by telephone, Internet, or hand-held or mobile technology), and reporting qualitative data including verbatim quotes. An adapted Critical Appraisal Skill Programme (CASP) checklist for qualitative research was used to assess paper quality. The results section of each included article was coded line by line, and all papers underwent inductive analysis, involving comparison, reexamination, and grouping of codes to

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develop descriptive themes. Analytical themes were developed through an iterative process of reflection on, and interpretation of, the descriptive themes within and across studies. RESULTS: Across the 22 included papers, 3 analytical themes emerged, each with 3 descriptive subthemes: (1) influence of telehealth on the disrupted lives of cancer survivors (convenience, independence, and burden); (2) personalized care across physical distance (time, space, and the human factor); and (3) remote reassurance-a safety net of health care professional connection (active connection, passive connection, and slipping through the net). Telehealth interventions represent a convenient approach, which can potentially minimize treatment burden and disruption to cancer survivors' lives. Telehealth interventions can facilitate an experience of personalized care and reassurance for those living with and beyond cancer; however, it is important to consider individual factors when tailoring interventions to ensure engagement promotes benefit rather than burden. CONCLUSIONS: Telehealth interventions can provide cancer survivors with independence and reassurance. Future telehealth interventions need to be developed iteratively in collaboration with a broad range of cancer survivors to maximize engagement and benefit.

Darlow, S. et Wen, K. Y. (2016). "Development testing of mobile health interventions for cancer patient self-management: A review." Health Informatics J **22**(3): 633-650.

As the vision of mobile health (mHealth) is beginning to be realized, rigorous intervention development protocols are needed in order to draw optimal efficacy and effectiveness to support patient-centered oncology care. The purpose of the current study was to conduct a review of published articles that describe the development process of mHealth interventions for patients' cancer care self-management. The review search yielded 11 interventions, reported by 14 manuscripts. The following trends emerged: importance of stakeholder engagement during the development process, addressing the unique needs and experiences of cancer patients and care providers, ensuring user satisfaction with the system, and identifying perceived benefits and limitations of the system. This review provides practical suggestions for mHealth intervention development. Assessments of user perceptions should be both qualitative and quantitative, and researchers should follow an established framework when developing a randomized controlled trial employing mHealth.

de Jong, J. M., Ogink, P. A., van Bunningen, C. G., et al. (2018). "A Cloud-Based Virtual Outpatient Clinic for Patient-Centered Care: Proof-of-Concept Study." J Med Internet Res **20**(9): e10135.

BACKGROUND: Most electronic health (eHealth) interventions offered to patients serve a single purpose and lack integration with other tools or systems. This is problematic because the majority of patients experience comorbidity and chronic disease, see multiple specialists, and therefore have different needs regarding access to patient data, communication with peers or providers, and self-monitoring of vital signs. A multicomponent digital health cloud service that integrates data sharing, collection, and communication could facilitate patient-centered care in combination with a hospital patient portal and care professionals. OBJECTIVE: This study aimed to assess the feasibility and functionality of a new cloud-based and multicomponent outpatient clinic, the "Virtual Outpatient Clinic" (VOC). METHODS: The VOC consists of 6 digital tools that facilitate self-monitoring (blood pressure, weight, and pain) and communication with peers and providers (chat and videoconferencing) connected to a cloud-based platform and the hospital patient portal to facilitate access to (self-collected) medical data. In this proof-of-concept study, 10 patients from both Departments of Internal Medicine and Dermatology (N=20) used all options of the VOC for 6 weeks. An eNurse offered support to participants during the study. We assessed the feasibility, usage statistics, content, adherence, and identified technical issues. Moreover, we conducted qualitative interviews with all participants by following a standard interview guide to identify user experiences, including barriers, facilitators, and potential effects. RESULTS: Most participants successfully used all options of the VOC and were positive about different tools and apps and the integral availability of their information. The adherence was 37% (7/19) for weight scale, 58% (11/19) for blood pressure monitor, and 70% (14/20) and 85% (17/20) for pain score and daily questions, respectively. The adherence for personal health record was 65% (13/20) and 60% (12/20) for the patient portal system. Qualitative data showed that performance and effort expectancy scored high among participants, indicating that using the VOC is convenient, easy, and time-saving. CONCLUSIONS: The VOC is a promising integrated Web-based technology that combines self-management, data sharing, and communication between patients and professionals. The system can be personalized by connecting various numbers of components, which could make it a relevant tool for other patient groups. Before a system, such as the

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VOC, can be implemented in daily practice, prospective studies focused on evaluating outcomes, costs, and patient-centeredness are needed.

Evangelista, L. S., Ghasemzadeh, H., Lee, J. A., et al. (2017). "Predicting adherence to use of remote health monitoring systems in a cohort of patients with chronic heart failure." Technol Health Care **25**(3): 425-433.

BACKGROUND: It is unclear whether subgroups of patients may benefit from remote monitoring systems (RMS) and what user characteristics and contextual factors determine effective use of RMS in patients with heart failure (HF). OBJECTIVE: The study was conducted to determine whether certain user characteristics (i.e. personal and clinical variables) predict use of RMS using advanced machine learning software algorithms in patients with HF. METHODS: This pilot study was a single-arm experimental study with a pre- (baseline) and post- (3 months) design; data from the baseline measures were used for the current data analyses. Sixteen patients provided consent; only 7 patients (mean age 65.8 +/- 6.1, range 58-83) accessed the RMS and transmitted daily data (e.g. weight, blood pressure) as instructed during the 12 week study duration. RESULTS: Baseline demographic and clinical characteristics of users and non-users were comparable for a majority of factors. However, users were more likely to have no HF specialty based care or an automatic internal cardioverter defibrillator. The precision accuracy of decision tree, multilayer perceptron (MLP) and k-Nearest Neighbor (k-NN) classifiers for predicting access to RMS was 87.5%, 90.3%, and 94.5% respectively. CONCLUSION: Our preliminary data show that a small set of baseline attributes is sufficient to predict subgroups of patients who had a higher likelihood of using RMS. While our findings shed light on potential end-users more likely to benefit from RMS-based interventions, additional research in a larger sample is warranted to explicate the impact of user characteristics on actual use of these technologies.

Faiola, A. et Holden, R. J. (2017). "Consumer Health Informatics: Empowering Healthy-Living-Seekers Through mHealth." Prog Cardiovasc Dis **59**(5): 479-486.

People are at risk from noncommunicable diseases (NCD) and poor health habits, with interventions like medications and surgery carrying further risk of adverse effects. This paper addresses ways people are increasingly moving to healthy living medicine (HLM) to mitigate such health threats. HLM-seekers increasingly leverage mobile technologies that enable control of personal health information, collaboration with clinicians/other agents to establish healthy living practices. For example, outcomes from consumer health informatics research include empowering users to take charge of their health through active participation in decision-making about healthcare delivery. Because the success of health technology depends on its alignment/integration with a person's sociotechnical system, we introduce SEIPS 2.0 as a useful conceptual model and analytic tool. SEIPS 2.0 approaches human work (i.e., life's effortful activities) within the complexity of the design and implementation of mHealth technologies and their potential to emerge as consumer-facing NLM products that support NCDs like diabetes.

Fairbrother, P., Pinnock, H., Hanley, J., et al. (2013). "Exploring telemonitoring and self-management by patients with chronic obstructive pulmonary disease: a qualitative study embedded in a randomized controlled trial." Patient Educ Couns **93**(3): 403-410.

OBJECTIVE: To explore patient and professional views on self-management in the context of telemonitoring in chronic obstructive pulmonary disease (COPD). METHODS: Semi-structured interviews with patients with COPD and healthcare professionals participating in a randomized controlled trial of telemonitoring in Lothian, Scotland, explored experiences of using telemonitoring, and dynamics in patient-practitioner relationships. Transcribed data were analyzed using the Framework approach. RESULTS: 38 patients (mean age 67.5 years) and 32 professionals provided 70 interviews. Patients considered that telemonitoring empowered self-management by enhancing their understanding of COPD and providing additional justification for their decisions to adjust treatment or seek professional advice. Professionals discussed telemonitoring as promoting compliance with medical advice and encouraged patients to exercise personal responsibility within clinical parameters, but expressed concerns about promoting the sick role and creating dependence on telemonitoring. CONCLUSION: Telemonitoring assisted many patients to embrace greater responsibility for their health but the model of service provision remained clinician-centered. A medical model of 'compliant self-management' may paradoxically have promoted dependence on professionals. PRACTICE IMPLICATIONS: Patients and

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professionals shared responsibility for meeting the central objective of prompt management of exacerbations of COPD. Care is needed, however, to minimize the risk in some patients, of telemonitoring increasing dependence on practitioner support.

Fairbrother, P., Ure, J., Hanley, J., et al. (2014). "Telemonitoring for chronic heart failure: the views of patients and healthcare professionals - a qualitative study." J Clin Nurs **23**(1-2): 132-144.

AIMS AND OBJECTIVES: To understand the views of patients and professionals on the acceptability and perceived usefulness of telemonitoring in the management of chronic heart failure in the context of day-to-day care provision. BACKGROUND: There is an increasing interest in the potential for telemonitoring to support the home-based management of patients with chronic heart failure. However, little is known about the views of patients and professionals on the use of telemonitoring in this context. A chronic heart failure telemonitoring service was set-up by NHS Lothian, Scotland, to evaluate the intervention. DESIGN: A qualitative design was adopted to explore the views of patients and professionals participating in the service. METHODS: Semi-structured interviews were undertaken with 18 patients (61% male, mean age 75 years) and five professionals participating at different time points in this new service. Interviews were audio recorded, coded and thematically analysed using the Framework approach. RESULTS: Five main themes were identified: 'information, support and reassurance'; 'compliance and dependence'; 'changes and challenges'; 'determining the criteria for patient applicability to telemonitoring'; and 'continuity of care'. CONCLUSION: Patients and professionals considered telemonitoring useful in the management of chronic heart failure, although with some caveats. Telemonitoring was popular with patients because they felt reassurance arising from what was perceived as continuous practitioner surveillance. Professionals expressed concern regarding perceived patient dependence on practitioner support. Increased workload was also a concern. Both groups acknowledged the need for improved technology and changes to service provision in order to better meet the intended objectives of the service. RELEVANCE TO CLINICAL PRACTICE: Although popular with patients, professionals emphasised the importance of case selection and adequate training and support, both for patients and themselves, in order to maximise the expected benefits of the service, particularly with regard to enabling self-management.

Fitzsimmons, D. A., Thompson, J., Bentley, C. L., et al. (2016). "Comparison of patient perceptions of Telehealth-supported and specialist nursing interventions for early stage COPD: a qualitative study." BMC Health Serv Res **16**(1): 420.

BACKGROUND: The increasing prevalence and associated cost of treating Chronic Obstructive Pulmonary Disease (COPD) is unsustainable, and focus is needed on self-management and prevention of hospital admissions. Telehealth monitoring of patients' vital signs allows clinicians to prioritise their workload and enables patients to take more responsibility for their health. This paper reports the results of a qualitative study embedded within a feasibility and pilot Randomised Controlled Trial (RCT) of Telehealth-supported care within a community-based COPD supported-discharge service. The aim of the study was to qualitatively explore the experiences of patients with COPD who had received either a Telehealth-supported or a specialist nursing intervention following their discharge from hospital after an admission for a COPD exacerbation. METHODS: Patients were invited to either participate in semi-structured interviews or to complete a semi-structured self-administered questionnaire on completion of the intervention. Nine patients were interviewed (67 % female) and seventeen patients completed the questionnaires. In addition, three clinicians responsible for the delivery of both interventions were interviewed to obtain their perspectives on the new services. RESULTS: Seven underlying themes emerged from the patient interviews and were further explored in the questionnaires: (1) patient demographics; (2) information received by the participants; (3) installation of the Telehealth technology; (4) Telehealth service functionality; (5) visits; (6) service withdrawal; and (7) service perceptions. Recipients of both services reported feelings of safety derived from the delivery of an integrated, community-based service. CONCLUSIONS: Although recipients of the Telehealth service received 50 % fewer home visits from the clinicians than recipients of a more traditional community-based nursing intervention, the patients were enthusiastic about the service, with some describing it as the best service they had ever received. This suggests that a Telehealth intervention is an acceptable alternative to a more traditional home nursing visit model for monitoring community-based patients with COPD following their discharge from hospital. TRIAL REGISTRATION: Current Controlled Trials ISRCTN68856013.

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Foster, M. V. et Sethares, K. A. (2014). "Facilitators and barriers to the adoption of telehealth in older adults: an integrative review." Comput Inform Nurs **32**(11): 523-533; quiz 534-525.

> Telehealth offers a great opportunity to provide follow-up care and daily monitoring of older adults in their homes. Although there is a significant body of literature related to telehealth in regard to design and adoption, little attention has been given by researchers to the perceptions of the older-adult end users of telehealth. As the numbers of older adults increases, there is a need to evaluate the perceptions of this population as they will most likely be the major users of telehealth. This review identified the current telehealth technologies that are available to older adults with a discussion on the facilitators of and barriers to those technologies. Literature published between 2003 and 2013 was reviewed using MEDLINE, PsycINFO, and CINAHL. A total of 2387 references were retrieved, but only 14 studies met the inclusion criteria. This review indicates that 50% of the studies did not specifically address facilitators of and barriers to adopting telehealth with older adults. Also, studies in this population did not address caregivers' perceptions on the facilitators of and barriers to telehealth. The use of telehealth among older adults is expected to rise, but effective adoption will be successful if the patient's perspective is kept at the forefront.

Fuji, K. T., Abbott, A. A. et Galt, K. A. (2015). "A qualitative study of how patients with type 2 diabetes use an electronic stand-alone personal health record." Telemed J E Health **21**(4): 296-300.

> BACKGROUND: Patient use of personal health records (PHRs) to manage their health information has been proposed to enhance patient knowledge and empower patients to make changes in their self-care behaviors. However, there remains a gap in understanding about patients' actual PHR use behaviors. The purpose of this qualitative study was to explore how patients with type 2 diabetes used a PHR to manage their diabetes-related health information for self-care. MATERIALS AND METHODS: Fifty-nine patients with type 2 diabetes were interviewed 3-6 months after receiving initial training on a free-of-charge, Web-based PHR. Interviews were audio-recorded, transcribed, and analyzed using an iterative process of in vivo coding, categorization, and theme development. RESULTS: Nine themes emerged, three of which expressed positive experiences: complete and accessible record; increased awareness; and behavioral changes. The remaining six themes expressed negative experiences: out of sight, out of mind; I would have used it if I were sicker; economic, infrastructure, and computer literacy barriers; lack of patient-provider engagement; double tracking; and privacy and security concerns. CONCLUSIONS: Despite some potential positive benefits resulting from PHR use, several barriers inhibited sustained and effective use over time. Provider and patient education about the benefits of PHR use and about the potential for filling in information gaps in the provider-based record is key to engage patients and stimulate PHR adoption and use.

Gee, P. M., Paterniti, D. A., Ward, D., et al. (2015). "e-Patients Perceptions of Using Personal Health Records for Self-management Support of Chronic Illness." Comput Inform Nurs **33**(6): 229-237.

> Chronic illness self-management is largely moving from healthcare professionals and into the hands of the patient. One tool that has been promoted to facilitate self-management support of chronic illness by policymakers, health advocates, providers, and consumers is the personal health record. Little is known about how consumers effectively use personal health records for self-management support and for productive patient-provider interactions. The purpose of this study was to learn from chronically ill engaged, experienced, and educated (e-patient) adults how and why they use personal health records for self-management support and productive patient-provider interactions. Eighteen purposively selected consumers were interviewed in two communities. Qualitative description methods were used, and we used a grounded theory approach to analyzing interview data, which was digitally recorded and transcribed verbatim. We identified four major thematic categories that capture the perceptions of the chronically ill using personal health records: (1) patient engagement and health self-management, (2) access to and control over personal health data, (3) promotion of productive communication, and (4) opportunities for training and education. Knowledge gained from the e-patient personal health record users suggest that making improvements to the portal system and providing education to consumers and providers will increase the utility among the experienced users and encourage new users to embrace adoption and use.

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Georgsson, M. et Staggers, N. (2016). "Quantifying usability: an evaluation of a diabetes mHealth system on effectiveness, efficiency, and satisfaction metrics with associated user characteristics." J Am Med Inform Assoc **23**(1): 5-11.

> OBJECTIVE: Mobile health (mHealth) systems are becoming more common for chronic disease management, but usability studies are still needed on patients' perspectives and mHealth interaction performance. This deficiency is addressed by our quantitative usability study of a mHealth diabetes system evaluating patients' task performance, satisfaction, and the relationship of these measures to user characteristics. MATERIALS AND METHODS: We used metrics in the International Organization for Standardization (ISO) 9241-11 standard. After standardized training, 10 patients performed representative tasks and were assessed on individual task success, errors, efficiency (time on task), satisfaction (System Usability Scale [SUS]) and user characteristics. RESULTS: Tasks of exporting and correcting values proved the most difficult, had the most errors, the lowest task success rates, and consumed the longest times on task. The average SUS satisfaction score was 80.5, indicating good but not excellent system usability. Data trends showed males were more successful in task completion, and younger participants had higher performance scores. Educational level did not influence performance, but a more recent diabetes diagnosis did. Patients with more experience in information technology (IT) also had higher performance rates. DISCUSSION: Difficult task performance indicated areas for redesign. Our methods can assist others in identifying areas in need of improvement. Data about user background and IT skills also showed how user characteristics influence performance and can provide future considerations for targeted mHealth designs. CONCLUSION: Using the ISO 9241-11 usability standard, the SUS instrument for satisfacion and measuring user characteristics provided objective measures of patients' experienced usability. These could serve as an exemplar for standardized, quantitative methods for usability studies on mHealth systems.

Georgsson, M. et Staggers, N. (2017). "Patients' Perceptions and Experiences of a mHealth Diabetes Self-management System." Comput Inform Nurs **35**(3): 122-130.

> Chronic diseases, including diabetes, constitute a substantial disease burden around the world. Mobile self-management systems now play a significant and increasingly important role in patients' disease management. Yet, patients' perceptions of these systems after longer-term use are largely unexplored. A random sample of 10 diabetes patients was assessed immediately after they exited a larger, 6-month randomized controlled trial on the use of a mHealth system called Care4Life. This descriptive, exploratory study assessed patients' perceptions and experiences of mHealth using a questionnaire and semistructured interview whose development was guided by the Technology Acceptance Model. Results indicated that patients saw clear benefits in using the technology and had favorable behavioral disease outcomes after using Care4Life. Suggestions for improving the system were highly individual despite the apparent homogeneity of the patient group. The study begins to fill the gap about the longer-term use of mHealth systems in chronic disease management and reflects the significance of individual needs for mHealth systems.

Gordon, N. P. et Hornbrook, M. C. (2018). "Older adults' readiness to engage with eHealth patient education and self-care resources: a cross-sectional survey." BMC Health Serv Res **18**(1): 220.

> BACKGROUND: This study examined access to digital technologies, skills and experience, and preferences for using web-based and other digital technologies to obtain health information and advice among older adults in a large health plan. A primary aim was to assess the extent to which digital divides by race/ethnicity and age group might affect the ability of a large percentage of seniors, and especially those in vulnerable groups, to engage with online health information and advice modalities (eHIA) and mobile health (mHealth) monitoring tools. METHODS: A mailed survey was conducted with age-sex stratified random samples of English-speaking non-Hispanic white, African-American/black (black), Hispanic/Latino (Latino), Filipino-American (Filipino), and Chinese-American (Chinese) Kaiser Permanente Northern California members who were aged 65-79 years. Respondent data were weighted to the study population for the cross-sectional analyses. RESULTS: Older seniors and black, Latino, and Filipino seniors have less access to digital tools, less experience performing a variety of online tasks, and are less likely to believe that they would be capable of going online for health information and advice compared to younger and

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white Non-Hispanic seniors. Consequently, they are also less likely to be interested in using eHIA modalities. CONCLUSIONS: The same subgroups of seniors that have previously been shown to have higher prevalence of chronic conditions and greater difficulties with healthcare access are also less likely to adopt use of eHIA and mHealth monitoring technologies. At the patient population level, this digital divide is important to take into account when planning health information and chronic disease management programs. At the individual patient level, to provide good patient-centered care, it is important for providers to assess rather than assume digital access, eHealth skills, and preferences prior to recommending use of web-based resources and mHealth tools.

Grainger, R., Townsley, H., Langlotz, T., et al. (2017). "Patient-Clinician Co-Design Co-Participation in Design of an App for Rheumatoid Arthritis Management via Telehealth Yields an App with High Usability and Acceptance." Stud Health Technol Inform **245**: 1223.

People with chronic conditions like rheumatoid arthritis (RA) self-manage on a day to day basis. They may be able to assess disease activity and communicate this via an app to their healthcare team to enable clinical review for medical management at the most appropriate times. This work describes the succesful co-design of a patient-held app for monitoring and communication of RA disease activity.

Grummet, J., Wickramasinghe, N., Haddad, P., et al. (2017). "Can Video Conferencing Facilitate Better Discharge Processes and a Superior Patient Experience?" Stud Health Technol Inform **245**: 1360.

Video conferencing is emerging as a useful clinical tool. Its application has extended to cover home monitoring, psychotherapy, managing patients with chronic diseases, and other various applications. However, utilizing video conferencing capabilities to facilitate discharge processes has to date been sparsely researched. This study explores the possibilities of video conferencing to facilitate better patient discharge processes at a large Australian not-for-profit tertiary healthcare group.

Grunloh, C., Myreteg, G., Cajander, A., et al. (2018). ""Why Do They Need to Check Me?" Patient Participation Through eHealth and the Doctor-Patient Relationship: Qualitative Study." J Med Internet Res **20**(1): e11.

BACKGROUND: Roles in the doctor-patient relationship are changing and patient participation in health care is increasingly emphasized. Electronic health (eHealth) services such as patient accessible electronic health records (PAEHRs) have been implemented to support patient participation. Little is known about practical use of PAEHR and its effect on roles of doctors and patients. OBJECTIVE: This qualitative study aimed to investigate how physicians view the idea of patient participation, in particular in relation to the PAEHR system. Hereby, the paper aims to contribute to a deeper understanding of physicians' constructions of PAEHR, roles in the doctor-patient relationship, and levels and limits of involvement. METHODS: A total of 12 semistructured interviews were conducted with physicians in different fields. Interviews were transcribed, translated, and a theoretically informed thematic analysis was performed. RESULTS: Two important aspects were identified that are related to the doctor-patient relationship: roles and involvement. The physicians viewed their role as being the ones to take on the responsibility, determining treatment options, and to be someone who should be trusted. In relation to the patient's role, lack of skills (technical or regarding medical jargon), motives to read, and patients' characteristics were aspects identified in the interviews. Patients were often referred to as static entities disregarding their potential to develop skills and knowledge over time. Involvement captures aspects that support or hinder patients to take an active role in their care. CONCLUSIONS: Literature of at least two decades suggests an overall agreement that the paternalistic approach in health care is inappropriate, and a collaborative process with patients should be adopted. Although the physicians in this study stated that they, in principle, were in favor of patient participation, the analysis found little support in their descriptions of their daily practice that participation is actualized. As seen from the results, paternalistic practices are still present, even if professionals might not be aware of this. This can create a conflict between patients who strive to become more informed and their questions being interpreted as signs of critique and mistrust toward the physician. We thus believe that the full potential of PAEHRs is not reached yet and argue that the concept of patient empowerment is problematic as it triggers an interpretation of "power" in health care as a zero-sum, which is not helpful for the maintenance of the relationship between the actors. Patient involvement is often discussed merely in relation to decision making; however, this study emphasizes the need to include also sensemaking and learning activities. This

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would provide an alternative understanding of patients asking questions, not in terms of "monitoring the doctor" but to make sense of the situation.

Haesum, L. K., Ehlers, L. et Hejlesen, O. K. (2013). "Telehomecare technologies enhance self-management and empowerment among patients with chronic obstructive pulmonary disease (COPD) - where does health literacy fit into this equation?" Stud Health Technol Inform **192**: 1182.

> Chronic obstructive pulmonary disease (COPD) is a chronic disease characterised by a graduate decline of pulmonary function and it constitutes a provable burden on society. Tele-homecare technology (THC) is a young field of research that has shown potential with regards to enhancing the level of self-management among COPD patients. Self-management is closely connected to health literacy. Health literacy and THC have shown great potential in terms of reducing healthcare costs and improving quality of life for COPD patients. The objective of this poster is to raise awareness regarding the potential of using THC to improve the level of health literacy.

Hanley, J., Fairbrother, P., McCloughan, L., et al. (2015). "Qualitative study of telemonitoring of blood glucose and blood pressure in type 2 diabetes." BMJ Open **5**(12): e008896.

> OBJECTIVES: To explore the experiences of patients and professionals taking part in a randomised controlled trial (RCT) of blood glucose, blood pressure (BP) and weight telemonitoring in type 2 diabetes supported by primary care, and identify factors facilitating or hindering the effectiveness of the intervention and those likely to influence its potential translation to routine practice. DESIGN: Qualitative study adopting an interpretive descriptive approach. PARTICIPANTS: 23 patients, 6 nurses and 4 doctors who were participating in a RCT of blood glucose and BP telemonitoring. A maximum variation sample of patients from within the trial based on age, sex and deprivation status of the practice was sought. SETTING: 12 primary care practices in Scotland and England. METHOD: Data were collected via recorded semistructured interviews. Analysis was inductive with themes presented within an overarching thematic framework. Multiple strategies were employed to ensure that the analysis was credible and trustworthy. RESULTS: Telemonitoring of blood glucose, BP and weight by people with type 2 diabetes was feasible. The data generated by telemonitoring supported self-care decisions and medical treatment decisions. Motivation to self-manage diet was increased by telemonitoring of blood glucose, and the 'benign policing' aspect of telemonitoring was considered by patients to be important. The convenience of home monitoring was very acceptable to patients although professionals had some concerns about telemonitoring increasing workload and costs. CONCLUSIONS: Telemonitoring of blood glucose, BP and weight in primary care is a promising way of improving diabetes management which would be highly acceptable to the type of patients who volunteered for this study. TRIAL REGISTRATION NUMBER: ISRCTN71674628; Pre-results.

Hanna, L., Gill, S. D., Newstead, L., et al. (2017). "Patient perspectives on a personally controlled electronic health record used in regional Australia." Health Inf Manag **46**(1): 42-48.

> BACKGROUND: Personally controlled electronic health records (PCEHRs) are being implemented throughout Australia; yet few studies have investigated patients' experiences of using a PCEHR. AIM: To explore patients' experiences and perspectives of using a locally developed PCEHR implemented in an Australian health service. METHOD: Twelve patients completed individual semi-structured telephone interviews, which underwent inductive analysis. RESULTS: Participants described two main interdependent advantages of PCEHRs: improved quality of healthcare through better information sharing and enhanced patient capacity for self-management. To realise these advantages, widespread acceptance and use of PCEHRs by healthcare providers is required, and PCEHRs need to be simple to use and accessible. CONCLUSION: PCEHRs can produce tangible benefits for patients. However, maximum benefits will be realised when PCEHRs contain a complete collection of relevant health information and are carefully designed for easy use.

Hartzler, A. L., Venkatakrishnan, A., Mohan, S., et al. (2016). "Acceptability of a team-based mobile health (mHealth) application for lifestyle self-management in individuals with chronic illnesses." Conf Proc IEEE Eng Med Biol Soc **2016**: 3277-3281.

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With increased incidence of chronic illnesses arising due to unhealthy lifestyle habits, it is increasingly important to leverage technology applications to promote and sustain health behavior change. We developed a smartphone-based application, NutriWalking (NW), which recommends personalized daily exercise goals and promotes healthy nutritional habits in small peer teams. Here, we demonstrate an early study of usability and acceptability of this app in patients with type 2 Diabetes Mellitus and Depression. Our goal was to evaluate the potential of NW as a self-management support tool. Findings point to design considerations for team-based self-management tools delivered via mHealth platforms.

Hendrieckx, C., Poole, L. A., Sharifi, A., et al. (2017). ""It Is Definitely a Game Changer": A Qualitative Study of Experiences with In-home Overnight Closed-Loop Technology Among Adults with Type 1 Diabetes." Diabetes Technol Ther **19**(7): 410-416.

BACKGROUND: This qualitative study explored trial participants' experiences of four nights of in-home closed loop. METHODS: Sixteen adults with type 1 diabetes, who completed a randomized crossover trial, were interviewed after four consecutive nights of closed-loop. Interviews were audio recorded, transcribed, and analyzed with a coding framework developed to identify the main themes. RESULTS: Participants had a mean age of 42 +/- 10 years, nine were women; mean diabetes duration was 27 +/- 7 years, and all were using insulin pumps. Overall, first impressions were positive. Participants found closed-loop easy to use and understand. Most experienced more stable overnight glucose levels, although for some these were similar to usual care or higher than they expected. Compared with their usual treatment, they noticed the proactive nature of the closed-loop, being able to predict trends and deliver micro amounts of insulin. Most reported technical glitches or inconveniences during one or more nights, such as transmission problems, problematic connectivity between devices, ongoing alarms despite addressing low glucose levels, and sensor inaccuracy. Remote monitoring by the trial team and their own hypoglycemic awareness contributed to feelings of trust and safety. Although rare, safety concerns were raised, related to feeling unsure whether the system would respond in time to falling glucose levels. CONCLUSIONS: This study provides relevant insights for implementation of closed-loop in the real world. For people with diabetes who are less familiar with technology, remote monitoring for the first few days may provide reassurance, strengthen their trust/skills, and make closed-loop an acceptable option for more people with type 1 diabetes.

Hochstenbach, L. M., Zwakhalen, S. M., Courtens, A. M., et al. (2016). "Feasibility of a mobile and web-based intervention to support self-management in outpatients with cancer pain." Eur J Oncol Nurs **23**: 97-105.

PURPOSE: Cancer pain is a prevalent and distressing symptom. To enhance self-management in outpatients, a multi-component intervention was developed, integrating patient self-management and professional care through healthcare technology. This article describes feasibility of the intervention in everyday practice. METHOD: Patients with moderate to severe cancer pain (n = 11) and registered nurses specialized in pain and palliative care (n = 3) participated in a four-week study. The intervention involved daily monitoring, graphical feedback, education, and advice by means of a mobile application for patients and a web application for nurses. Learnability, usability and desirability were measured in patients with a 20-item questionnaire (1-5 scale), higher scores indicating better feasibility. Patients' adherence was based on completion rates from server logs. Single semi-structured interviews with patients and a focus group interview with nurses provided insight into experiences. RESULTS: Questionnaire findings confirmed learnability (4.8), usability (4.8) and desirability (4.6) of the application for patients. Average completion rates were 76.8% for pain monitoring, 50.4% for medication monitoring and 100% for education sessions. Interviews revealed that patients were pleased with the simplicity of the mobile application and appreciated different components. Nurses agreed upon the added value and were mostly positive about the possibilities of the web application. Patients and nurses provided ideas for improvements relating to the content and technical performance of the intervention. CONCLUSIONS: Study results demonstrate feasibility of the intervention in everyday practice. Provided that content-related and technical adjustments are made, the intervention enables patients with cancer pain to practice self-management and nurses to remotely support these patients.

Hopia, H., Punna, M., Laitinen, T., et al. (2015). "A patient as a self-manager of their personal data on health and disease with new technology--challenges for nursing education." Nurse Educ Today **35**(12): e1-3.

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Background: Digital technologies have transformed nearly every aspect of our lives. However, for many of us, they have not yet improved the way we receive or participate in our health services and disease care. Hostetter et al. (2014) explore in a new multimedia essay the changes occurring with the arrival of new digital tools, from mobile apps and data-driven software solutions to wearable sensors that transmit information to a patient's team of health care providers. Digitisation will revolutionise health technology to a new extent, as the self-measurement, cloud services, teleconsultation and robotics technologies are being used to get health expenditure under control. In the future, robots will dispense drugs, and treatment routines will utilise cloud services (Biesdorf and Niedermann, 2014; Grain and Sharper, 2013). According to the rationale of the Horizon 2020 (European Commission, 2013b) work programme, personalising health and care has been stated to empower citizens and patients to manage their own health and disease, which can result in more cost-effective healthcare systems by enabling the management of chronic diseases outside institutions, improving health outcomes, and by encouraging healthy citizens to remain so. Solutions should be developed and tested with the use of open innovation platforms, such as large-scale demonstrators for health and service innovation. It is a fact that ICT/new health technology and personal health applications are transforming patients' self-management in many ways. A huge amount of personal health application solutions are being offered in the marketplace, which engage in activities that promote health, monitoring the symptoms and signs of illness, and managing the impact of illness (European Commission eHealth Action Plan 2012-2020, 2012). The WHO (2011) has conducted a comprehensive study and published a report on Member States' use of mHealth (mobile Health) as well as the readiness and barriers to its use. The percentage of countries reporting that they had formally evaluated mHealth initiatives was 12%. Seven per cent of developing countries reported conducting a mHealth evaluation. Mobile technologies have already changed, and they will continue to change the lives of millions around the world. In the WHO's report, it was estimated that mHealth can revolutionise health and well-being outcomes if implemented strategically and systematically, thereby providing virtually anyone with a mobile phone with health and well-being expertise and knowledge in real-time. In the research reports (European Commission eHealth Action Plan 2012-2020, 2012; Blake, 2013), it was reported that mobile phones as a tool are cost-effective and wide reaching, while they easily target large samples and hard-to-reach groups. Studies show that eHealth as a way to self-monitor and self-manage as well as supportive interventions for clients offers a good possibility to bridge the gap between inpatient and outpatient care. The mobile phone is especially effective in enhancing the therapist-patient bond so that this does not collapse when the client leaves the therapist's consulting room. Furthermore, eHealth applications can assist the client to cope with everyday situations in an autonomous way while improving the transfer of the abilities acquired by the client in the health care setting to everyday life. The findings of various projects (European Commission eHealth Action Plan 2012-2020, 2012; European Commission, 2012; European Commission, 2013b; Hamalainen, 2013) provide an opportunity for an open discussion regarding the digital health revolution, which will change health care processes and citizens' applications for health promotion and self-care.

Hunting, G., Shahid, N., Sahakyan, Y., et al. (2015). "A multi-level qualitative analysis of Telehomecare in Ontario: challenges and opportunities." BMC Health Serv Res 15: 544.

BACKGROUND: Despite research demonstrating the potential effectiveness of Telehomecare for people with Chronic Obstructive Pulmonary Disease and Heart Failure, broad-scale comprehensive evaluations are lacking. This article discusses the qualitative component of a mixed-method program evaluation of Telehomecare in Ontario, Canada. The objective of the qualitative component was to explore the multi-level factors and processes which facilitate or impede the implementation and adoption of the program across three regions where it was first implemented. METHODS: The study employs a multi-level framework as a conceptual guide to explore the facilitators and barriers to Telehomecare implementation and adoption across five levels: technology, patients, providers, organizations, and structures. In-depth semi-structured interviews and ethnographic observations with program stakeholders, as well as a Telehomecare document review were used to elicit key themes. Study participants (n = 89) included patients and/or informal caregivers (n = 39), health care providers (n = 23), technicians (n = 2), administrators (n = 12), and decision makers (n = 13) across three different Local Health Integration Networks in Ontario. RESULTS: Key facilitators to Telehomecare implementation and adoption at each level of the multi-level framework included: user-friendliness of Telehomecare technology, patient motivation to participate in the program, support for Telehomecare providers, the integration of Telehomecare into broader health service provision, and comprehensive program evaluation. Key barriers

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included: access-related issues to using the technology, patient language (if not English or French), Telehomecare provider time limitations, gaps in health care provision for patients, and structural barriers to patient participation related to geography and social location. CONCLUSIONS: Though Telehomecare has the potential to positively impact patient lives and strengthen models of health care provision, a number of key challenges remain. As such, further implementation and expansion of Telehomecare must involve continuous assessments of what is working and not working with all stakeholders. Increased dialogue, evaluation, and knowledge translation within and across regions to understand the contextual factors influencing Telehomecare implementation and adoption is required. This can inform decision-making that better reflects and addresses the needs of all program stakeholders.

Huygens, M. W. J., Vermeulen, J., Swinkels, I. C. S., et al. (2016). "Expectations and needs of patients with a chronic disease toward self-management and eHealth for self-management purposes." BMC Health Serv Res **16**: 11. <Go to ISI>://WOS:000379459200004

Background: Self-management is considered as an essential component of chronic care by primary care professionals. eHealth is expected to play an important role in supporting patients in their self-management. For effective implementation of eHealth it is important to investigate patients' expectations and needs regarding self-management and eHealth. The objectives of this study are to investigate expectations and needs of people with a chronic condition regarding self-management and eHealth for self-management purposes, their willingness to use eHealth, and possible differences between patient groups regarding these topics. Methods: Five focus groups with people with diabetes (n = 14), COPD (n = 9), and a cardiovascular condition (n = 7) were conducted in this qualitative research. Separate focus groups were organized based on patients' chronic condition. The following themes were discussed: 1) the impact of the chronic disease on patients' daily life; 2) their opinions and needs regarding self-management; and 3) their expectations and needs regarding, and willingness to use, eHealth for self-management purposes. A conventional content analysis approach was used for coding. Results: Patient groups seem to differ in expectations and needs regarding self-management and eHealth for self-management purposes. People with diabetes reported most needs and benefits regarding self-management and were most willing to use eHealth, followed by the COPD group. People with a cardiovascular condition mentioned having fewer needs for self-management support, because their disease had little impact on their life. In all patient groups it was reported that the patient, not the care professional, should choose whether or not to use eHealth. Moreover, participants reported that eHealth should not replace, but complement personal care. Many participants reported expecting feelings of anxiety by doing measurement themselves and uncertainty about follow-up of deviant data of measurements. In addition, many participants worried about the implementation of eHealth being a consequence of budget cuts in care. Conclusion: This study suggests that aspects of eHealth, and the way in which it should be implemented, should be tailored to the patient. Patients' expected benefits of using eHealth to support self-management and their perceived controllability over their disease seem to play an important role in patients' willingness to use eHealth for self-management purposes.

Hwang, D., Chang, J. W., Benjafield, A. V., et al. (2018). "Effect of Telemedicine Education and Telemonitoring on Continuous Positive Airway Pressure Adherence. The Tele-OSA Randomized Trial." Am J Respir Crit Care Med **197**(1): 117-126.

RATIONALE: Automated telemedicine interventions could potentially improve adherence to continuous positive airway pressure (CPAP) therapy. OBJECTIVES: Examining the effects of telemedicine-delivered obstructive sleep apnea (OSA) education and CPAP telemonitoring with automated patient feedback messaging on CPAP adherence. METHODS: This four-arm, randomized, factorial design clinical trial enrolled 1,455 patients (51.0% women; age, 49.1 +/- 12.5 yr [mean +/- SD]) referred for suspected OSA. Nine hundred and fifty-six underwent home sleep apnea testing, and 556 were prescribed CPAP. Two telemedicine interventions were implemented: 1) web-based OSA education (Tel-Ed) and 2) CPAP telemonitoring with automated patient feedback (Tel-TM). Patients were randomized to 1) usual care, 2) Tel-Ed added, 3) Tel-TM added, or 4) Tel-Ed and Tel-TM added (Tel-both). MEASUREMENTS AND MAIN RESULTS: The primary endpoint was 90-day CPAP usage. Secondary endpoints included attendance to OSA evaluation, and change in Epworth Sleepiness Scale score. CPAP average daily use at 90 days was 3.8 +/- 2.5, 4.0 +/- 2.4, 4.4 +/- 2.2, and 4.8 +/- 2.3 hours in usual care, Tel-Ed, Tel-TM, and Tel-both groups. Usage was significantly higher in the Tel-TM and Tel-both groups versus usual care (P = 0.0002 for both) but not for Tel-Ed (P = 0.10). Medicare adherence rates were 53.5, 61.0, 65.6, and 73.2% in usual care,

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Tel-Ed, Tel-TM, and Tel-both groups (Tel-both vs. usual care, P = 0.001; Tel-TM vs. usual care, P = 0.003; Tel-Ed vs. usual care, P = 0.07), respectively. Telemedicine education improved clinic attendance compared with no telemedicine education (show rate, 68.5 vs. 62.7%; P = 0.02). CONCLUSIONS: The use of CPAP telemonitoring with automated feedback messaging improved 90-day adherence in patients with OSA. Telemedicine-based education did not significantly improve CPAP adherence but did increase clinic attendance for OSA evaluation. Clinical trial registered with www.clinicaltrials.gov (NCT02279901).

Jessen, S., Mirkovic, J. et Ruland, C. M. (2018). "Creating Gameful Design in mHealth: A Participatory Co-Design Approach." JMIR Mhealth Uhealth **6**(12): e11579.

BACKGROUND: Gameful designs (gamification), using design pieces and concepts typically found in the world of games, is a promising approach to increase users' engagement with, and adherence to, electronic health and mobile health (mHealth) tools. Even though both identifying and addressing users' requirements and needs are important steps of designing information technology tools, little is known about the users' requirements and preferences for gameful designs in the context of self-management of chronic conditions. OBJECTIVE: This study aimed to present findings as well as the applied methods and design activities from a series of participatory design workshops with patients with chronic conditions, organized to generate and explore user needs, preferences, and ideas to the implementation of gameful designs in an mHealth self-management app. METHODS: We conducted three sets of two consecutive co-design workshops with a total of 22 participants with chronic conditions. In the workshops, we applied participatory design methods to engage users in different activities such as design games, scenario making, prototyping, and sticky notes exercises. The workshops were filmed, and the participants' interactions, written products, ideas, and suggestions were analyzed thematically. RESULTS: During the workshops, the participants identified a wide range of requirements, concerns, and ideas for using the gameful elements in the design of an mHealth self-management app. Overall inputs on the design of the app concerned aspects such as providing a positive user experience by promoting collaboration and not visibly losing to someone or by designing all feedback in the app to be uplifting and positive. The participants provided both general inputs (regarding the degree of competitiveness, use of rewards, or possibilities for customization) and specific inputs (such as being able to customize the look of their avatars or by having rewards that can be exchanged for real-world goods in a gift shop). However, inputs also highlighted the importance of making tools that provide features that are meaningful and motivating on their own and do not only have to rely on gameful design features to make people use them. CONCLUSIONS: The main contribution in this study was users' contextualized and richly described needs and requirements for gamefully designed mHealth tools for supporting chronic patients in self-management as well as the methods and techniques used to facilitate and support both the participant's creativity and communication of ideas and inputs. The range, variety, and depth of the inputs from our participants also showed the appropriateness of our design approach and activities. These findings may be combined with literature and relevant theories to further inform in the selection and application of gameful designs in mHealth apps, or they can be used as a starting point for conducting more participatory workshops focused on co-designing gameful health apps.

Jones, L. et Grech, C. (2016). "The patient experience of remote telemonitoring for heart failure in the rural setting: a literature review." Contemp Nurse **52**(2-3): 230-243.

BACKGROUND: Remote telemonitoring is utilised to provide specialised care to people with heart failure living in rural locations. There is limited research into the patients' experience of telemonitoring. OBJECTIVE: This literature review was completed to examine the available evidence and inform the development of a telemonitoring service. METHODS: Cochrane Database of Systematic Reviews; Medline; CINAHL database, Joanna Briggs Institute, AMED, EMBASE were searched using the key words. A thematic analysis was applied. RESULTS: Forty-six studies reviewed, 11 met inclusion criteria. Individual health status, use of technology, and effect on lifestyle influenced the patient experience. CONCLUSION: Limited literature was available addressing the patient experience of telemonitoring and no studies were found that specifically investigated the experiences of patients with heart failure in rural locations. Further research is required to examine the patient/user perspective of this type of service, and explore the feasibility of including telemonitoring in usual care.

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Kaambwa, B., Ratcliffe, J., Shulver, W., et al. (2017). "Investigating the preferences of older people for telehealth as a new model of health care service delivery: A discrete choice experiment." J Telemed Telecare **23**(2): 301-313. <Go to ISI>://WOS:000394260400013

> Introduction: Telehealth approaches to health care delivery can potentially improve quality of care and clinical outcomes, reduce mortality and hospital utilisation, and complement conventional treatments. However, substantial research into the potential for integrating telehealth within health care in Australia, particularly in the provision of services relevant to older people, including palliative care, aged care and rehabilitation, is lacking. Furthermore, to date, no discrete choice experiment (DCE) studies internationally have sought the views and preferences of older people about the basic features that should make up a telehealth approach to these services. Methods: Using a DCE, we investigated the relative importance of six salient features of telehealth (what aspects of care are to be pursued during telehealth sessions, distance to the nearest hospital or clinic, clinicians' attitude to telehealth, patients' experience of using technology, what types of assessments should be conducted face-to-face versus via telehealth sessions and the costs associated with receiving telehealth). Data were obtained from an online panel of older people aged 65 years and above, drawn from the Australian general population. Results: The mean age for 330 study participants was 69 years. In general, individuals expressed strong preferences for telehealth services that offered all aspects of care, were relatively inexpensive and targeted specifically at individuals living in remote regions without easy access to a hospital or clinic. Participants also preferred telehealth services to be offered to individuals with some prior experience of using technology, provided by clinicians who were positive about telehealth but wanted all or some pre-telehealth health assessments to take place in a hospital or clinic. Preferences only differed by gender. Additionally, respondents did not feel that telehealth led to loss of privacy and confidentiality. Discussion: Our findings indicate a preference amongst respondents for face-to-face pre-telehealth health assessments and, thereafter, a comprehensive telehealth model (in terms of services offered) targeted at those with some technological know-how as a substitute for attendance at hospitals and clinics, especially where these health facilities were far away from older people's homes. The findings may be usefully incorporated into the design of future telehealth models of service delivery for older people.

Kiberd, J., Khan, U., Stockman, C., et al. (2018). "Effectiveness of a Web-Based eHealth Portal for Delivery of Care to Home Dialysis Patients: A Single-Arm Pilot Study." Can J Kidney Health Dis **5**: 2054358118794415.

> Background: Improving a patient's experience with their care through an online interface for communication (an eHealth patient portal) has been shown to be beneficial in some studies of chronic disease populations. However, little is known about the effectiveness of an eHealth portal for delivery of care to home dialysis patients. Objectives: Primary: To determine whether an eHealth portal is effective at improving a patient's experience with their home dialysis care. Secondary: (1) To determine whether an eHealth portal improves health-related quality of life for home dialysis patients, (2) to assess patient satisfaction with an eHealth portal and perceived impact on aspects of their home dialysis therapy and health, (3) to determine the acceptability of the eHealth portal software, and (4) to determine the change in telephone usage for communication after patient adoption of an eHealth portal. Design: Single-arm pilot trial with recruitment over a 4-month period. Setting: The multidisciplinary home dialysis clinic in Halifax Nova Scotia Canada. Patients: Adults (>18 years) receiving either home hemodialysis or peritoneal dialysis. Measurements: Consumer quality index (CQI), health-related quality of life using the EuroQol Five Dimensions Questionnaire (EQ-5D), acceptability of the eHealth portal software (using the Acceptability E-scale), and satisfaction/perceived impact (using a modified questionnaire). Methods: A web-based application (McKesson, Canada, RelayHealth(R)) allowed patients and health care workers to communicate through a secure, password-protected online portal that permitted visualization of the messaging history by patient and provider. Patients and the home dialysis health care team had the ability to send messages related to patient care at any time including proposed changes to medication, instructions after a clinic visit, times of new appointments, upcoming investigations, or questions about care. Patient experience with home dialysis care using the CQI, health-related quality of life using the EQ-5D, acceptability of the eHealth portal software, and satisfaction/perceived impact were assessed at baseline, 6, and 12 months of follow-up (where applicable). Total minutes of telephone communication was assessed prior to and after adoption of the portal. Results: Of the 41 patients who consented to join the portal, 27 (66%) created an online account. At baseline, patients had a positive experience for the care and communication provided by their nephrologist (CQI: 3.63, 95% confidence interval [CI]: 3.50-3.76) and this did not change significantly over the study period. Similar results were observed for the

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care provided by other nephrology health care team members. Health-related quality of life using the EQ-5D score was 0.80 (interquartile range [IQR]: 0.71-0.83) at baseline and this also did not significantly change over the study period. Patients were satisfied with the eHealth portal (mean Likert scale score of 6.5 +/- 0.6 in overall satisfaction, scale ranging from 1 completely dissatisfied to 10 completely satisfied), but only a minority (N = 12) completed a satisfaction questionnaire. Median monthly phone usage decreased from 12.5 to 10 minutes (P = .02) after adoption of the portal. Limitations: The study is limited by the small sample size, high rate of patient dropout, and limited response rate. Conclusions: In this study of home dialysis patients, we identified that an eHealth communication did not lead to significant improvements in patient experience with home dialysis care. Trial Registration: ClinicalTrials.gov number NCT02128347.

Kim, J. Y., Wineinger, N. E. et Steinhubl, S. R. (2016). "The Influence of Wireless Self-Monitoring Program on the Relationship Between Patient Activation and Health Behaviors, Medication Adherence, and Blood Pressure Levels in Hypertensive Patients: A Substudy of a Randomized Controlled Trial." J Med Internet Res **18**(6): e116.

BACKGROUND: Active engagement in the management of hypertension is important in improving self-management behaviors and clinical outcomes. Mobile phone technology using wireless monitoring tools are now widely available to help individuals monitor their blood pressure, but little is known about the conditions under which such technology can effect positive behavior changes or clinical outcomes. OBJECTIVE: To study the influence of wireless self-monitoring program and patient activation measures on health behaviors, medication adherence, and blood pressure levels as well as control of blood pressure in hypertensive patients. METHODS: We examined a subset of 95 hypertensive participants from a 6-month randomized controlled trial designed to determine the utility of a wireless self-monitoring program (n=52 monitoring program, n=43 control), which consisted of a blood pressure monitoring device connected with a mobile phone, reminders for self-monitoring, a Web-based disease management program, and a mobile app for monitoring and education, compared with the control group receiving a standard disease management program. Study participants provided measures of patient activation, health behaviors including smoking, drinking, and exercise, medication adherence, and blood pressure levels. We assessed the influence of wireless self-monitoring as a moderator of the relationship between patient activation and health behaviors, medication adherence, and control of blood pressure. RESULTS: Improvements in patient activation were associated with improvements in cigarette smoking (beta=-0.46, P<.001) and blood pressure control (beta=0.04, P=.02). This relationship was further strengthened in reducing cigarettes (beta=-0.60, P<.001), alcohol drinking (beta=-0.26, P=.01), and systolic (beta=-0.27, P=.02) and diastolic blood pressure (beta=-0.34, P=.007) at 6 months among individuals participating in the wireless self-monitoring program. No differences were observed with respect to medication adherence. CONCLUSIONS: Participation in a wireless self-monitoring program provides individuals motivated to improve their health management with an added benefit above and beyond that of motivation alone. Hypertensive individuals eager to change health behaviors are excellent candidates for mobile health self-monitoring.. TRIAL REGISTRATION: ClinicalTrials.gov NCT01975428, https://clinicaltrials.gov/ct2/show/NCT01975428 (Archived by WebCite at http://www.webcitation.org/6iSO5OgOG).

Korpershoek, Y. J. G., Vervoort, S., Trappenburg, J. C. A., et al. (2018). "Perceptions of patients with chronic obstructive pulmonary disease and their health care providers towards using mHealth for self-management of exacerbations: a qualitative study." BMC Health Serv Res **18**(1): 757.

BACKGROUND: Self-management of exacerbations in COPD patients is important to reduce exacerbation impact. There is a need for more comprehensive and individualized interventions to improve exacerbation-related self-management behavior. The use of mobile health (mHealth) could help to achieve a wide variety of behavioral goals. Understanding of patients and health care providers perspectives towards using mHealth in promoting self-management will greatly enhance the development of solutions with optimal usability and feasibility. Therefore, the aim of this study was to explore perceptions of COPD patients and their health care providers towards using mHealth for self-management of exacerbations. METHODS: A qualitative study using focus group interviews with COPD patients (n = 13) and health care providers (HCPs) (n = 6) was performed to explore perceptions towards using mHealth to support exacerbation-related self-management. Data were analyzed by a thematic analysis. RESULTS: COPD patients and HCPs perceived mostly similar benefits and barriers of using

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mHealth for exacerbation-related self-management. These perceived benefits and barriers seem to be important drivers in the willingness to use mHealth. Both patients and HCPs strengthen the need for a multi-component and tailored mHealth intervention that improves patients' exacerbation-related self-management by determining their health status and providing adequate information, decision support and feedback on self-management behavior. Most importantly, patients and HCPs considered an mHealth intervention as support to improve self-management and emphasized that it should never replace patients' own feelings nor undermine their own decisions. In addition, the intervention should be complementary to regular contact with HCPs, as personal contact with a HCP was considered to be very important. To optimize engagement with mHealth, patients should have a positive attitude toward using mHealth and an mHealth intervention should be attractive, rewarding and safe. CONCLUSIONS: This study provided insight into perceptions of COPD patients and their HCPs towards using mHealth for self-management of exacerbations. This study points out that future mHealth interventions should focus on developing self-management skills over time by providing adequate information, decision support and feedback on self-management behavior and that mHealth should complement regular care. To optimize engagement, mHealth interventions should be attractive, rewarding, safe and tailored to the patient needs.

Lancaster, K., Abuzour, A., Khaira, M., et al. (2018). "The Use and Effects of Electronic Health Tools for Patient Self-Monitoring and Reporting of Outcomes Following Medication Use: Systematic Review." J Med Internet Res **20**(12): e294.

BACKGROUND: Electronic health (eHealth) tools are becoming increasingly popular for helping patients' self-manage chronic conditions. Little research, however, has examined the effect of patients using eHealth tools to self-report their medication management and use. Similarly, there is little evidence showing how eHealth tools might prompt patients and health care providers to make appropriate changes to medication use. OBJECTIVE: The objective of this systematic review was to determine the impact of patients' use of eHealth tools on self-reporting adverse effects and symptoms that promote changes to medication use. Related secondary outcomes were also evaluated. METHODS: MEDLINE, EMBASE, and CINAHL were searched from January 1, 2000, to April 25, 2018. Reference lists of relevant systematic reviews and included articles from the literature search were also screened to identify relevant studies. Title, abstract, and full-text review as well as data extraction and risk of bias assessment were performed independently by 2 reviewers. Due to high heterogeneity, results were not meta-analyzed and instead presented as a narrative synthesis. RESULTS: A total of 14 studies, including 13 randomized controlled trials (RCTs) and 1 open-label intervention, were included, from which 11 unique eHealth tools were identified. In addition, 14 RCTs found statistically significant increases in positive medication changes as a result of using eHealth tools, as did the single open-label study. Moreover, 8 RCTs found improvement in patient symptoms following eHealth tool use, especially in adolescent asthma patients. Furthermore, 3 RCTs showed that eHealth tools might improve patient self-efficacy and self-management of chronic disease. Little or no evidence was found to support the effectiveness of eHealth tools at improving medication recommendations and reconciliation by clinicians, medication-use behavior, health service utilization, adverse effects, quality of life, or patient satisfaction. eHealth tools with multifaceted functionalities and those allowing direct patient-provider communication may be more effective at improving patient self-management and self-efficacy. CONCLUSIONS: Evidence suggests that the use of eHealth tools may improve patient symptoms and lead to medication changes. Patients generally found eHealth tools useful in improving communication with health care providers. Moreover, health-related outcomes among frequent eHealth tool users improved in comparison with individuals who did not use eHealth tools frequently. Implementation issues such as poor patient engagement and poor clinician workflow integration were identified. More high-quality research is needed to explore how eHealth tools can be used to effectively manage use of medications to improve medication management and patient outcomes.

Lasorsa, I., P, D. A., Ajcevic, M., et al. (2016). "Personalized support for chronic conditions. A novel approach for enhancing self-management and improving lifestyle." Appl Clin Inform **7**(3): 633-645.

OBJECTIVE: Solutions for improving management of chronic conditions are under the attention of healthcare systems, due to the increasing prevalence caused by demographic change and better survival, and the relevant impact on healthcare expenditures. The objective of this study was to propose a

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comprehensive architecture of a mHealth system aimed at boosting the active and informed participation of patients in their care process, while at the same time overcoming the current technical and psychological/clinical issues highlighted by the existing literature. METHODS: After having studied the current challenges outlined in the literature, both in terms of technological and human requirements, we focused our attention on some specific psychological aspects with a view to providing patients with a comprehensive and personalized solution. Our approach has been reinforced through the results of a preliminary assessment we conducted on 22 patients with chronic conditions. The main goal of such an assessment was to provide a preliminary understanding of their needs in a real context, both in terms of self-awareness and of their predisposition toward the use of IT solutions. RESULTS: According to the specific needs and features, such as mindfulness and gamification, which were identified through the literature and the preliminary assessment, we designed a comprehensive open architecture able to provide a tailor-made solution linked to specific individuals' needs. CONCLUSION: The present study represents the preliminary step towards the development of a solution aimed at enhancing patients' actual perception and encouraging self-management and self-awareness for a better lifestyle. Future work regards further identification of pathology-related needs and requirements through focus groups including all stakeholders in order to describe the architecture and functionality in greater detail.

Kraai, I. H., Luttik, M. L., de Jong, R. M., Jaarsma, T. et Hillege, H. L. (2011). "Heart failure patients monitored with telemedicine: patient satisfaction, a review of the literature." J Card Fail **17**(8): 684-690.

BACKGROUND: Remote monitoring of the clinical status of heart failure patients has developed rapidly and is the subject of several trials. Patient satisfaction is an important outcome, as recommended by the U.S. Food and Drug Administration to use in clinical research, and should be included in studies concerning remote monitoring. The objective of this review is to describe the current state of the literature on patient satisfaction with noninvasive telemedicine, regarding definition, measurement, and overall level of patient satisfaction with telemedicine. METHODS AND RESULTS: The Pubmed, Embase, Cochrane, and Cinahl databases were searched using heart failure-, satisfaction-, and telemedicine-related search terms. The literature search identified 193 publications, which were reviewed by 2 independent reviewers. Fourteen articles were included. None of the articles described a clear definition or concept of patient satisfaction with telemedicine. Patient satisfaction with telemedicine was measured with self-developed questionnaires or face-to-face or telephonic interviews. None of the articles used the same questionnaire or telephonic survey to measure patient satisfaction. Only one questionnaire was assessed for validity and reliability. In general, patients seemed to be satisfied or very satisfied with the use of telemedicine. CONCLUSIONS: Measurement of patient satisfaction is still underexposed in telemedicine research and the measurement of patient satisfaction with telemedicine underappreciated with poorly constructed questionnaires.

Lee, M. K., Lee, K. H., Yoo, S. H., et al. (2017). "Impact of initial active engagement in self-monitoring with a telemonitoring device on glycemic control among patients with type 2 diabetes." Scientific Reports **7**: 7. <Go to ISI>://WOS:000403643900019

This study aimed to investigate the effect of patient engagement in self-monitoring with a telemonitoring device on glycemic control among patients with type 2 diabetes. We conducted a subanalysis of the telemonitoring device study in Kaiser Permanente Northern California members. We divided the telemonitoring group into 53 frequent and 54 infrequent users based on self-monitoring of blood glucose (SMBG) frequency of the first 6 weeks. The frequency of SMBG transmitted from the telemonitoring device was examined over 24 weeks. Clinic and laboratory tests were collected at baseline, 6 weeks and 6 months. There was no significant difference in baseline HbA1c level between the two groups. After 6 months, change in HbA1c was -2.4 +/- 1.6% among frequent users and -1.5 +/- 1.5% among infrequent users (p = 0.003). The proportion of patients achieving target HbA1C level at 6 months was significantly higher among frequent users than among infrequent users. An increased frequency of SMBG was significantly correlated with a reduction in HbA1c at 6 months. In conclusion, initial active engagement in self-monitoring with a telemonitoring device could provide incremental improvement of glycemic control over 6 months.

Lee, P. A., Greenfield, G. et Pappas, Y. (2018). "Patients' perception of using telehealth for type 2 diabetes management: a phenomenological study." BMC Health Serv Res **18**(1): 549.

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BACKGROUND: There is a growing body of evidence that supports the uses of telehealth to monitor and manage people with diabetes at a distance. Despite this, the uptake of telehealth has been low. The objective of this study is to explore patients' perceptions of using telehealth for type 2 diabetes management. METHODS: Semi-structured interviews were undertaken with 10 patients from the NHS Newham area in London, UK. Data were collected using recorded semi-structured interviews. The interviews were transcribed verbatim and the analysis was guided by the phenomenological analysis approach. RESULTS: We identified three main themes for facilitating positive patient experience or acceptance of telehealth and these included: technology consideration, service perceptions and empowerment. All patients asserted that they were pleased with the technology and many also proclaimed that they could not see themselves being without it. Moreover, very few negative views were reported with respect to the use of telehealth. CONCLUSION: The patients' perceived telehealth as a potential to enhance their quality of life, allow them to live independently at home as well as help them take and be in more control over their own health state. The findings of this study therefore supports the use of telehealth for the routine care of people with type 2 diabetes. However, one must interpret the results with caution due to limitations identified in the sample.

Lilholt, P. H., Haesum, L. K. E. et Hejlesen, O. K. (2015). Exploring User Experience of a Telehealth System for the Danish TeleCare North Trial. Digital Healthcare Empowering Europeans. Cornet, R., StoicuTivadar, L., Horbst, A. et al. Amsterdam, Ios Press. **210:** 301-305.
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The aim was to explore user experiences of using a telehealth system (Telekit) designed for the Danish TeleCare North trial. Telekit is designed for patients diagnosed with chronic obstructive pulmonary disease (COPD) in order to manage the disease and support patient empowerment. This article sums up COPD-participants' user experiences in terms of increased sense of freedom, of security, of control, and greater awareness of COPD symptoms. A consecutive sample of sixty participants (27 women, 33 men) were recruited from the TeleCare North trial. At home the participants completed a non-standardised questionnaire while a researcher was present. The questionnaire identified their health status, their use of specific technologies, and their user experiences with the telehealth system. Results from the questionnaire indicate that the majority of participants (88%) considered the Telekit system as easy to use. 43 (72%) participants felt increased sense of security, and 37 (62%) participants felt increased sense of control by using the system. 30 (50%) participants felt greater awareness of their COPD symptoms, but only 16 (27%) participants felt increased freedom. The study has provided a general picture of COPD participants' user experiences which is important to emphasise as it has a bearing on whether a given implementation will be successful or not.

Losiouk, E., Lanzola, G., Del Favero, S., et al. (2018). "Parental evaluation of a telemonitoring service for children with Type I Diabetes." J Telemed Telecare **24**(3): 230-237.
<Go to ISI>://WOS:000430335200012

Introduction: In the past years, we developed a telemonitoring service for young patients affected by Type 1 Diabetes. The service provides data to the clinical staff and offers an important tool to the parents, that are able to oversee in real time their children. The aim of this work was to analyze the parents' perceived usefulness of the service. Methods: The service was tested by the parents of 31 children enrolled in a seven-day clinical trial during a summer camp. To study the parents' perception we proposed and analyzed two questionnaires. A baseline questionnaire focused on the daily management and implications of their children's diabetes, while a post-study one measured the perceived benefits of telemonitoring. Questionnaires also included free text comment spaces. Results: Analysis of the baseline questionnaires underlined the parents' suffering and fatigue: 51% of total responses showed a negative tendency and the mean value of the perceived quality of life was 64.13 in a 0-100 scale. In the post-study questionnaires about half of the parents believed in a possible improvement adopting telemonitoring. Moreover, the foreseen improvement in quality of life was significant, increasing from 64.13 to 78.39 (p-value = 0.0001). The analysis of free text comments highlighted an improvement in mood, and parents' commitment was also proved by their willingness to pay for the service (median = 200euro/year). Discussion: A high number of parents appreciated the telemonitoring service and were confident that it could improve communication with physicians as well as the family's own peace of mind.

Lundgren, J., Johansson, P., Jaarsma, T., et al. (2018). "Patient Experiences of Web-Based Cognitive Behavioral Therapy for Heart Failure and Depression: Qualitative Study." J Med Internet Res **20**(9): 15.

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> Background: Web-based cognitive behavioral therapy (wCBT) has been proposed as a possible treatment for patients with heart failure and depressive symptoms. Depressive symptoms are common in patients with heart failure and such symptoms are known to significantly worsen their health. Although there are promising results on the effect of wCBT, there is a knowledge gap regarding how persons with chronic heart failure and depressive symptoms experience wCBT. Objective: The aim of this study was to explore and describe the experiences of participating and receiving health care through a wCBT intervention among persons with heart failure and depressive symptoms. Methods: In this qualitative, inductive, exploratory, and descriptive study, participants with experiences of a wCBT program were interviewed. The participants were included through purposeful sampling among participants previously included in a quantitative study on wCBT. Overall, 13 participants consented to take part in this study and were interviewed via telephone using an interview guide. Verbatim transcripts from the interviews were qualitatively analyzed following the recommendations discussed by Patton in Qualitative Research & Evaluation Methods: Integrating Theory and Practice. After coding each interview, codes were formed into categories. Results: Overall, six categories were identified during the analysis process. They were as follows: "Something other than usual health care," "Relevance and recognition," "Flexible, understandable, and safe," "Technical problems," "Improvements by real-time contact," and "Managing my life better." One central and common pattern in the findings was that participants experienced the wCBT program as something they did themselves and many participants described the program as a form of self-care. Conclusions: Persons with heart failure and depressive symptoms described wCBT as challenging. This was due to participants balancing the urge for real-time contact with perceived anonymity and not postponing the work with the program. wCBT appears to be a valuable tool for managing depressive symptoms.

Lupton, D. (2013). "The digitally engaged patient: Self-monitoring and self-care in the digital health era." Social Theory & Health **11**(3): 256-270.
https://doi.org/10.1057/sth.2013.10

> The phenomenon of digital health has emerged as a key dimension of contemporary healthcare policy and delivery in many countries. This review article focuses on one aspect of digital health discourses: the concept of patient engagement that encourages patients to take up the new digital media technologies to engage in self-monitoring and self-care, or what I term 'the digitally engaged patient'. A critical approach is adopted to examine the sociocultural dimensions of eliciting patients to become 'digitally engaged' in their own medical care and preventive health efforts. It is argued that the techno-utopian discourses articulated in the mainstream healthcare policy literature concerning the possibilities and potentialities afforded by digital health technologies do not acknowledge the complexities and ambivalences that are part of using self-monitoring and self-care technologies for monitoring health and illness states, both for patients and for healthcare providers. These include the surveillance and disciplinary dimensions of using these technologies, the emotions and resistances they provoke, their contribution to the burden of self-care and the invisible work on the part of healthcare workers that they require to operate.

Lyzwinski, L. N., Caffery, L. J., Bambling, M., et al. (2018). "Consumer perspectives on mHealth for weight loss: a review of qualitative studies." J Telemed Telecare **24**(4): 290-302.

> Introduction With increasing development and use of mobile health (mHealth) interventions for weight loss in overweight and obese populations, it is timely to gain greater insight into consumer experience with these technologies. The aims of this review were to identify common themes across studies that included user preferences for mHealth intervention for weight loss. Methods The databases PubMed (Medline), CINAHL, Web of Science, and Embase were searched for relevant qualitative studies on mHealth for weight loss. Searches were conducted in May 2016. Results Several common high preference themes were identified relating to simple and attractive apps that allowed for self-monitoring with feedback. The five key themes concerning text messages for weight loss involved a careful consideration of personalization, message tone, structure, frequency and content. Key optimization themes for weight loss apps were personalization, simplicity with appeal and engagement/entertainment. Common identified benefits of mHealth for weight loss included self-monitoring, goal setting, feedback, ability to motivate, educate, and remind. Common barriers users identified were related to technological and psychological issues as well as message overload/inappropriate timing of messages. Conclusion When planning an mHealth weight loss intervention, critical factors are the message tone, structure and the

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frequency of message delivery. Personalization also seems to be important. Designing simple apps while still ensuring that they engage the user is also essential. Additionally, it seems important to tailor the content in accordance with different target group demographic preferences. The successful reach and adoption of mHealth interventions requires minimizing perceived barriers and maximizing perceived benefits.

Maeder, A., Poultney, N., Morgan, G., et al. (2015). "Patient Compliance in Home-Based Self-Care Telehealth Projects." J Telemed Telecare **21**(8): 439-442.

> This paper presents the findings of a literature review on patient compliance in home-based self-care telehealth monitoring situations, intended to establish a knowledge base for this aspect which is often neglected alongside more conventional clinical, economic and service evaluations. A systematic search strategy led to 72 peer-reviewed published scientific papers being selected as most relevant to the topic, 58 of which appeared in the last 10 years. Patient conditions in which most evidence for compliance was found were blood pressure, heart failure and stroke, diabetes, asthma, chronic obstructive pulmonary disease and other respiratory diseases. In general, good compliance at the start of a study was found to drop off over time, most rapidly in the period immediately after the start. Success factors identified in the study included the extent of patient health education, telehealth system implementation style, user training and competence in system usage, active human support from the healthcare provider and maintaining strong participant motivation.

Mamykina, L., Heitkemper, E. M., Smaldone, A. M., et al. (2016). "Structured scaffolding for reflection and problem solving in diabetes self-management: qualitative study of mobile diabetes detective." J Am Med Inform Assoc **23**(1): 129-136.

> OBJECTIVE: To investigate subjective experiences and patterns of engagement with a novel electronic tool for facilitating reflection and problem solving for individuals with type 2 diabetes, Mobile Diabetes Detective (MoDD). METHODS: In this qualitative study, researchers conducted semi-structured interviews with individuals from economically disadvantaged communities and ethnic minorities who are participating in a randomized controlled trial of MoDD. The transcripts of the interviews were analyzed using inductive thematic analysis; usage logs were analyzed to determine how actively the study participants used MoDD. RESULTS: Fifteen participants in the MoDD randomized controlled trial were recruited for the qualitative interviews. Usage log analysis showed that, on average, during the 4 weeks of the study, the study participants logged into MoDD twice per week, reported 120 blood glucose readings, and set two behavioral goals. The qualitative interviews suggested that individuals used MoDD to follow the steps of the problem-solving process, from identifying problematic blood glucose patterns, to exploring behavioral triggers contributing to these patterns, to selecting alternative behaviors, to implementing these behaviors while monitoring for improvements in glycemic control. DISCUSSION: This qualitative study suggested that informatics interventions for reflection and problem solving can provide structured scaffolding for facilitating these processes by guiding users through the different steps of the problem-solving process and by providing them with context-sensitive evidence and practice-based knowledge related to diabetes self-management on each of those steps. CONCLUSION: This qualitative study suggested that MoDD was perceived as a useful tool in engaging individuals in self-monitoring, reflection, and problem solving.

Marina Ocana, J. et Feliz Murias, T. (2018). "[Perceptions about the Information and Education for Health in Virtual Environments in Spanish]." Rev Esp Salud Publica **92**.

> OBJECTIVE: The appropriation of digital technology in knowledge applied to health should promote a proactive attitude in the persons, training them in the search for information, the management of their health care, and the health of their social context and environment. The objective of this work was to know and analyse, in relation to the information searches and education for health in Spanish virtual environments, the access features, the users' perceptions and experiences, the degree of easiness or difficulty perceived by themselves, and their causes, as well as their topics of interest to suggest improvements. METHODS: An ex post facto empirical research was carried out, with a combined quantitative, qualitative design, through a self-completed online questionnaire with simple random distribution among internet healthcare users, students, professors, and staff from Spanish universities.

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The personal profile of the survey respondents, the access features, the difficulties met, and the search topics were investigated. We have used measures of descriptive and inferential statistics, as Kramer's V and contingency coefficient, to investigate the differences between groups of the surveyed population. The influence of sex and age on the answers was studied. RESULTS: The study was performed on 998 responses, which suppose a response rate of 9.56%. Internet users surveyed used digital environments in searches for health in 99.8% of the 974 valid responses, varying the tech- nology used and social media according to age, and 57.1% of 965 responses considered easy and very easy to obtain information, and 35.6% of 922 responses used it for education searches. The offer of information for health, with 655 responses, was considered ample, but presented doubts about quality and reliability for 87.4%, while the health education, less demanded, with 196 responses, was rated as more reliable, but presented quality doubts for 32.7%. 27.6% considered a scarce offer and 16.8% found difficulties to access. Regarding the searched topics, the most frequent among 945 responses were in relation to the vital stages, the disease or the syndromes, and the tests, related to themselves or relatives, with 22,0% of searches, followed of the search category "healthy life" with 18.8%. Little dependence was found among the studied categories related to Internet searches with respect to gender and age, except for the age in relation to the categories of "access technology", and "social media". CONCLUSIONS: The growing use of the Internet in the search for information and education for health could influence patients, relatives, and caregivers in relation to care and self-care, as well as in the relationship with the health system and its professionals. The searches find important difficulties, as in Information for health, doubtful reliability, low quality contents, and infoxication; while in Education for health, they refer difficulty to access and doubtful reliability.

May, C., Finch, T., Mair, F., et al. (2005). "Towards a wireless patient: chronic illness, scarce care and technological innovation in the United Kingdom." Soc Sci Med **61**(7): 1485-1494.

'Modernization' is a key health policy objective in the UK. It extends across a range of public service delivery and organizational contexts, and also means there are radical changes in perspective on professional behaviour and practice. New information and communications technologies have been seen as one of the key mechanisms by which these changes can be engendered. In particular, massive investment in information technologies promises the rapid distribution and deployment of patient-centred information across internal organizational boundaries. While the National Health Service (NHS) sits on the edge of a pound sterling 6 billion investment in electronic patient records, other technologies find their status as innovative vehicles for professional behaviour change and service delivery in question. In this paper, we consider the ways that telemedicine and telehealthcare systems have been constructed first as a field of technological innovation, and more recently, as management solutions to problems around the distribution of health care. We use NHS responses to chronic illness as a medium for understanding these shifts. In particular, we draw attention to the shifting definitions of 'innovation' and to the ways that these shifts define a move away from notions of technological advance towards management control.

Middlemass, J. B., Vos, J. et Siriwardena, A. N. (2017). "Perceptions on use of home telemonitoring in patients with long term conditions - concordance with the Health Information Technology Acceptance Model: a qualitative collective case study." BMC Med Inform Decis Mak **17**: 13.
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Background: Health information technology (HIT) may be used to improve care for increasing numbers of older people with long term conditions (LTCs) who make high demands on health and social care services. Despite its potential benefits for reducing disease exacerbations and hospitalisations, HIT home monitoring is not always accepted by patients. Using the Health Information Technology Acceptance Model (HITAM) this qualitative study examined the usefulness of the model for understanding acceptance of HIT in older people (>= 60 years) participating in a RCT for older people with Chronic Obstructive Pulmonary Disease (COPD) and associated heart diseases (CHROMED). Methods: An instrumental, collective case study design was used with qualitative interviews of patients in the intervention arm of CHROMED. These were conducted at two time points, one shortly after installation of equipment and again at the end of (or withdrawal from) the study. We used Framework Analysis to examine how well the HITAM accounted for the data. Results: Participants included 21 patients aged between 60-99 years and their partners or relatives where applicable. Additional concepts for the HITAM for older people included: concerns regarding health professional access and attachment; heightened illness anxiety and desire to

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avoid continuation of the 'sick-role'. In the technology zone, HIT self-efficacy was associated with good organisational processes and informal support; while ease of use was connected to equipment design being suitable for older people. HIT perceived usefulness was related to establishing trends in health status, detecting early signs of infection and potential to self-manage. Due to limited feedback to users opportunities to self-manage were reduced. Conclusions: HITAM helped understand the likelihood that older people with LTCs would use HIT, but did not explain how this might result in improved self-management. In order to increase HIT acceptance among older people, equipment design and organisational factors need to be considered.

Milani, R. V., Lavie, C. J., Bober, R. M., et al. (2017). "Improving Hypertension Control and Patient Engagement Using Digital Tools." Am J Med **130**(1): 14-20.

Hypertension is present in 30% of the adult US population and is a major contributor to cardiovascular disease. The established office-based approach yields only 50% blood pressure control rates and low levels of patient engagement. Available home technology now provides accurate, reliable data that can be transmitted directly to the electronic medical record. We evaluated blood pressure control in 156 patients with uncontrolled hypertension enrolled into a home-based digital-medicine blood pressure program and compared them with 400 patients (matched to age, sex, body mass index, and blood pressure) in a usual-care group after 90 days. Digital-medicine patients completed questionnaires online, were asked to submit at least one blood pressure reading/week, and received medication management and lifestyle recommendations via a clinical pharmacist and a health coach. Blood pressure units were commercially available that transmitted data directly to the electronic medical record. Digital-medicine patients averaged 4.2 blood pressure readings per week. At 90 days, 71% of digital-medicine vs 31% of usual-care patients had achieved target blood pressure control. Mean decrease in systolic/diastolic blood pressure was 14/5 mm Hg in digital medicine, vs 4/2 mm Hg in usual care (P < .001). Excess sodium consumption decreased from 32% to 8% in the digital-medicine group (P = .004). Mean patient activation increased from 41.9 to 44.1 (P = .008), and the percentage of patients with low patient activation decreased from 15% to 6% (P = .03) in the digital-medicine group. A digital hypertension program is feasible and associated with significant improvement in blood pressure control rates and lifestyle change. Utilization of a virtual health intervention using connected devices improves patient activation and is well accepted by patients.

Mirkovic, J., Jessen, S., Kristjansdottir, O. B., et al. (2018). "Developing Technology to Mobilize Personal Strengths in People with Chronic Illness: Positive Codesign Approach." JMIR Form Res **2**(1): e10774.

BACKGROUND: Emerging research from psychology and the bio-behavioral sciences recognizes the importance of supporting patients to mobilize their personal strengths to live well with chronic illness. Positive technology and positive computing could be used as underlying design approaches to guide design and development of new technology-based interventions for this user group that support mobilizing their personal strengths. OBJECTIVE: A codesigning workshop was organized with the aim to explore user requirements and ideas for how technology can be used to help people with chronic illness activate their personal strengths in managing their everyday challenges. METHODS: Thirty-five participants from diverse backgrounds (patients, health care providers, designers, software developers, and researchers) participated. The workshop combined principles of (1) participatory and service design to enable meaningful participation and collaboration of different stakeholders and (2) an appreciative inquiry methodology to shift participants' attention to positive traits, values, and aspects that are meaningful and life-giving and stimulate participants' creativity, engagement, and collaboration. Utilizing these principles, participants were engaged in group activities to develop ideas for strengths-supportive tools. Each group consisted of 3-8 participants with different backgrounds. All group work was analysed using thematic analyses. RESULTS: Participants were highly engaged in all activities and reported a wide variety of requirements and ideas, including more than 150 personal strength examples, more than 100 everyday challenges that could be addressed by using personal strengths, and a wide range of functionality requirements (eg, social support, strength awareness and reflection, and coping strategies). 6 concepts for strength-supportive tools were created. These included the following: a mobile app to support a person to store, reflect on, and mobilize one's strengths (Strengths treasure chest app); "empathy glasses" enabling a person to see a situation from another person's perspective (Empathy Simulator); and a mobile app allowing a person to receive supportive messages from close people in a

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safe user-controlled environment (Cheering squad app). Suggested design elements for making the tools engaging included: metaphors (eg, trees, treasure island), visualization techniques (eg, dashboards, color coding), and multimedia (eg, graphics). Maintaining a positive focus throughout the tool was an important requirement, especially for feedback and framing of content. CONCLUSIONS: Combining participatory, service design, and appreciative inquiry methods were highly useful to engage participants in creating innovative ideas. Building on peoples' core values and positive experiences empowered the participants to expand their horizons from addressing problems and symptoms, which is a very common approach in health care today, to focusing on their capacities and that which is possible, despite their chronic illness. The ideas and user requirements, combined with insights from relevant theories (eg, positive technology, self-management) and evidence from the related literature, are critical to guide the development of future more personalized and strengths-focused self-management tools.

Nahm, E. S., Blum, K., Scharf, B., et al. (2008). "Exploration of patients' readiness for an eHealth management program for chronic heart failure: a preliminary study." J Cardiovasc Nurs **23**(6): 463-471.

Heart failure (HF) is a major public health problem in the United States. Approximately 5 million Americans are living with HF, and each year, 550,000 more are newly diagnosed. With recent, rapidly advancing technologies, many studies have examined the effects of technology-based HF management programs. Most of these studies focused on telemonitoring devices, lacking an aspect to motivate individuals to manage their own illnesses. This exploratory study was conducted to (1) examine the readiness of patients with HF in using an eHealth program that includes both telemonitoring and motivational components (ie, Web learning modules, eCommunication) and (2) assess the specific needs of patients with HF that can be addressed by a future eHealth program. This was a single group descriptive study using a convenience sample. A total of 44 patients with HF (mean age, 72.8 years; range, 55-85 years) were recruited from the pool of enrollees of the Medicare Coordinated Care Demonstration project for HF management that used only a telemonitoring component. Although only 10 participants were users, among 34 nonusers, 17 reported availability of Web access, and 15 reported that they would use the Internet if access and training were available. Overall, confidence for using telemonitoring devices and Web-based health modules was high, with means of 27 (range, 3-30) and 7.6 (range, 1-10), respectively. Confidence for learning health information using Web modules, however, was lower with a mean of 41.5 (range, 8-80). The 2 most highly rated health information needs were research findings (n = 41, 93.2%) and medication (n = 39, 88.6%). Most participants would like to have e-mail communication with healthcare providers. The findings showed the participants' high readiness to use the proposed eHealth program if access and training were provided. This study used a small convenience sample. Further studies are needed with larger, diverse samples.

Nelson, L. A., Mulvaney, S. A., Johnson, K. B., et al. (2017). "mHealth Intervention Elements and User Characteristics Determine Utility: A Mixed-Methods Analysis." Diabetes Technol Ther **19**(1): 9-17.

BACKGROUND: Mobile health (mHealth) interventions are improving the medication adherence of adults with type 2 diabetes mellitus (T2DM), but few studies examine how users experience these interventions. Therefore, we used a mixed-methods approach to understand how T2DM users experience a text messaging and interactive voice response (IVR)-delivered medication adherence intervention called MEssaging for Diabetes (MED). METHODS: Adults with T2DM used MED as part of a 3-month pilot study. MED sends daily tailored text messages addressing adherence barriers, daily assessment text messages asking about adherence, and weekly tailored IVR calls providing adherence feedback, encouragement, and questions to facilitate problem solving. Sixty participants completed feedback interviews. We used a mixed-methods approach to understand their experience, examining associations between participants' characteristics and their feedback. RESULTS: Participants who completed feedback interviews were on average 50.0 +/- 10.1 years old; 65% female, 62% non-white; 15% had less than a high school education, 70% had annual incomes less than $20K; and average hemoglobin A1c was 8.0% +/- 1.9%. Participants rated each intervention element favorably; common reasons for MED's helpfulness included receiving novel information about diabetes medications, emotional support, and reminders to take medication. People who were younger and more recently diagnosed with T2DM had more favorable experiences using MED. In general, users valued text messages more than IVR calls. CONCLUSIONS: Consideration of the user experience is critical for developing engaging mHealth interventions. User feedback reveals what

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mHealth elements have the most value and why, which users to target, and how to optimize an intervention's utility and appeal.

Newhouse, N., Martin, A., Jawad, S., et al. (2016). "Randomised feasibility study of a novel experience-based internet intervention to support self-management in chronic asthma." BMJ Open **6**(12): e013401.

> OBJECTIVE: To determine the feasibility of a randomised controlled trial (RCT) assessing the effects of an experience-based website as a resource for the self-management of chronic asthma. DESIGN AND SETTING: Feasibility, single-blind RCT in 2 regions of England. Randomisation used computer-generated random number sequence in a 1:1 ratio, after baseline data collection, to website access for 2 weeks. PARTICIPANTS: Adults (age >/=18 years), with clinically diagnosed asthma as coded in their primary care electronic record, prescribed inhaled corticosteroids for at least 3 months in the previous year, were recruited from 9 general practices. INTERVENTION: The EXPERT asthma intervention is an interactive PC/laptop/tablet/smartphone compatible website designed with extensive input from adults with asthma. It provides experience-based information and aims to support subjective perception of self-efficacy, self-management and improve health status. OUTCOME MEASURES: Primary outcomes were consent/recruitment, website usage and completion of outcome measures. Secondary outcomes included Partners in Health (PIH) questionnaire, the Chronic Disease Self-Efficacy Scale, the SF36 and the E-Health Impact Questionnaire. Participant blinding postrandomisation was not possible. The analysis was blind to allocation. RESULTS: Recruitment target exceeded. 148 participants randomised (73 intervention group). Age range 19-84 years; 59% female. 121 of 148 (84%; 62 intervention group) followed up. The median number of logins was 2 (IQR 2-3, range 1-48). Minimal differences of change from baseline between groups; both showed improvement in health state or management of their condition with no significant differences between arms. No adverse events. CONCLUSIONS: Recruitment and retention confirmed feasibility. The trends towards improved outcomes suggest that further research on digital interventions based on exposure to others' personal experiences may be of value in the self-management of chronic asthma. TRIAL REGISTRATION NUMBER: ISRCTN29549695; Results.

Nissen, L. et Lindhardt, T. (2017). "A qualitative study of COPD-patients' experience of a telemedicine intervention." Int J Med Inform **107**: 11-17.

> BACKGROUND: Clinically stable patients with chronic obstructive pulmonary disease (COPD) are often followed at regular intervals regardless of the needs. Our aim was to investigate the patient perspective on receiving telemedicine with weekly submission of readings and regular video consultations (Net-COPD) as an alternative to visits in the respiratory outpatient clinic and investigating the role of telemedicine in management of severe COPD. DESIGN: Descriptive design and the method is qualitative based on semistructured interviews. METHODS: Fourteen intervention patients participated from the Danish randomized clinical trial Net-COPD project. The transcribed interviews were analysed using manifest and latent content analysis. FINDINGS: Participants reported that Net-COPD brought enhanced wellbeing and a sense of security in knowing that nurses kept an eye on them and initiated appropriate interventions in case of changes in the patient's condition. This was experienced as a lifeline to the respiratory outpatient clinic, which could be contacted when needed. Through monitoring, moreover, patients developed increased awareness and better self-management of their disease. Patients also experienced more focused and less stressful meetings via video consultations, than in respiratory outpatient visits. Nevertheless it was important that it was the same health staff patient met in the video consultations. CONCLUSION: Participation in telemedicine increased the patient empowerment primarily by the sharing of data with a permanent staff of nurses. This knowledge was used to keep control of the disease in the form of extra readings and the systematic use of learned initiatives. This gave patients and relatives a sense of security.

Novak, L. L., Unertl, K. M. et Holden, R. J. (2016). "Realizing the Potential of Patient Engagement: Designing IT to Support Health in Everyday Life." Stud Health Technol Inform **222**: 237-247.

> Maintaining health or managing a chronic condition involves performing and coordinating potentially new and complex tasks in the context of everyday life. Tools such as reminder apps and online health communities are being created to support patients in carrying out these tasks. Research has documented mixed effectiveness and problems with continued use of these tools, and suggests that more widespread

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adoption may be aided by design approaches that facilitate integration of eHealth technologies into patients' and family members' daily routines. Given the need to augment existing methods of design and implementation of eHealth tools, this contribution discusses frameworks and associated methods that engage patients and explore contexts of use in ways that can produce insights for eHealth designers.

Oberg, U., Isaksson, U., Jutterstrom, L., et al. (2018). "Perceptions of Persons With Type 2 Diabetes Treated in Swedish Primary Health Care: Qualitative Study on Using eHealth Services for Self-Management Support." JMIR Diabetes **3**(1): e7.

BACKGROUND: Digital health services are increasing rapidly worldwide. Strategies to involve patients in self-monitoring of type 2 diabetes (T2D) on a daily basis is of crucial importance, and there is a need to optimize the delivery of care such as self-management support. Digitalized solutions have the potential to modify and personalize the way in which people use primary health services, both by increasing access to information and providing other forms of support at a distance. It is a challenge to integrate core values of person-centered care into digitalized health care services. OBJECTIVE: The objective of this study was to describe perceptions of using electronic health (eHealth) services and related technologies for self-management support among people with T2D treated in Swedish primary health care. METHODS: This is a qualitative study based on interviews analyzed using qualitative content analysis conducted among people diagnosed with T2D. RESULTS: Findings suggest that the participants had mixed feelings regarding the use of digital health services for self-management support. They experienced potentials such as increased involvement, empowerment, and security, as well as concerns such as ambivalence and uncertainty. CONCLUSIONS: Digital health services for self-management are easily accessible and have the potential to reach a wide population. However, targeted training to increase digital skills is required, and personalized devices must be adapted and become more person-centered to improve patients' involvement in their own care.

O'Cathain, A., Drabble, S. J., Foster, A., et al. (2016). "Being Human: A Qualitative Interview Study Exploring Why a Telehealth Intervention for Management of Chronic Conditions Had a Modest Effect." J Med Internet Res **18**(6): e163.

BACKGROUND: Evidence of benefit for telehealth for chronic conditions is mixed. Two linked randomized controlled trials tested the Healthlines Service for 2 chronic conditions: depression and high risk of cardiovascular disease (CVD). This new telehealth service consisted of regular telephone calls from nonclinical, trained health advisers who followed standardized scripts generated by interactive software. Advisors facilitated self-management by supporting participants to use Web-based resources and helped to optimize medication, improve treatment adherence, and encourage healthier lifestyles. Participants were recruited from primary care. The trials identified moderate (for depression) or partial (for CVD risk) effectiveness of the Healthlines Service. OBJECTIVE: An embedded qualitative study was undertaken to help explain the results of the 2 trials by exploring mechanisms of action, context, and implementation of the intervention. METHODS: Qualitative interview study of 21 staff providing usual health care or involved in the intervention and 24 patients receiving the intervention. RESULTS: Interviewees described improved outcomes in some patients, which they attributed to the intervention, describing how components of the model on which the intervention was based helped to achieve benefits. Implementation of the intervention occurred largely as planned. However, contextual issues in patients' lives and some problems with implementation may have reduced the size of effect of the intervention. For depression, patients' lives and preferences affected engagement with the intervention: these largely working-age patients had busy and complex lives, which affected their ability to engage, and some patients preferred a therapist-based approach to the cognitive behavioral therapy on offer. For CVD risk, patients' motivations adversely affected the intervention whereby some patients joined the trial for general health improvement or from altruism, rather than motivation to make lifestyle changes to address their specific risk factors. Implementation was not optimal in the early part of the CVD risk trial owing to technical difficulties and the need to adapt the intervention for use in practice. For both conditions, enthusiastic and motivated staff offering continuity of intervention delivery tailored to individual patients' needs were identified as important for patient engagement with telehealth; this was not delivered consistently, particularly in the early stages of the trials. Finally, there was a lack of active engagement from primary care. CONCLUSIONS: The conceptual model was supported and could be used to develop further telehealth interventions for chronic conditions. It may be possible to increase the effectiveness of this, and similar interventions, by

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attending to the human as well as the technical aspects of telehealth: offering it to patients actively wanting the intervention, ensuring continuity of delivery by enthusiastic and motivated staff, and encouraging active engagement from primary care staff.

O'Connor, S., Hanlon, P., O'Donnell, C. A., et al. (2016). "Barriers and facilitators to patient and public engagement and recruitment to digital health interventions: protocol of a systematic review of qualitative studies." BMJ Open **6**(9): e010895.

INTRODUCTION: Patients and the public are beginning to use digital health tools to assist in managing chronic illness, support independent living and self-care, and remain connected to health and care providers. However, engaging with and enrolling in digital health interventions, such as telehealth systems, mobile health applications, patient portals and personal health records, in order to use them varies considerably. Many factors affect people's ability to engage with and sign up to digital health platforms. OBJECTIVES: The primary aim is to identify the barriers and facilitators patients and the public experience to engagement and recruitment to digital health interventions. The secondary aim is to identify engagement and enrolment strategies, leading if possible to a taxonomy of such approaches, and a conceptual framework of digital health engagement and recruitment processes. METHODS: A systematic review of qualitative studies will be conducted by searching six databases: MEDLINE, CINAHL, PubMed, EMBASE, Scopus and the ACM Digital Library for papers published between 2000 and 2015. Titles and abstracts along with full-text papers will be screened by two independent reviewers against predetermined inclusion and exclusion criteria. A data extraction form will be used to provide details of the included studies. Quality assessment will be conducted using the Consolidated Criteria for Reporting Qualitative Research checklist. Any disagreements will be resolved through discussion with an independent third reviewer. Analysis will be guided by framework synthesis and informed by normalization process theory and burden of treatment theory, to aid conceptualisation of digital health engagement and recruitment processes. DISCUSSION: This systematic review of qualitative studies will explore factors affecting engagement and enrolment in digital health interventions. It will advance our understanding of readiness for digital health by examining the complex factors that affect patients' and the public's ability to take part. TRIAL REGISTRATION NUMBER: CRD42015029846.

Oudshoorn, N. (2008). "Diagnosis at a distance: the invisible work of patients and healthcare professionals in cardiac telemonitoring technology." Sociol Health Illn **30**(2): 272-288.

Although patients are often absent in discourses on telemedicine, many telemonitoring applications constitute a new medical practice in which patients are expected to play an active role. The paper is based on a study of the use of one specific telemonitoring device, an ambulatory ECG recorder introduced to diagnose infrequent irregularities of the heart rhythm. It seeks to examine all the invisible work it takes to produce patients who are active and responsible as participants in the diagnosis of their heart problem. In particular, I address the question of how we can understand that individuals who are anxious about their heart function manage to adopt the role of 'diagnostic agent'. This research shows that, although many patients managed to become competent users of the new technology, there are important patterns of selective use patients invented to integrate the technology in their daily life. In conclusion, the paper suggests that most patients were able to adopt the role of diagnostic agent not only because of their individual motivation but because of their location in the socio-technical network of this technology, in which the invisible work of home-care nurses and physicians at the telemedical centre made all the difference.

Palazzo, C., Klinger, E., Dorner, V., et al. (2016). "Barriers to home-based exercise program adherence with chronic low back pain: Patient expectations regarding new technologies." Ann Phys Rehabil Med **59**(2): 107-113.

OBJECTIVE: To assess views of patients with chronic low back pain (cLBP) concerning barriers to home-based exercise program adherence and to record expectations regarding new technologies. DESIGN: Qualitative study based on semi-structured interviews. PARTICIPANTS: A heterogeneous sample of 29 patients who performed a home-based exercise program for cLBP learned during supervised physiotherapy sessions in a tertiary care hospital. INTERVENTIONS: Patients were interviewed at home by the same trained interviewer. Interviews combined a funnel-shaped structure and an itinerary method. RESULTS: Barriers to adherence related to the exercise program (number, effectiveness, complexity and

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burden of exercises), the healthcare journey (breakdown between supervised sessions and home exercise, lack of follow-up and difficulties in contacting care providers), patient representations (illness and exercise perception, despondency, depression and lack of motivation), and the environment (attitudes of others, difficulties in planning exercise practice). Adherence could be enhanced by increasing the attractiveness of exercise programs, improving patient performance (following a model or providing feedback), and the feeling of being supported by care providers and other patients. Regarding new technologies, relatively younger patients favored visual and dynamic support that provided an enjoyable and challenging environment and feedback on their performance. Relatively older patients favored the possibility of being guided when doing exercises. Whatever the tool proposed, patients expected its use to be learned during a supervised session and performance regularly checked by care providers; they expected adherence to be discussed with care providers. CONCLUSIONS: For patients with cLBP, adherence to home-based exercise programs could be facilitated by increasing the attractiveness of the programs, improving patient performance and favoring a feeling of being supported. New technologies meet these challenges and seem attractive to patients but are not a substitute for the human relationship between patients and care providers.

Palcu, P., Munce, S., Jaglal, S. B., et al. (2018). "Understanding the Patient Experience and Challenges to Osteoporosis Care Delivered Virtually by Telemedicine." Journal of Bone and Mineral Research **33**: 399-399. <Go to ISI>://WOS:000450475402015

Peleg, M., Michalowski, W., Wilk, S., et al. (2018). "Ideating Mobile Health Behavioral Support for Compliance to Therapy for Patients with Chronic Disease: A Case Study of Atrial Fibrillation Management." J Med Syst **42**(11): 234.

Poor patient compliance to therapy results in a worsening condition that often increases healthcare costs. In the MobiGuide project, we developed an evidence-based clinical decision-support system that delivered personalized reminders and recommendations to patients, helping to achieve higher therapy compliance. Yet compliance could still be improved and therefore building on the MobiGuide project experience, we designed a new component called the Motivational Patient Assistant (MPA) that is integrated within the MobiGuide architecture to further improve compliance. This component draws from psychological theories to provide behavioral support to improve patient engagement and thereby increasing patients' compliance. Behavior modification interventions are delivered via mobile technology at patients' home environments. Our approach was inspired by the IDEAS (Integrate, Design, Assess, and Share) framework for developing effective digital interventions to change health behavior; it goes beyond this approach by extending the Ideation phase' concepts into concrete backend architectural components and graphical user-interface designs that implement behavioral interventions. We describe in detail our ideation approach and how it was applied to design the user interface of MPA for anticoagulation therapy for the atrial fibrillation patients. We report results of a preliminary evaluation involving patients and care providers that shows the potential usefulness of the MPA for improving compliance to anticoagulation therapy.

Piotrowicz, E. (2017). "The management of patients with chronic heart failure: the growing role of e-Health." Expert Rev Med Devices **14**(4): 271-277.

INTRODUCTION: The increasing pandemic of heart failure is becoming a serious challenge for the health care system. The medical world is searching for solutions which could decrease its scale and improve patients' quality of life and prognosis. Telemanagement of heart failure patients is a new promising option. Technical and technological platforms to perform e-Health management in heart failure patients' homes have become available. This paper's aims are to present different forms of e-Health including telecare, home monitoring of cardiovascular implantable electronic devices, remote monitoring of hemodynamic implantable devices and telerehabilitation in providing optimal long term management for heart failure patients. Areas covered: E-education and self-monitoring, structured telephone support and telemonitoring, remote monitoring of cardiovascular implantable electronics devices and hemodynamic implantable electronic devices and telerehabilitation. Expert commentary: The data analyzed in the paper suggests that remote monitoring is capable of identifying life-threatening deterioration and helps heart failure patients avoid seeking medical assistance in hospitals and that home-based telerehabilitation is well accepted, safe, effective and has high adherence among HF patients.

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Pludwinski, S., Ahmad, F., Wayne, N., et al. (2016). "Participant experiences in a smartphone-based health coaching intervention for type 2 diabetes: A qualitative inquiry." J Telemed Telecare **22**(3): 172-178.

> INTRODUCTION: We investigated the experience of individuals diagnosed with type 2 diabetes mellitus (T2DM) who participated in an intervention in which the key elements were the provision of a smartphone and self-monitoring software. The interviews focused on use of a smartphone and the effects on motivation for health behavior change. METHODS: This was a qualitative evaluation of participants in a larger T2DM self-management randomized controlled trial (RCT) conducted at the Black Creek Community Health Centre (BCCHC) in Toronto, Canada (ClinicalTrials.gov Identifier: NCT02036892). The study is based on semi-structured interviews (n = 11) that were audio taped and analyzed with a thematic analytic approach. The RCT compared the effectiveness of six months of smartphone-based self-monitoring and health coaching with a control group who received health coaching without internet or smartphone-based assistance. RESULTS: Qualitative data analyses resulted in derivation of four major themes that describe participant experience: (a) 'smartphone and software', describes smartphone use in relation to health behavior change; (b) 'health coach' describes how client/health coach relationships were assisted by smartphone use; (c) 'overall experience' describes perceptions of the overall intervention; and (d) 'frustrations in managing chronic conditions' describes difficulties with the complexities of T2DM management from a patient perspective. DISCUSSION: Findings suggest that interventions with T2DM assisted by smartphone software and health coaches actively engage individuals in improved hemoglobin A1c (HbA1c) control.

Powell, R. E., Henstenburg, J. M., Cooper, G., et al. (2017). "Patient Perceptions of Telehealth Primary Care Video Visits." Ann Fam Med **15**(3): 225-229.

> PURPOSE: Telehealth is a care delivery model that promises to increase the flexibility and reach of health services. Our objective is to describe patient experiences with video visits performed with their established primary care clinicians. METHODS: We constructed semistructured, in-depth qualitative interviews with adult patients following video visits with their primary care clinicians at a single academic medical center. Data were analyzed with a content analysis approach. RESULTS: Of 32 eligible patients, 19 were successfully interviewed. All patients reported overall satisfaction with video visits, with the majority interested in continuing to use video visits as an alternative to in-person visits. The primary benefits cited were convenience and decreased costs. Some patients felt more comfortable with video visits than office visits and expressed a preference for receiving future serious news via video visit, because they could be in their own supportive environment. Primary concerns with video visits were privacy, including the potential for work colleagues to overhear conversations, and questions about the ability of the clinician to perform an adequate physical examination. CONCLUSIONS: Primary care video visits are acceptable in a variety of situations. Patients identified convenience, efficiency, communication, privacy, and comfort as domains that are potentially important to consider when assessing video visits vs in-person encounters. Future studies should explore which patients and conditions are best suited for video visits.

Powell, R. E., Stone, D. et Hollander, J. E. (2018). "Patient and Health System Experience With Implementation of an Enterprise-Wide Telehealth Scheduled Video Visit Program: Mixed-Methods Study." JMIR Med Inform **6**(1): 7. <Go to ISI>://WOS:000433947600010

> Background: Real-time video visits are increasingly used to provide care in a number of settings because they increase access and convenience of care, yet there are few reports of health system experiences. Objective: The objective of this study is to report health system and patient experiences with implementation of a telehealth scheduled video visit program across a health system. Methods: This is a mixed methods study including (1) a retrospective descriptive report of implementation of a telehealth scheduled visit program at one large urban academic-affiliated health system and (2) a survey of patients who participated in scheduled telehealth visits. Health system and patient-reported survey measures were aligned with the National Quality Forum telehealth measure reporting domains of access, experience, and effectiveness of care. Results: This study describes implementation of a scheduled synchronous video visit program over an 18-month period. A total of 3018 scheduled video visits were completed across multiple clinical departments. Patient experiences were captured in surveys of 764 patients who participated in telehealth visits. Among survey respondents, 91.6% (728/795) reported satisfaction with the scheduled visits and 82.7% (628/759) reported perceived quality similar to an in-person visit. A total of 86.0% (652/758) responded that use of the scheduled video visit made it easier to

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get care. Nearly half (46.7%, 346/740) of patients estimated saving 1 to 3 hours and 40.8% (302/740) reported saving more than 3 hours of time. The net promoter score, a measure of patient satisfaction, was very high at 52. Conclusions: A large urban multihospital health system implemented an enterprise-wide scheduled telehealth video visit program across a range of clinical specialties with a positive patient experience. Patients found use of scheduled video visits made it easier to get care and the majority perceived time saved, suggesting that use of telehealth for scheduled visits can improve potential access to care across a range of clinical scenarios with favorable patient experiences.

Price-Haywood, E. G., Harden-Barrios, J., Ulep, R., et al. (2017). "eHealth Literacy: Patient Engagement in Identifying Strategies to Encourage Use of Patient Portals Among Older Adults." Popul Health Manag **20**(6): 486-494.

Innovations in chronic disease management are growing rapidly as advancements in technology broaden the scope of tools. Older adults are less likely to be willing or able to use patient portals or smartphone apps for health-related tasks. The authors conducted a cross-sectional survey of older adults (ages >/=50) with hypertension or diabetes to examine relationships between portal usage, interest in health-tracking tools, and eHealth literacy, and to solicit practical solutions to encourage technology adoption. Among 247 patients surveyed in a large integrated delivery health system between August 2015 and January 2016, eHealth literacy was positively associated with portal usage (OR [95% CI]: 1.3 [1.2-1.5]) and interest in health-tracking tools (1.2 [1.1-1.3]). Portal users compared to nonusers (N = 137 vs.110) had higher rates of interest in using websites/smartphone apps to track blood pressure (55% vs. 36%), weight (53% vs. 35%), exercise (53% vs. 32%), or medication (46% vs 33%, all P < 0.05). Portal users noted cumbersome processes for accessing portals and variations in provider availability for online scheduling and response times to messages. Portal nonusers expressed concerns about data security, lack of personalization, and limited perceived value of using portals. Both groups noted the importance of computer literacy and technical support. Patient stakeholders recommended marketing initiatives that capture patient stories demonstrating real-life applications of what patients can do with digital technology, how to use it, and why it may be useful. Health systems also must screen for eHealth literacy, provide training, promote proxy users, and institute quality assurance that ensures patients' experiences will not vary across the system.

Ramirez, M., Wu, S., Jin, H., et al. (2016). "Automated Remote Monitoring of Depression: Acceptance Among Low-Income Patients in Diabetes Disease Management." JMIR Ment Health **3**(1): e6.

BACKGROUND: Remote patient monitoring is increasingly integrated into health care delivery to expand access and increase effectiveness. Automation can add efficiency to remote monitoring, but patient acceptance of automated tools is critical for success. From 2010 to 2013, the Diabetes-Depression Care-management Adoption Trial (DCAT)-a quasi-experimental comparative effectiveness research trial aimed at accelerating the adoption of collaborative depression care in a safety-net health care system-tested a fully automated telephonic assessment (ATA) depression monitoring system serving low-income patients with diabetes. OBJECTIVE: The aim of this study was to determine patient acceptance of ATA calls over time, and to identify factors predicting long-term patient acceptance of ATA calls. METHODS: We conducted two analyses using data from the DCAT technology-facilitated care arm, in which for 12 months the ATA system periodically assessed depression symptoms, monitored treatment adherence, prompted self-care behaviors, and inquired about patients' needs for provider contact. Patients received assessments at 6, 12, and 18 months using Likert-scale measures of willingness to use ATA calls, preferred mode of reach, perceived ease of use, usefulness, nonintrusiveness, privacy/security, and long-term usefulness. For the first analysis (patient acceptance over time), we computed descriptive statistics of these measures. In the second analysis (predictive factors), we collapsed patients into two groups: those reporting "high" versus "low" willingness to use ATA calls. To compare them, we used independent t tests for continuous variables and Pearson chi-square tests for categorical variables. Next, we jointly entered independent factors found to be significantly associated with 18-month willingness to use ATA calls at the univariate level into a logistic regression model with backward selection to identify predictive factors. We performed a final logistic regression model with the identified significant predictive factors and reported the odds ratio estimates and 95% confidence intervals. RESULTS: At 6 and 12 months, respectively, 89.6% (69/77) and 63.7% (49/77) of patients "agreed" or "strongly agreed" that they would be willing to use ATA calls in the future. At 18 months, 51.0% (64/125) of patients perceived ATA calls as useful and 59.7%

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(46/77) were willing to use the technology. Moreover, in the first 6 months, most patients reported that ATA calls felt private/secure (75.9%, 82/108) and were easy to use (86.2%, 94/109), useful (65.1%, 71/109), and nonintrusive (87.2%, 95/109). Perceived usefulness, however, decreased to 54.1% (59/109) in the second 6 months of the trial. Factors predicting willingness to use ATA calls at the 18-month follow-up were perceived privacy/security and long-term perceived usefulness of ATA calls. No patient characteristics were significant predictors of long-term acceptance. CONCLUSIONS: In the short term, patients are generally accepting of ATA calls for depression monitoring, with ATA call design and the care management intervention being primary factors influencing patient acceptance. Acceptance over the long term requires that the system be perceived as private/secure, and that it be constantly useful for patients' needs of awareness of feelings, self-care reminders, and connectivity with health care providers. TRIAL REGISTRATION: ClinicalTrials.gov NCT01781013; https://clinicaltrials.gov/ct2/show/NCT01781013 (Archived by WebCite at http://www.webcitation.org/6e7NGku56).

Ravn Jakobsen, P., Hermann, A. P., Sondergaard, J., et al. (2018). "Development of an mHealth Application for Women Newly Diagnosed with Osteoporosis without Preceding Fractures: A Participatory Design Approach." Int J Environ Res Public Health **15**(2).

mHealth is a useful tool to improve health outcome within chronic disease management. However, mHealth is not implemented in the field of postmenopausal osteoporosis even though it is a major worldwide health challenge. Therefore, this study aims to design and develop an mHealth app to support women in self-management of osteoporosis when they are diagnosed without preceding fractures. Participatory design is conducted in three phases. Based on identified needs in the first phase, a prototype is designed and developed in an iterative process in the second phase before the mHealth app is tested in the third phase. This paper focuses on the user activities in phase two and describes how a team of researchers, women, physicians, healthcare professionals, and app designers are involved in the participatory design process. The study shows that participatory design is a viable approach when developing an mHealth app for women with asymptomatic osteoporosis. Results obtained from the workshops and laboratory tests demonstrate the importance of feedback from users in the iterative process, as well as the participation of users and app designers in workshops and laboratory tests to enable mutual learning when developing new mHealth solutions. The regular member-checks and involvement of users helped to identify challenges associated with providing healthcare services through an app.

Riley, J. P., Gabe, J. P. et Cowie, M. R. (2013). "Does telemonitoring in heart failure empower patients for self-care? A qualitative study." J Clin Nurs **22**(17-18): 2444-2455.

AIMS AND OBJECTIVES: To explore the extent to which telemonitoring in patients with heart failure empowers them to self-care. BACKGROUND: Telemonitoring is increasingly used to provide structured follow-up. In patients with heart failure it has been shown to reduce mortality. However there is limited knowledge of the extent to which it supports the patient to develop self-care skills. DESIGN: A qualitative study including interviews with patients at 2 time-points. METHODS: Fifteen patients mean age 74, 11 (73%) male, 9 (60%) symptomatic on moderate activity, 6 (40%) symptomatic on mild exertion were interviewed at two time points: firstly following three months of telemonitoring and the second interview following six months of telemonitoring. Thematic analysis of the data was undertaken using constant comparison. RESULTS: Patients undertook a variety of self-care actions. During the three-month interview technological skills featured highly in patients accounts and they used telemonitoring to facilitate professional monitoring. However, during the six-month interview patients described how they used telemonitoring to support their self-care actions. Such actions were based on the understanding of heart failure that patients developed from their personal experience of symptoms, and their interaction with the telemonitoring and the telemonitoring nurse. We found no difference in self-care actions regardless of patients age, severity of their heart failure, time since diagnosis with heart failure or living alone. CONCLUSION: In summary, the majority of patients used telemonitoring daily and developed self-care skills in monitoring their heart failure. Such skills were developed over the six-month time-period of the study. RELEVANCE TO CLINICAL PRACTICE: Our findings suggest how the nurse can help patients to use telemonitoring to develop their understanding of their heart failure and empower them for self- care decision making.

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Sands, D. Z. et Wald, J. S. (2014). "Transforming health care delivery through consumer engagement, health data transparency, and patient-generated health information." Yearb Med Inform **9**: 170-176.

> OBJECTIVE: Address current topics in consumer health informatics. METHODS: Literature review. RESULTS: Current health care delivery systems need to be more effective in the management of chronic conditions as the population turns older and experiences escalating chronic illness that threatens to consume more health care resources than countries can afford. Most health care systems are positioned poorly to accommodate this. Meanwhile, the availability of ever more powerful and cheaper information and communication technology, both for professionals and consumers, has raised the capacity to gather and process information, communicate more effectively, and monitor the quality of care processes. CONCLUSION: Adapting health care systems to serve current and future needs requires new streams of data to enable better self-management, improve shared decision making, and provide more virtual care. Changes in reimbursement for health care services, increased adoption of relevant technologies, patient engagement, and calls for data transparency raise the importance of patient-generated health information, remote monitoring, non-visit based care, and other innovative care approaches that foster more frequent contact with patients and better management of chronic conditions.

Sarkar, U., Gourley, G. I., Lyles, C. R., et al. (2016). "Usability of Commercially Available Mobile Applications for Diverse Patients." J Gen Intern Med **31**(12): 1417-1426.

> BACKGROUND: Mobile applications or 'apps' intended to help people manage their health and chronic conditions are widespread and gaining in popularity. However, little is known about their acceptability and usability for low-income, racially/ethnically diverse populations who experience a disproportionate burden of chronic disease and its complications. OBJECTIVE: The objective of this study was to investigate the usability of existing mobile health applications ("apps") for diabetes, depression, and caregiving, in order to facilitate development and tailoring of patient-facing apps for diverse populations. DESIGN: Usability testing, a mixed-methods approach that includes interviewing and direct observation of participant technology use, was conducted with participants (n = 9 caregivers; n = 10 patients with depression; and n = 10 patients with diabetes) on a total of 11 of the most popular health apps (four diabetes apps, four depression apps, and three caregiver apps) on both iPad and Android tablets. PARTICIPANTS: The participants were diverse: 15 (58 %) African Americans, seven (27 %) Whites, two (8 %) Asians, two (8 %) Latinos with either diabetes, depression, or who were caregivers. MAIN MEASURES: Participants were given condition-specific tasks, such as entering a blood glucose value into a diabetes app. Participant interviews were video recorded and were coded using standard methods to evaluate attempts and completions of tasks. We performed inductive coding of participant comments to identify emergent themes. KEY RESULTS: Participants completed 79 of 185 (43 %) tasks across 11 apps without assistance. Three themes emerged from participant comments: lack of confidence with technology, frustration with design features and navigation, and interest in having technology to support their self-management. CONCLUSIONS: App developers should employ participatory design strategies in order to have an impact on chronic conditions such as diabetes and depression that disproportionately affect vulnerable populations. While patients express interest in using technologies for self-management, current tools are not consistently usable for diverse patients.

Sedlander, E., Barboza, K. C., Jensen, A., et al. (2018). "Veterans' Preferences for Remote Management of Chronic Conditions." Telemed J E Health **24**(3): 229-235.

> BACKGROUND: The Veterans Health Administration (VA) is investing considerable resources into providing remote management care to patients for disease prevention and management. Remote management includes online patient portals, e-mails between patients and providers, follow-up phone calls, and home health devices to monitor health status. However, little is known about patients' attitudes and preferences for this type of care. This qualitative study was conducted to better understand patient preferences for receiving remote care. METHODS: Ten focus groups were held comprising 77 patients with hypertension or tobacco use history at two VA medical centers. Discussion questions focused on experience with current VA remote management efforts and preferences for receiving additional care between outpatient visits. RESULTS: Most participants were receptive to remote management for referrals, appointment reminders, resource information, and motivational and emotional support between visits, but described challenges with some technological tools. Participants reported that remote

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management should be personalized and tailored to individual needs. They expressed preferences for frequency, scope, continuity of provider, and mode of communication between visits. Most participants were open to nonclinicians contacting them as long as they had direct connection to their medical team. Some participants expressed a preference for a licensed medical professional. All groups raised concerns around confidentiality and privacy of healthcare information. Female Veterans expressed a desire for gender-sensitive care and an interest in complementary and alternative medicine. CONCLUSIONS: The findings and specific recommendations from this study can improve existing remote management programs and inform the design of future efforts.

Seto, E., Leonard, K. J., Cafazzo, J. A., et al. (2012). "Perceptions and experiences of heart failure patients and clinicians on the use of mobile phone-based telemonitoring." J Med Internet Res **14**(1): e25.

BACKGROUND: Previous trials of heart failure telemonitoring systems have produced inconsistent findings, largely due to diverse interventions and study designs. OBJECTIVES: The objectives of this study are (1) to provide in-depth insight into the effects of telemonitoring on self-care and clinical management, and (2) to determine the features that enable successful heart failure telemonitoring. METHODS: Semi-structured interviews were conducted with 22 heart failure patients attending a heart function clinic who had used a mobile phone-based telemonitoring system for 6 months. The telemonitoring system required the patients to take daily weight and blood pressure readings, weekly single-lead ECGs, and to answer daily symptom questions on a mobile phone. Instructions were sent to the patient's mobile phone based on their physiological values. Alerts were also sent to a cardiologist's mobile phone, as required. All clinicians involved in the study were also interviewed post-trial (N = 5). The interviews were recorded, transcribed, and then analyzed using a conventional content analysis approach. RESULTS: The telemonitoring system improved patient self-care by instructing the patients in real-time how to appropriately modify their lifestyle behaviors. Patients felt more aware of their heart failure condition, less anxiety, and more empowered. Many were willing to partially fund the use of the system. The clinicians were able to manage their patients' heart failure conditions more effectively, because they had physiological data reported to them frequently to help in their decision-making (eg, for medication titration) and were alerted at the earliest sign of decompensation. Essential characteristics of the telemonitoring system that contributed to improved heart failure management included immediate self-care and clinical feedback (ie, teachable moments), how the system was easy and quick to use, and how the patients and clinicians perceived tangible benefits from telemonitoring. Some clinical concerns included ongoing costs of the telemonitoring system and increased clinical workload. A few patients did not want to be watched long-term while some were concerned they might become dependent on the system. CONCLUSIONS: The success of a telemonitoring system is highly dependent on its features and design. The essential system characteristics identified in this study should be considered when developing telemonitoring solutions.

Shaw, R. J., Steinberg, D. M., Bonnet, J., et al. (2016). "Mobile health devices: will patients actually use them?" J Am Med Inform Assoc **23**(3): 462-466.

Although mobile health (mHealth) devices offer a unique opportunity to capture patient health data remotely, it is unclear whether patients will consistently use multiple devices simultaneously and/or if chronic disease affects adherence. Three healthy and three chronically ill participants were recruited to provide data on 11 health indicators via four devices and a diet app. The healthy participants averaged overall weekly use of 76%, compared to 16% for those with chronic illnesses. Device adherence declined across all participants during the study. Patients with chronic illnesses, with arguably the most to benefit from advanced (or increased) monitoring, may be less likely to adopt and use these devices compared to healthy individuals. Results suggest device fatigue may be a significant problem. Use of mobile technologies may have the potential to transform care delivery across populations and within individuals over time. However, devices may need to be tailored to meet the specific patient needs.

Snoek, J. A., Meindersma, E. P., Prins, L. F., et al. (2016). "Rationale and design of a randomised clinical trial for an extended cardiac rehabilitation programme using telemonitoring: the TeleCaRe study." BMC Cardiovasc Disord **16**(1): 175.

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BACKGROUND: Despite the known positive effects of cardiac rehabilitation and an active lifestyle, evidence is emerging that it is difficult to attain and sustain the minimum recommendations of leisure time physical activity. The long-term benefits are often disappointing due to lack of adherence to the changes in life style. Qualitative research on patients' perspectives suggests that motivation for lifestyle change tends to diminish around 3 months after the index-event. The time most cardiac rehabilitation programmes end. The aim of the present study is to determine if prolongation of a traditional cardiac rehabilitation programme with additional heart rate based telemonitoring guidance for a period of 6 months results in better long term effects on physical and mental outcomes, care consumption and quality of life than traditional follow-up. METHODS: In this single centre randomised controlled trial 120 patients with an absolute indication for cardiac rehabilitation will be randomised in a 1:1 ratio to an intervention group with 6 months of heart rate based telemonitoring guidance or a control group with traditional follow-up after cardiac rehabilitation. The primary endpoint will be VO2peak after 12 months. Secondary endpoints are VO2peak after 6 months, quality of life, physical-, emotional- and social functioning, cardiac structure, traditional risk profile, compliance to the use of the heart rate belt and smartphone, MACE and care-consumption. DISCUSSION: The TeleCaRe study will provide insight into the added value of the prolongation of traditional cardiac rehabilitation with 6 months of heart rate based telemonitoring guidance. TRIAL REGISTRATION: Dutch Trial Register: NTR4644 (registered 06/12/14).

Steele Gray, C., Khan, A. I., Kuluski, K., et al. (2016). "Improving Patient Experience and Primary Care Quality for Patients With Complex Chronic Disease Using the Electronic Patient-Reported Outcomes Tool: Adopting Qualitative Methods Into a User-Centered Design Approach." JMIR Res Protoc **5**(1): e28.

BACKGROUND: Many mHealth technologies do not meet the needs of patients with complex chronic disease and disabilities (CCDDs) who are among the highest users of health systems worldwide. Furthermore, many of the development methodologies used in the creation of mHealth and eHealth technologies lack the ability to embrace users with CCDD in the specification process. This paper describes how we adopted and modified development techniques to create the electronic Patient-Reported Outcomes (ePRO) tool, a patient-centered mHealth solution to help improve primary health care for patients experiencing CCDD. OBJECTIVE: This paper describes the design and development approach, specifically the process of incorporating qualitative research methods into user-centered design approaches to create the ePRO tool. Key lessons learned are offered as a guide for other eHealth and mHealth research and technology developers working with complex patient populations and their primary health care providers. METHODS: Guided by user-centered design principles, interpretive descriptive qualitative research methods were adopted to capture user experiences through interviews and working groups. Consistent with interpretive descriptive methods, an iterative analysis technique was used to generate findings, which were then organized in relation to the tool design and function to help systematically inform modifications to the tool. User feedback captured and analyzed through this method was used to challenge the design and inform the iterative development of the tool. RESULTS: Interviews with primary health care providers (n=7) and content experts (n=6), and four focus groups with patients and carers (n=14) along with a PICK analysis-Possible, Implementable, (to be) Challenged, (to be) Killed-guided development of the first prototype. The initial prototype was presented in three design working groups with patients/carers (n=5), providers (n=6), and experts (n=5). Working group findings were broken down into categories of what works and what does not work to inform modifications to the prototype. This latter phase led to a major shift in the purpose and design of the prototype, validating the importance of using iterative codesign processes. CONCLUSIONS: Interpretive descriptive methods allow for an understanding of user experiences of patients with CCDD, their carers, and primary care providers. Qualitative methods help to capture and interpret user needs, and identify contextual barriers and enablers to tool adoption, informing a redesign to better suit the needs of this diverse user group. This study illustrates the value of adopting interpretive descriptive methods into user-centered mHealth tool design and can also serve to inform the design of other eHealth technologies. Our approach is particularly useful in requirements determination when developing for a complex user group and their health care providers.

Swartwout, E., Deyo, P. et El-Zein, A. (2016). "Effectiveness of technology use for engaging community dwelling adults with chronic disease in self-care behavior management in health care: a systematic review protocol." JBI Database System Rev Implement Rep **14**(5): 87-95.

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REVIEW QUESTION/OBJECTIVE: The quantitative objective is to identify the effectiveness of technology use for self-care behavior management and the patient engagement levels in health care.More specifically, the objectives are to identify: 1) the effectiveness of technology use (includes mobile health applications, text messages, telemedicine/video conferences between providers and people with chronic disease, remote monitoring and websites) in health care for engaging community-dwelling adults with chronic disease in self-care management, and 2) the patient engagement levels in health care.

Uei, S. L., Kuo, Y. M., Tsai, C. H., et al. (2017). "An Exploration of Intent to Use Telehealth at Home for Patients with Chronic Diseases." Int J Environ Res Public Health **14**(12).

Telecare is defined as care practiced at a distance. It is an effective strategy for improving the self-health care management of home-patients with chronic diseases. The purpose of this study was to explore the intent to use of telehealth patients. The correlation between the self-care behaviors, the intent to use of telehealth, and the effects on physiological indicators of patients with chronic disease at home were studied. A cross-sectional study design employing purposive sampling was selected. The structured questionnaire 'Telecare Usage Intention Scale and Self-Care Behavior Scale' were used, 'HbA1c, glucose levels and monthly blood pressure measurements' were analyzed in this thirteen month study. The self-care behaviors of the participants were positively correlated with their intent to use telehealth (p < 0.01). The results also indicated that HbA1c, glucose levels and frequency BP measurement of the participants improved significantly after using telecare (p < 0.005). The results indicated a strong intent to use telehealth and positive perception of telecare services by in-home patients with a chronic disease. Telehealth improves the self-care behavior of in-home chronic disease patients and enhances medical professionals' ability to deliver quality and effective healthcare.

van Gaalen, J. L., van Bodegom-Vos, L., Bakker, M. J., et al. (2016). "Internet-based self-management support for adults with asthma: a qualitative study among patients, general practitioners and practice nurses on barriers to implementation." BMJ Open **6**(8): e010809.

OBJECTIVES: The aim of this study was to explore barriers among patients, general practitioners (GPs) and practice nurses to implement internet-based self-management support as provided by PatientCoach for asthma in primary care. SETTING: Primary care within South Holland, the Netherlands. PARTICIPANTS: Twenty-two patients (12 women, mean age 38 years), 21 GPs (6 women, mean age 52 years) and 13 practice nurses (all women, mean age 41 years). DESIGN: A qualitative study using focus groups and interviews. OUTCOMES: Barriers as perceived by patients, GPs and practice nurses to implementation of PatientCoach. METHODS: 10 focus groups and 12 interviews were held to collect data: 4 patient focus groups, 4 GP focus groups, 2 practice nurse focus group, 2 patient interviews, 5 GP interviews and 5 practice nurse interviews. A prototype of PatientCoach that included modules for coaching, personalised information, asthma self-monitoring, medication treatment plan, feedback, e-consultations and a forum was demonstrated. A semistructured topic guide was used. Directed content analysis was used to analyse data. Reported barriers were classified according to a framework by Grol and Wensing. RESULTS: A variety of barriers emerged among all participant groups. Barriers identified among patients include a lack of a patient-professional partnership in using PatientCoach and a lack of perceived benefit in improving asthma symptoms. Barriers identified among GPs include a low sense of urgency towards asthma care and current work routines. Practice nurses identified a low level of structured asthma care and a lack of support by colleagues as barriers. Among all participant groups, insufficient ease of use of PatientCoach, lack of financial arrangements and patient characteristics such as a lack of asthma symptoms were reported as barriers. CONCLUSIONS: We identified a variety of barriers to implementation of PatientCoach. An effective implementation strategy for internet-based self-management support in asthma care should focus on these barriers.

Vatnoy, T. K., Thygesen, E. et Dale, B. (2017). "Telemedicine to support coping resources in home-living patients diagnosed with chronic obstructive pulmonary disease: Patients' experiences." J Telemed Telecare **23**(1): 126-132.

Introduction The way in which telemedicine contributes to promote coping and independence might be undervalued in the development of telemedicine solutions and the implementation of telemedicine interventions. This study explored how home-living patients diagnosed with chronic obstructive pulmonary disease (COPD) experienced follow-up using telemedicine, and the extent to which the

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implemented technology was able to support and improve the patients' coping resources and independence. Methods A qualitative approach with individual semi-structured interviews was used. Ten patients diagnosed with COPD participated. The data were transcribed verbatim and a qualitative content analysis method was used, including analyses of the manifest and latent content of the texts. Results The participants' positive attitude to handling and understanding the technology and the positive and negative feelings related to use the technology derived the theme: "The telemedicine solution is experienced as comprehensible and manageable and provides meaning in daily life". The importance of telemedicine services that provided trust and confidence, the intervention's impact on independence and self-management and the intervention's ability to support integrity and meaning in life, derived the theme: "The telemedicine intervention contributes to stress reduction caused by illness burden and facilitates living as normally as possible". Discussion The impact of a telemedicine intervention might be influenced by the experience of a technological solution that requires little effort to deal with, while it must also provide meaning in life. Furthermore, the telenurses' expertise and the intervention's flexibility, i.e. possibilities for individual adaption, might promote coping to facilitate living as normally as possible despite illness.

Vuorinen, A. L., Ermes, M., Karhula, T., et al. (2016). Is Home Telemonitoring Feasible in the Care of Chronic Diseases - Insights into Adherence to a Self-management Intervention in Renewing Health Finland Trial. Building Sustainable Health Ecosystems. Li, H., Nykanen, P., Suomi, R. et al. Berlin, Springer-Verlag Berlin. **636:** 57-66.
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eHealth studies typically suffer from high attrition rates. Objective To investigate type 2 diabetes and heart disease patients' adherence to a self-management intervention that combined health coaching and telemonitoring. Methods Renewing Health Finland was a 12-month randomized controlled trial to improve quality of life (QoL) and/or HbA1c of 595 patients with chronic conditions. The intervention consisted of (1) weekly measurement of health parameters (2) health coaching every 4-6 weeks. Adherence to telemonitoring was defined as the percentage of weeks with at least one reported health measurement. Adherence to coaching was defined as the number of received calls. Results The median percentage of monitored weeks was 65 % without time-dependent attrition. 66 % of participants received 7-11 calls that corresponds to the predefined coaching schedule. Adherence did not correlate with QoL or HbA1c. Discussion Our results indicate that the intervention in the Renewing Health Finland trial was delivered almost with planned intensity.

Waibel, K. H., Cain, S. M., Hall, T. E., et al. (2017). "Multispecialty Synchronous Telehealth Utilization and Patient Satisfaction Within Regional Health Command Europe: A Readiness and Recapture System for Health." Military Medicine **182**(7): E1693-E1697.
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Background: Telehealth implementation within the Military Healthcare System continues to advance toward the goal of a mature regional health platform; however, specialty-specific usage or patient satisfaction regarding synchronous or "real-time" telehealth at the regional military hospital level has not been described. Methods: A retrospective review of synchronous telehealth encounters and patient satisfaction surveys from Landstuhl Regional Medical Center (LRMC) specialty clinics engaging in synchronous telehealth to regional Army Health Clinics (AHCs) during 2015 was conducted. Results: 2,354 synchronous telehealth encounters were conducted for 1,886 unique patients. The majority of patients were adults (88.4%), male (71.1%), and active duty (75%). Twelve distinct distant locations were engaged in synchronous telehealth with 31 distinct specialties. 1,552 (62.5%) patients had a single telehealth visit with a median (range) of 1 (1-7) visit. Median (range) visits per specialty was 25 (1-582) with sleep medicine (24.7%), general surgery (13.1%), nutrition (9.7%), orthopedics (9.0%), and ENT (6.0%) representing 62.5% of all encounters. Median (range) number of encounters per location was 146 (13-685). Surgical specialties preferentially evaluated patients at locations with a specialty-trained presenter (p < 0.001), whereas nonsurgical specialties did not (p > 0.05). Fifteen percent (372/ 2,354) of patients completed an anonymous survey at the time of their telehealth visit. Mean responses on a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5) was 4.8 +/- 0.5 for both recommending and being satisfied with their telehealth visit. The 2,354 telehealth visits represented 2.4% (2,354/100,094) of all visits to LRMC during 2015 for 25 of 31 specialties whose total outpatient visits could be determined. Conclusion: Clinic utilization varied between specialties as well as whether a specialty-trained patient presenter was preferred. This robust multispecialty synchronous telehealth

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experience provides insight into both specialty-specific utilization and patient satisfaction which may aid regional medical centers recognizing avenues for specialty-specific telehealth initiatives.

Waite, M., Martin, C., Franklin, R., et al. (2018). "Human Factors and Data Logging Processes With the Use of Advanced Technology for Adults With Type 1 Diabetes: Systematic Integrative Review." JMIR Hum Factors **5**(1): e11.

BACKGROUND: People with type 1 diabetes (T1D) undertake self-management to prevent short and long-term complications. Advanced technology potentially supports such activities but requires consideration of psychological and behavioral constructs and usability issues. Economic factors and health care provider capacity influence access and uptake of advanced technology. Previous reviews have focused upon clinical outcomes or were descriptive or have synthesized studies on adults with those on children and young people where human factors are different. OBJECTIVE: This review described and examined the relationship between human factors and adherence with technology for data logging processes in adults with T1D. METHODS: A systematic literature search was undertaken by using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Quality appraisal was undertaken and data were abstracted and categorized into the themes that underpinned the human factor constructs that were examined. RESULTS: A total of 18 studies were included. A total of 6 constructs emerged from the data analysis: the relationship between adherence to data logging and measurable outcomes; satisfaction with the transition to advanced technology for self-management; use of advanced technology and time spent on diabetes-related activities; strategies to mediate the complexities of diabetes and the use of advanced technology; cognition in the wild; and meanings, views, and perspectives from the users of technology. CONCLUSIONS: Increased treatment satisfaction was found on transition from traditional to advanced technology use-insulin pump and continuous glucose monitoring (CGM); the most significant factor was when blood glucose levels were consistently <7.00 mmol/L (P </=.01). Participants spent considerable time on their diabetes self-care. Logging of data was positively correlated with increasing age when using an app that provided meaningful feedback (regression coefficient=55.8 recordings/year; P </=.01). There were benefits of CGM for older people in mediating complexities and fears of hypoglycemia with significant differences in well-being (P </=.001). Qualitative studies explored the contextual use and uptake of technology. The results suggested frustrations with CGM, continuous subcutaneous insulin infusion, calibration of devices, and alarms. Furthermore implications for "body image" and the way in which "significant others" impacted on the behavior and attitude of the individual toward technology use. There were wide variations in the normal use of and interaction with technology across a continuum of sociocultural contexts, which has implications for the way in which future technologies should be designed. Quantitative studies were limited by small sample sizes, making it difficult to generalize findings to other contexts. This was further limited by a sample that was predominantly white, well-controlled, and engaged with self-care. The use of critical appraisal frameworks demonstrated where research into human factors and data logging processes of individuals could be improved. This included engaging people in the design of the technology, especially hard-to-reach or marginalized groups.

Wallin, E. E., Mattsson, S. et Olsson, E. M. (2016). "The Preference for Internet-Based Psychological Interventions by Individuals Without Past or Current Use of Mental Health Treatment Delivered Online: A Survey Study With Mixed-Methods Analysis." JMIR Ment Health **3**(2): e25.

BACKGROUND: The use of the Internet has the potential to increase access to evidence-based mental health services for a far-reaching population at a low cost. However, low take-up rates in routine care indicate that barriers for implementing Internet-based interventions have not yet been fully identified. OBJECTIVE: The aim of this study was to evaluate the preference for Internet-based psychological interventions as compared to treatment delivered face to face among individuals without past or current use of mental health treatment delivered online. A further aim was to investigate predictors of treatment preference and to complement the quantitative analyses with qualitative data about the perceived advantages and disadvantages of Internet-based interventions. METHODS: Two convenience samples were used. Sample 1 was recruited in an occupational setting (n=231) and Sample 2 consisted of individuals previously treated for cancer (n=208). Data were collected using a paper-and-pencil survey and analyzed using mixed methods. RESULTS: The preference for Internet-based psychological interventions was low in both Sample 1 (6.5%) and Sample 2 (2.6%). Most participants preferred psychological

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interventions delivered face to face. Use of the Internet to search for and read health-related information was a significant predictor of treatment preference in both Sample 1 (odds ratio [OR] 2.82, 95% CI 1.18-6.75) and Sample 2 (OR 3.52, 95% CI 1.33-9.29). Being born outside of Sweden was a significant predictor of preference for Internet-based interventions, but only in Sample 2 (OR 6.24, 95% CI 1.29-30.16). Similar advantages and disadvantages were mentioned in both samples. Perceived advantages of Internet-based interventions included flexibility regarding time and location, low effort, accessibility, anonymity, credibility, user empowerment, and improved communication between therapist and client. Perceived disadvantages included anonymity, low credibility, impoverished communication between therapist and client, fear of negative side effects, requirements of computer literacy, and concerns about confidentiality. CONCLUSIONS: Internet-based interventions were reported as the preferred choice by a minority of participants. The results suggest that Internet-based interventions have specific advantages that may facilitate help-seeking among some individuals and some disadvantages that may restrict its use. Initiatives to increase treatment acceptability may benefit from addressing the advantages and disadvantages reported in this study.

Walsh, S., Golden, E. et Priebe, S. (2016). "Systematic review of patients' participation in and experiences of technology-based monitoring of mental health symptoms in the community." BMJ Open **6**(6): e008362.

OBJECTIVES: To review systematically the literature on patients' experiences of, and participation in, technology-based monitoring of mental health symptoms. This practice was defined as patients monitoring their mental health symptoms, emotions or behaviours outside of routine clinical appointments by submitting symptom data using technology, with feedback arising from the data (for example, supportive messages or symptom summaries, being sent to the patient, clinician or carer). DESIGN: Systematic review following PRISMA guidelines of studies evaluating technology-based symptom monitoring. Tools from narrative synthesis were used to analyse quantitative findings on participation rates and qualitative findings on patient views. DATA SOURCES: PubMed, EMBASE, PsycINFO, BNI, CINAHL, Cochrane Registers and Web of Science electronic databases were searched using a combination of 'psychiatry', 'symptom monitoring' and 'technology' descriptors. A secondary hand search was performed in grey literature and references. RESULTS: 57 papers representing 42 studies met the inclusion criteria for the review. Technology-based symptom monitoring was used for a range of mental health conditions, either independently of a specific therapeutic intervention or as an integrated component of therapeutic interventions. The majority of studies reported moderate-to-strong rates of participation, though a third reported lower rates. Qualitative feedback suggests that acceptability of monitoring is related to perceived validity, ease of practice, convenient technology, appropriate frequency and helpfulness of feedback, as well as the impact of monitoring on participants' ability to manage health and personal relationships. CONCLUSIONS: Such symptom monitoring practices appear to be well accepted and may be a feasible complement to clinical practice. However, there is limited availability of data and heterogeneity of studies. Future research should examine robustly patients' role in the development and evaluation of technology-based symptom monitoring in order to maximise its clinical utility.

Walker, R. C., Tong, A., Howard, K. et Palmer, S. C. (2019). "Patient expectations and experiences of remote monitoring for chronic diseases: Systematic review and thematic synthesis of qualitative studies." Int J Med Inform **124**: 78-85.

OBJECTIVES: To describe the range of patients' beliefs, attitudes, expectations, and experiences of remote monitoring for chronic conditions across different healthcare contexts and populations. DESIGN: We searched MEDLINE, Embase, PsychINFO, and CINAHL, Google Scholar, and reference lists of related studies through to July 2017. Thematic synthesis was used to analyse the findings of the primary studies. Study characteristics were examined to explain differences in findings. SETTING: All healthcare settings PARTICIPANTS: Adults with chronic diseases OUTCOMES: Patient beliefs, attitudes, expectations and experiences of remote monitoring RESULTS: We included 16 studies involving 307 participants with chronic obstructive pulmonary disease, heart failure, diabetes, hypertension, and end stage kidney disease. The studies were conducted in 8 countries. We identified four themes: gaining knowledge and triggering actions (tracking and responding to change, prompting timely and accessible care, supporting self-management and shared decision-making); reassurance and security (safety in being alone, peace of mind); concern about additional burden (reluctance to learn something new, lack of trust in technology,

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avoiding additional out-of-pocket costs), and jeopardising interpersonal connections (fear of being lost in data, losing face to face contact). CONCLUSIONS: For patients with chronic disease, remote monitoring increased their disease-specific knowledge, triggered earlier clinical assessment and treatment, improved self-management and shared decision-making. However, these potential benefits were balanced against concerns about losing interpersonal contact, and the additional personal responsibility of remote monitoring.

Ware, P., Bartlett, S. J., Pare, G., et al. (2017). "Using eHealth Technologies: Interests, Preferences, and Concerns of Older Adults." Interact J Med Res **6**(1): e3.

BACKGROUND: The Internet and eHealth technologies represent new opportunities for managing health. Age, sex, socioeconomic status, and current technology use are some of the known factors that influence individuals' uptake of eHealth; however, relatively little is known about facilitators and barriers to eHealth uptake specific to older adults, particularly as they relate to their experiences in accessing health care. OBJECTIVE: The aim of our study was to explore the interests, preferences, and concerns of older adults in using the Internet and eHealth technologies for managing their health in relation to their experiences with the current health care system. METHODS: Two focus groups (n=15) were conducted with adults aged 50+ years. Pragmatic thematic analysis using an inductive approach was conducted to identify the interests, preferences, and concerns of using the Internet and eHealth technologies. RESULTS: Five themes emerged that include (1) Difficulty in identifying credible and relevant sources of information on the Web; (2) Ownership, access, and responsibility for medical information; (3) Peer communication and support; (4) Opportunities to enhance health care interactions; and (5) Privacy concerns. These findings support the potential value older adults perceive in eHealth technologies, particularly in their ability to provide access to personal health information and facilitate communication between providers and peers living with similar conditions. However, in order to foster acceptance, these technologies will need to provide personal and general health information that is secure, readily accessible, and easily understood. CONCLUSIONS: Older adults have diverse needs and preferences that, in part, are driven by their experiences and frustrations with the health care system. Results can help inform the design and implementation of technologies to address gaps in care and access to health information for older adults with chronic conditions who may benefit the most from this approach.

Whealin, J. M., Jenchura, E. C., Wong, A. C., et al. (2016). "How Veterans With Post-Traumatic Stress Disorder and Comorbid Health Conditions Utilize eHealth to Manage Their Health Care Needs: A Mixed-Methods Analysis." J Med Internet Res **18**(10): e280.

BACKGROUND: Mental health conditions are prevalent among US veterans and pose a number of self-management and health care navigation challenges. Post-Traumatic Stress Disorder (PTSD) with comorbid chronic medical conditions (CMCs) is especially common, in both returning Iraq or Afghanistan and earlier war-era veterans. Patient-facing electronic health (eHealth) technology may offer innovative strategies to support these individuals' needs. OBJECTIVE: This study was designed to identify the types of eHealth tools that veterans with PTSD and comorbid CMCs use, understand how they currently use eHealth technology to self-manage their unique health care needs, and identify new eHealth resources that veterans feel would empower them to better manage their health care. METHODS: A total of 119 veterans with PTSD and at least one CMC who have used the electronic personal health record system of the US Department of Veterans Affairs (VA) responded to a mailed survey about their chronic conditions and preferences related to the use of technology. After the survey, 2 focus groups, stratified by sex, were conducted with a subgroup of patients to explore how veterans with PTSD and comorbid CMCs use eHealth technology to support their complex health care needs. Focus groups were transcribed verbatim and analyzed using standard content analysis methods for coding textual data, guided by the "Fit between Individual, Task, and Technology" framework. RESULTS: Survey respondents had a mean age of 64.0 (SD 12.0) years, 85.1% (97/114) were male, 72.4% (84/116) were white, and 63.1% (70/111) had an annual household income of < US $50,000. Mean score on a measure of eHealth literacy was 27.7 (SD 9.8). Of the respondents, 44.6% (50/112) used health-related technology 1 to 3 times per month and 21.4% (24/112) used technology less than once per month. Veterans reported using technology most often to search for health information (78.9%, 90/114), communicate with providers (71.1%, 81/114), and track medications (64.9%, 74/114). Five major themes emerged that describe how eHealth technology influences veterans with PTSD and comorbid CMCs: (1) interactions with social support, (2) condition management, (3) access

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to and communication with providers, (4) information access, and (5) coordination of care. CONCLUSIONS: The "Fit between Individual, Task, and Technology" model provided a useful framework to examine the clinical tasks that arose for veterans and their resourceful adoption of eHealth tools. This study suggests that veterans who use the Web are eager to incorporate eHealth technology into their care and self-management activities. Findings illustrate a number of ways in which the VA and eHealth technology developers can refine existing applications, develop new resources, and better promote tools that address challenges experienced by veterans with PTSD and comorbid CMCs.

Williams, V., Price, J., Hardinge, M., et al. (2014). "Using a mobile health application to support self-management in COPD: a qualitative study." Br J Gen Pract **64**(624): e392-400.

BACKGROUND: Telehealth shows promise for supporting patients in managing their long-term health conditions, such as chronic obstructive pulmonary disease (COPD). However, it is currently unclear how patients, and particularly older people, may benefit from these technological interventions. AIM: To explore patients' expectations and experiences of using a mobile telehealth-based (mHealth) application and to determine how such a system may impact on their perceived wellbeing and ability to manage their COPD. DESIGN AND SETTING: Embedded qualitative study using interviews with patients with COPD from various community NHS services: respiratory community nursing service, general practice, and pulmonary rehabilitation. METHOD: An embedded qualitative study was conducted to which patients were recruited using purposive sampling to achieve maximum variation. Interviews were carried out prior to receiving the mHealth system and again after a 6-month period. Data were analysed using a grounded theory approach. RESULTS: The sample comprised 19 patients (aged 50-85 years) with varied levels of computer skills. Patients identified no difficulties in using the mHealth application. The main themes encapsulating patients' experience of using the mHealth application related to an increased awareness of the variability of their symptoms (onset of exacerbation and recovery time) and reassurance through monitoring (continuity of care). CONCLUSION: Patients were able to use the mHealth application, interpret clinical data, and use these within their self-management approach regardless of previous knowledge. Telehealth interventions can complement current clinical care pathways to support self-management behaviour.

Williamson, S., Chalmers, K. et Beaver, K. (2015). "Patient experiences of nurse-led telephone follow-up following treatment for colorectal cancer." Eur J Oncol Nurs **19**(3): 237-243.

PURPOSE: Colorectal cancer is the third most prevalent cancer worldwide, although mortality rates across most of Europe have decreased in recent years. Historically, patients are asked to return to hospital outpatient clinics following treatment to monitor for disease progression. However, new approaches are being called for that focus on meeting the information and support needs of patients. Telephone follow-up (TFU) by specialist nurses is an alternative approach; this study aimed to explore patient views of TFU. METHODS: Qualitative interviews were conducted with 26 colorectal cancer patients who had received TFU. One interview was also conducted with the specialist nurse who had used a structured intervention to provide TFU. Data were analysed using content analysis. RESULTS: All patients found TFU to be a positive experience and all stated a preference for continuing with TFU. Three main themes emerged from the patient interviews; 1) accessible and convenient care, 2) personalised care, and 3) relationship with the specialist nurse. The themes from the specialist nurse interview were 1) knowing the patient, 2) the benefits of TFU and 3) the challenges of TFU. CONCLUSIONS: TFU was well received by patients; it was perceived as highly convenient and had distinct advantages over hospital follow-up. Continuity of care was an important factor in building a trusting relationship between patient and nurse. Training in the use of the intervention is recommended and it may be useful for specialist nurses to initially meet eligible patients face to face to establish rapport before implementing TFU.

Wodskou, P. M., Host, D., Godtfredsen, N. S., et al. (2014). "A qualitative study of integrated care from the perspectives of patients with chronic obstructive pulmonary disease and their relatives." BMC Health Serv Res **14**: 471.

BACKGROUND: Disease management programmes have been developed for chronic obstructive pulmonary disease (COPD) to facilitate the integration of care across healthcare settings. The purpose of the present study was to examine the experiences of COPD patients and their relatives of integrated care after implementation of a COPD disease management programme. METHODS: Seven focus groups and

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five individual interviews were held with 34 patients with severe or very severe COPD and two focus groups were held with eight of their relatives. Data were analysed using inductive content analysis. RESULTS: Four main categories of experiences of integrated care emerged: 1) a flexible system that provides access to appropriate healthcare and social services and furthers patient involvement; 2) the responsibility of health professionals to both take the initiative and follow up; 3) communication and providing information to patients and relatives; 4) coordination and professional cooperation. Most patients were satisfied with their care and raised few criticisms. However, patients with more unstable and severe disease tended to experience more problems. CONCLUSIONS: Participant suggestions for optimizing the integration of healthcare included assigning patients a care coordinator, telehealth solutions for housebound patients and better information technology to support interprofessional cooperation. Further studies are needed to explore these and other possible solutions to problems with integrated care among COPD patients. A future effort in this field should be informed by detailed knowledge of the extent and relative importance of the identified problems. It should also be designed to address variable levels of severity of COPD and relevant comorbidities and to deliver care in ways appropriate to the respective healthcare setting. Future studies should also take health professionals' views into account so that interventions may be planned in the light of the experiences of all those involved in the treatment of COPD patients.

Woldaregay, A. Z., Issom, D. Z., Henriksen, A., et al. (2018). "Motivational Factors for User Engagement with mHealth Apps." Stud Health Technol Inform **249**: 151-157.

The widespread adoption of smartphones creates an enormous potential to improve healthcare services. Numerous apps, sensors, and devices are developed for health self-management purposes. However, adoption rates remain low and long-term user engagement is a major issue. The goal of this study is to identify major motivational factors that can facilitate prolonged use of mobile health systems. To this end, we conducted 16 interviews with representatives of various cultural backgrounds, disease history, age, and gender. Participants' experiences indicated that existing systems were unable to answer their self-management needs properly. People with a disease history favored learning from data, as well as from others via social media integration. People without chronic disease felt more reserved about social media integration. In conclusion, systems that collect and share personal data should have a clear opt-in or opt-out option to motivate usage. Additionally, researchers and mobile health system developers could achieve long-term adoption by giving clear answers to privacy and trust issues, while offering people strong added value according to their individual needs.

Woods, L., Cummings, E., Duff, J., et al. (2017). "Design Thinking for mHealth Application Co-Design to Support Heart Failure Self-Management." Stud Health Technol Inform **241**: 97-102.

Heart failure is a prevalent, progressive chronic disease costing in excess of $1billion per year in Australia alone. Disease self-management has positive implications for the patient and decreases healthcare usage. However, adherence to recommended guidelines is challenging and existing literature reports sub-optimal adherence. mHealth applications in chronic disease education have the potential to facilitate patient enablement for disease self-management. To the best of our knowledge no heart failure self-management application is available for safe use by our patients. In this paper, we present the process established to co-design a mHealth application in support of heart-failure self-management. For this development, an interdisciplinary team systematically proceeds through the phases of Stanford University's Design Thinking process; empathise, define, ideate, prototype and test with a user-centred philosophy. Using this clinician-led heart failure app research as a case study, we describe a sequence of procedures to engage with local patients, carers, software developers, eHealth experts and clinical colleagues to foster rigorously developed and locally relevant patient-facing mHealth solutions. Importantly, patients are engaged in each stage with ethnographic interviews, a series of workshops and multiple re-design iterations.

Yan, M. et Or, C. (2018). "Factors in the 4-week Acceptance of a Computer-Based, Chronic Disease Self-Monitoring System in Patients with Type 2 Diabetes Mellitus and/or Hypertension." Telemed J E Health **24**(2): 121-129.

BACKGROUND: Health information technology (HIT) interventions developed to support patients' self-care for chronic diseases have become popular, but people may not always accept and sustain their use.

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INTRODUCTION: This study examined factors that affected patients' acceptance of a computer-based, chronic disease self-monitoring system over a 4-week period. MATERIALS AND METHODS: A research model was developed to test the relationships between the perceived usefulness, perceived ease of use, attitude, and subjective norm and the patients' behavioral intention to use the system (i.e., acceptance). Data were collected with surveys of 42 patients with type 2 diabetes mellitus and/or hypertension at baseline, 2 weeks after implementation, and 4 weeks after implementation. Path analysis was used for model testing. RESULTS: Perceived usefulness affected behavioral intention indirectly at 2 weeks and directly at 4 weeks; perceived ease of use affected behavioral intention indirectly at 2 and 4 weeks; attitude directly affected behavioral intention at 2 weeks; and subjective norm affected behavioral intention indirectly at 2 weeks and directly at baseline and at 4 weeks. CONCLUSIONS: Patients' acceptance of HIT is affected by the factors proposed in our research model. It is suggested that healthcare stakeholders consider and address the effects of these factors and their variations over time before implementing HIT.

Yasmin, F., Banu, B., Zakir, S. M., et al. (2016). "Positive influence of short message service and voice call interventions on adherence and health outcomes in case of chronic disease care: a systematic review." <u>BMC Med Inform Decis Mak</u> **16**: 46.

BACKGROUND: Chronic diseases have emerged as a serious threat for health, as well as for global development. They endenger considerably increased health care costs and diminish the productivity of the adult population group and, therefore, create a burden on health, as well as on the global economy. As the management of chronic diseases involves long-term care, often lifelong patient adherence is the key for better health outcomes. We carried out a systematic literature review on the impact of mobile health interventions -mobile phone texts and/or voice messages- in high, middle and low income countries to ascertain the impact on patients' adherence to medical advice, as well as the impact on health outcomes in cases of chronic diseases. METHODS: The review identified fourteen related studies following the defined inclusion and exclusion criteria, in PubMed, Cochrane Library, the Library of Congress, and Web Sciences. All the interventions were critically analysed according to the study design, sample size, duration, tools used, and the statistical methods used for analysing the primary data. Impacts of the different interventions on outcomes of interest were also analysed. RESULTS: The findings showed evidence of improved adherence, as well as health outcomes in disease management, using mobile Short Message Systems and/or Voice Calls. Significant improvement has been found on adherence with taking medicine, following diet and physical activity advice, as well as improvement in clinical parameters like HbA1c, blood glucose, blood cholesterol and control of blood pressure and asthma. CONCLUSIONS: Though studies showed positive impacts on adherence and health outcomes, three caveats should be considered, (i) there was no clear understanding of the processes through which interventions worked; (ii) none of the studies showed cost data for the m-health interventions and (iii) only short term impacts were captured, it remains unclear whether the effects are sustained. More research is needed in these three areas before drawing concrete conclusions and making suggestions to policy makers for further decision and implementation.

Zan, S. Y., Agboola, S., Moore, S. A., et al. (2015). "Patient Engagement With a Mobile Web-Based Telemonitoring System for Heart Failure Self-Management: A Pilot Study." <u>JMIR Mhealth Uhealth</u> **3**(2): 14.
<Go to ISI>://WOS:000359791800024

Background: Intensive remote monitoring programs for congestive heart failure have been successful in reducing costly readmissions, but may not be appropriate for all patients. There is an opportunity to leverage the increasing accessibility of mobile technologies and consumer-facing digital devices to empower patients in monitoring their own health outside of the hospital setting. The iGetBetter system, a secure Web-and telephone-based heart failure remote monitoring program, which leverages mobile technology and portable digital devices, offers a creative solution at lower cost. Objective: The objective of this pilot study was to evaluate the feasibility of using the iGetBetter system for disease self-management in patients with heart failure. Methods: This was a single-arm prospective study in which 21 ambulatory, adult heart failure patients used the intervention for heart failure self-management over a 90-day study period. Patients were instructed to take their weight, blood pressure, and heart rate measurements each morning using a WS-30 bluetooth weight scale, a self-inflating blood pressure cuff (Withings LLC, Issy les Moulineaux, France), and an iPad Mini tablet computer (Apple Inc, Cupertino, CA, USA) equipped with cellular Internet connectivity to view their measurements on the Internet. Outcomes

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assessed included usability and satisfaction, engagement with the intervention, hospital resource utilization, and heart failure-related quality of life. Descriptive statistics were used to summarize data, and matched controls identified from the electronic medical record were used as comparison for evaluating hospitalizations. Results: There were 20 participants (mean age 53 years) that completed the study. Almost all participants (19/20, 95%) reported feeling more connected to their health care team and more confident in performing care plan activities, and 18/20 (90%) felt better prepared to start discussions about their health with their doctor. Although heart failure-related quality of life improved from baseline, it was not statistically significant (P=.55). Over half of the participants had greater than 80% (72/90 days) weekly and overall engagement with the program, and 15% (3/20) used the interactive voice response telephone system exclusively for managing their care plan. Hospital utilization did not differ in the intervention group compared to the control group (planned hospitalizations P=.23, and unplanned hospitalizations P=.99). Intervention participants recorded shorter average length of hospital stay, but no significant differences were observed between intervention and control groups (P=.30). Conclusions: This pilot study demonstrated the feasibility of a low-intensive remote monitoring program leveraging commonly used mobile and portable consumer devices in augmenting care for a fairly young population of ambulatory patients with heart failure. Further prospective studies with a larger sample size and within more diverse patient populations is necessary to determine the effect of mobile-based remote monitoring programs such as the iGetBetter system on clinical outcomes in heart failure.

L'expérience des professionnels de santé

Aamodt, I. T., Lycholip, E., Celutkiene, J., et al. (2018). "Remote patient telemonitoring in heart failure care. Experiences and perception of nurses and physicians in the Nordic Baltic region." European Journal of Heart Failure **20**: 613-614.
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Aamodt, I. T., Lycholip, E., Celutkiene, J., et al. (2019). "Health Care Professionals' Perceptions of Home Telemonitoring in Heart Failure Care: Cross-Sectional Survey." J Med Internet Res **21**(2): 11.
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Background: Noninvasive telemonitoring (TM) can be used in heart failure (HF) patients to perform early detection of decompensation at home, prevent unnecessary health care utilization, and decrease health care costs. However, the evidence is not sufficient to be part of HF guidelines for follow-up care, and we have no knowledge of how TM is used in the Nordic Baltic region. Objective: The aim of this study was to describe health care professionals' (HCPs) perception of and presumed experience with noninvasive TM in daily HF patient care, perspectives of the relevance of and reasons for applying noninvasive TM, and barriers to the use of noninvasive TM. Methods: A cross-sectional survey was performed between September and December 2016 in Norway and Lithuania with physicians and nurses treating HF patients at either a hospital ward or an outpatient clinic. A total of 784 questionnaires were sent nationwide by postal mail to 107 hospitals. The questionnaire consisted of 43 items with close- and open-ended questions. In Norway, the response rate was 68.7% (226/329), with 57 of 60 hospitals participating, whereas the response rate was 68.1% (310/455) in Lithuania, with 41 of 47 hospitals participating. Responses to the closed questions were analyzed using descriptive statistics, and the open-ended questions were analyzed using summative content analysis. Results: This study showed that noninvasive TM is not part of the current daily clinical practice in Norway or Lithuania. A minority of HCPs responded to be familiar with noninvasive TM in HF care in Norway (48/226, 21.2%) and Lithuania (64/310, 20.6%). Approximately half of the HCPs in both countries perceived noninvasive TM to be relevant in follow-up of HF patients in Norway (131/226, 58.0%) and Lithuania (172/310, 55.5%). For physicians in both countries and nurses in Norway, the 3 most mentioned reasons for introducing noninvasive TM were to improve self-care, to reduce hospitalizations, and to provide high-quality care, whereas the Lithuanian nurses described ability to treat more patients and to reduce their workload as reasons for introducing noninvasive TM. The main barriers to implement noninvasive TM were lack of funding from health care authorities or the Territorial Patient Fund. Moreover, HCPs perceive that HF patients themselves could represent barriers because of their physical or mental condition in addition to a lack of internet access. Conclusions: HCPs in Norway and Lithuania are currently nonusers of TM in daily HF care. However, they perceive a future with TM to improve the quality of care for HF patients. Financial barriers and HF patients' condition may have an impact on the use of TM, whereas sufficient funding from health care authorities and improved knowledge may encourage the more widespread use of TM in the Nordic Baltic region and beyond.

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Alami, H., Fortin, J. P., Gagnon, M. P., et al. (2018). "The Challenges of a Complex and Innovative Telehealth Project: A Qualitative Evaluation of the Eastern Quebec Telepathology Network." International Journal of Health Policy and Management **7**(5): 421-432.
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>   Background: The Eastern Quebec Telepathology Network (EQTN) has been implemented in the province of Quebec (Canada) to support pathology and surgery practices in hospitals that are lack of pathologists, especially in rural and remote areas. This network includes 22 hospitals and serves a population of 1.7 million inhabitants spread over a vast territory. An evaluation of this network was conducted in order to identify and analyze the factors and issues associated with its implementation and deployment, as well as those related to its sustainability and expansion. Methods: Qualitative evaluative research based on a case study using: (1) historical analysis of the project documentation (newsletters, minutes of meetings, articles, ministerial documents, etc); (2) participation in meetings of the committee in charge of telehealth programs and the project; and (3) interviews, focus groups, and discussions with different stakeholders, including decision-makers, clinical and administrative project managers, clinicians (pathologists and surgeons), and technologists. Data from all these sources were cross-checked and synthesized through an integrative and interpretative process. Results: The evaluation revealed numerous socio-political, regulatory, organizational, governance, clinical, professional, economic, legal and technological challenges related to the emergence and implementation of the project. In addition to technical considerations, the development of this network was associated with major changes and transformations of production procedures, delivery and organization of services, clinical practices, working methods, and clinical-administrative processes and cultures (professional/organizational). Conclusion: The EQTN reflects the complex, structuring, and innovative projects that organizations and health systems are required to implement today. Future works should be more sensitive to the complexity associated with the emergence of telehealth networks and no longer reduce them to technological considerations.

Alander, T. et Scandurra, I. (2015). "Experiences of Healthcare Professionals to the Introduction in Sweden of a Public eHealth Service: Patients' Online Access to their Electronic Health Records." Stud Health Technol Inform **216**: 153-157.

>   Patients' increasing demands for medical information, the digitization of health records and the fast spread of Internet access form a basis of introducing new eHealth services. An international trend is to provide access for patients to health information of various kind. In Sweden, access by patients to their proper electronic health record (EHR) has been provided in a pilot county since November 2012. This eHealth service is controversial and criticism has arised from the clinical professions, mainly physicians. Two web surveys were conducted to discover whether the opinions of healthcare professionals differ; between staff that have had experience with patients accessing their own EHR and those who have no such expericence. Experienced nurses found the EHR more important for the patients and a better reform, compared to unexperienced nurses in the rest of the country. Similarly, physicians with their own experience had a more positive attitude compared to non-experienced physicians. The conclusion of this study is that healthcare professionals must be involved in the implementation of public eHealth services such as EHRs and that real experiences of the professionals should be better disseminated to their inexperienced peers.

Barbieri, J. S., Nelson, C. A., Bream, K. D., et al. (2015). "Primary care providers' perceptions of mobile store-and-forward teledermatology." Dermatol Online J **21**(8).

>   INTRODUCTION: Although teledermatology offers promise as a tool to increase access to care, adoption has been limited. Understanding the perspectives and experiences of key stakeholders, such as primary care providers (PCPs) and patients, is important to identify opportunities to reduce barriers to adoption and to improve teledermatology programs. Although many studies have examined patients' experiences and satisfaction with teledermatology, few have examined referring PCPs' perspectives. OBJECTIVE: To identify PCPs' perceptions on the strengths and limitations of teledermatology in order to identify opportunities to improve teledermatology programs. METHODS: We distributed an anonymous, web-based survey to 30 PCPs involved in a two-year study evaluating a mobile app-based teledermatology platform. RESULTS: 100% (18/18) agreed or strongly agreed that teledermatology increases access to dermatologic care, improves patient care, and is acceptable to patients. 100% (18/18) agreed or strongly agreed that teledermatology provides educational benefit to the PCP. Only 6% (1/18) agreed that teledermatology increases medical liability and 11% (2/18) agreed that it increases risk of a breach in privacy or confidentiality. CONCLUSIONS: Our findings highlight that PCPs are highly satisfied with mobile app-based, store-and-forward

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teledermatology and that they believe teledermatology offers synergistic educational benefit. We hope these results will help guide the development of teledermatology programs to increase access to timely, cost-effective care.

Barbosa, I. D. et da Silva, M. J. P. (2017). "Nursing care by telehealth: what is the influence of distance on communication?" Revista Brasileira De Enfermagem **70**(5): 928-934.
<Go to ISI>://WOS:000416651400006

> Objective: Evaluate the perception of nurses regarding interpersonal communication while providing care via telehealth. Method: Qualitative research realized with seven nurses working in telehealth in Brazil, the sample was determined by data saturation. A questionnaire with open questions was applied and then content analysis of the dialogues was conducted, focusing on thematic analysis. Results: Four categories emerged from the dialogues: Understanding the importance of communication; the interpersonal relationship interfering with communication; Communicating via technology; and Learning the communication process. Final considerations: The perception of nurses working in telehealth in Brazil is that technology has facilitated their professional practice; however, in relation to the communication process, they believe it is harder to communicate by telehealth, mainly due to difficulty in perceiving nonverbal signals. To overcome these difficulties, they agreed that interpersonal communication is a skill that must be acquired during their professional training.

Barrett, D. (2017). "Rethinking presence: a grounded theory of nurses and teleconsultation." J Clin Nurs **26**(19-20): 3088-3098.

> AIMS AND OBJECTIVES: To develop a theory that offered an evidence-based insight into the use of teleconsultation by nurses. BACKGROUND: Teleconsultation is the use of video to facilitate real-time, remote interaction between healthcare practitioners and patients. Although its popularity is growing, there is little understanding of how teleconsultation impacts on the role of nurses. DESIGN: The study adopted a constructivist grounded theory method, supplemented by the use of Straussian analytical approaches. METHODS: Using selective and theoretical approaches, registered nurses with experience of using video in health care were sampled. Data were collected using semi-structured interviews exploring experiences, knowledge and feelings surrounding teleconsultation. Interviews were recorded, transcribed and subjected to three-stage, nonlinear manual analysis (open, axial and selective coding). RESULTS: Theoretical saturation occurred after 17 interviews. The core category identified from the data was 'nursing presence' Four subcategories of nursing presence were identified: operational, clinical, therapeutic and social. The degree to which presence could be achieved was dependent upon three influencing factors - enablers, constraints and compensation. CONCLUSIONS: Nurses provide different types of presence during teleconsultation, with the degree of presence dependent on specific characteristics of video-mediated communication. Where the use of video constrains the delivery of presence, nurses use a range of compensatory mechanisms to enhance patient care. RELEVANCE TO CLINICAL PRACTICE: Teleconsultation provides an innovative approach to enhancing the delivery of health care. This study provides nurses with insight into the impact of teleconsultation on their professional role, and an understanding of how best to use video-mediated communication to support patient care.

Bello, A. K., Molzahn, A. E., Girard, L. P., et al. (2017). "Patient and provider perspectives on the design and implementation of an electronic consultation system for kidney care delivery in Canada: a focus group study." BMJ Open **7**(3): e014784.

> OBJECTIVES: We assessed stakeholder perceptions on the use of an electronic consultation system (e-Consult) to improve the delivery of kidney care in Alberta. We aim to identify acceptability, barriers and facilitators to the use of an e-Consult system for ambulatory kidney care delivery. METHODS: This was a qualitative focus group study using a thematic analysis design. Eight focus groups were held in four locations in the province of Alberta, Canada. In total, there were 72 participants in two broad stakeholder categories: patients (including patients' relatives) and providers (including primary care physicians, nephrologists, other care providers and policymakers). FINDINGS: The e-Consult system was generally acceptable across all stakeholder groups. The key barriers identified were length of time required for referring physicians to complete the e-Consult due to lack of integration with current electronic medical records, and concerns that increased numbers of requests might overwhelm nephrologists and lead to a delayed response or an unsustainable system. The key facilitators identified were potential improvement of care coordination, dissemination of best practice through an educational platform, comprehensive data to

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make decisions without the need for face-to-face consultation, timely feedback to primary care providers, timeliness/reduced delays for patients' rapid triage and identification of cases needing urgent care and improved access to information to facilitate decision-making in patient care. CONCLUSIONS: Stakeholder perceptions regarding the e-Consult system were favourable, and the key barriers and facilitators identified will be considered in design and implementation of an acceptable and sustainable electronic consultation system for kidney care delivery.

Boyne, J. J. et Vrijhoef, H. J. (2013). "Implementing telemonitoring in heart failure care: barriers from the perspectives of patients, healthcare professionals and healthcare organizations." Curr Heart Fail Rep **10**(3): 254-261.

The increasing prevalence of chronic diseases, such as heart failure, presents a substantial challenge to healthcare systems. Telemonitoring is believed to be a useful instrument in the delivery of heart failure care. However, a widespread use of telemonitoring is currently failing for various reasons. This article provides an overview of the barriers for the implementation of telemonitoring in heart failure patients from the perspectives of its users: patients, healthcare professionals and healthcare organisations. In doing so, identified barriers are grouped according to the perceived attributes of innovation by Rogers. Recommendations are provided as to how research can improve the implementation of telemonitoring in heart failure.

Bradbury, K., Morton, K., Band, R., et al. (2017). "Understanding how primary care practitioners perceive an online intervention for the management of hypertension." BMC Med Inform Decis Mak **17**(1): 5.

BACKGROUND: In order to achieve successful implementation an intervention needs to be acceptable and feasible to its users and must overcome barriers to behaviour change. The Person-Based Approach can help intervention developers to improve their interventions to ensure more successful implementation. This study provides an example of using the Person-Based Approach to refine a digital intervention for hypertension (HOME BP). METHODS: Our Person-Based Approach involved conducting qualitative focus groups with practice staff to explore their perceptions of HOME BP and to identify any potential barriers to implementation of the HOME BP procedures. We took an iterative approach moving between data collection, analysis and modifications to the HOME BP intervention, followed by further data collection. The data was analysed using thematic analysis. RESULTS: Many aspects of HOME BP appeared to be acceptable, persuasive and feasible to implement. Practitioners perceived benefits in using HOME BP, including that it could empower patients to self-manage their health, potentially overcome clinical inertia around prescribing medication and save both the patient and practitioner time. However, practitioners also had some concerns. Some practitioners were concerned about the accuracy of patients' home blood pressure readings, or the potential for home monitoring to cause patients anxiety and therefore increase consultations. Some GPs lacked confidence in choosing multiple medication changes, or had concerns about unanticipated drug interactions. A few nurses were concerned that the model of patient support they were asked to provide was not consistent with their perceived role. Modifications were made to the intervention based on this feedback, which appeared to help overcome practitioners' concerns and improve the acceptability and feasibility of the intervention. CONCLUSIONS: This paper provides a detailed example of using the Person-Based Approach to refine HOME BP, demonstrating how we improved the acceptability and feasibility of HOME BP based on feedback from practice staff. This demonstration may be useful to others developing digital interventions.

Caffery, L. J., Taylor, M., North, J. B., et al. (2017). "Tele-orthopaedics: A snapshot of services in Australia." J Telemed Telecare **23**(10): 835-841.

Health services in the United States and Europe have reported that tele-orthopaedics saves significant patient travel time, reduces time off work, increases satisfaction with care and in some scenarios reduces the cost of care. Less is known about the role of tele-orthopaedics in Australia. The aim of this study was to explore Australian-based tele-orthopaedic services, and to identify the barriers and enablers associated with these services. We used a qualitative case study methodology where specific services were identified from multiple sources and invited to participate in a structured interview. Nine tele-orthopaedic services contributed to the study. Telehealth activity in each service ranged from one to 75 patients per week, and service maturity ranged from three months to 10 years. Services were used predominantly for fracture clinics and peri-operative consultations. The majority (78%) of services used videoconferencing. Two services used asynchronous methods to review radiographs without direct patient involvement. Tele-orthopaedics was

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found to be disruptive as it required the redesign of many care processes. However, all services found the redesign feasible. Staff resistance was a commonly cited barrier. Further, imaging repositories from multiple imaging providers complicated access to information. Key enablers included clinical champions, picture archiving and communication systems, and the perceived benefit to patients who would avoid the need for travel. Whilst it appears that tele-orthopaedics is not widely utilised in Australia, recognition of the barriers and enablers is important for the development of similar services.

Carlisle, K. et Warren, R. (2013). "A qualitative case study of telehealth for in-home monitoring to support the management of type 2 diabetes." J Telemed Telecare **19**(7): 372-375.

The present study formed part of a randomised controlled trial of telehealth for in-home monitoring to support people with poorly controlled type 2 diabetes. We explored the experiences of patients and healthcare practitioners, and their perceptions of the telehealth model of care used in the trial. In addition to their usual diabetes care, participants receive diabetes care from a diabetes educator nurse via an in-home broadband communication device. On average, each patient participated in 14 videoconferences with a diabetes care coordinator during the 12-month trial period. Qualitative data was collected from two general practices and included semi-structured interviews and document review of patient clinical notes. A total of 12 people were interviewed: 8 health practitioners and 4 patients. Patients and health practitioners expressed a high level of satisfaction with the model of care provided. Patients also reported positive health and social outcomes as a result of being involved in the trial and indicated that in the main they had achieved their goals and were happy with their progress over the 12-month period. Analysis of interviews revealed three broad elements associated with the implementation of telehealth: interpersonal factors, operational problems and the wider health system context within which the general practices and trial team were operating. The findings suggest that adopting telehealth in the management of type 2 diabetes can lead to improved diabetes control, but more support is required to ensure sustainability and widespread implementation.

Carter, M., Fletcher, E., Sansom, A., et al. (2018). "Feasibility, acceptability and effectiveness of an online alternative to face-to-face consultation in general practice: a mixed-methods study of webGP in six Devon practices." BMJ Open **8**(2): e018688.

OBJECTIVES: To evaluate the feasibility, acceptability and effectiveness of webGP as piloted by six general practices. METHODS: Mixed-methods evaluation, including data extraction from practice databases, general practitioner (GP) completion of case reports, patient questionnaires and staff interviews. SETTING: General practices in NHS Northern, Eastern and Western Devon Clinical Commissioning Group's area approximately 6 months after implementing webGP (February-July 2016). PARTICIPANTS: Six practices provided consultations data; 20 GPs completed case reports (regarding 61 e-consults); 81 patients completed questionnaires; 5 GPs and 5 administrators were interviewed. OUTCOME MEASURES: Attitudes and experiences of practice staff and patients regarding webGP. RESULTS: WebGP uptake during the evaluation was small, showing no discernible impact on practice workload. The completeness of cross-sectional data on consultation workload varied between practices.GPs judged 41/61 (72%) of webGP requests to require a face-to-face or telephone consultation. Introducing webGP appeared to be associated with shifts in responsibility and workload between practice staff and between practices and patients.81/231 patients completed a postal survey (35.1% response rate). E-Consulters were somewhat younger and more likely to be employed than face-to-face respondents. WebGP appeared broadly acceptable to patients regarding timeliness and quality/experience of care provided. Similar problems were presented by all respondents. Both groups appeared equally familiar with other practice online services; e-consulters were somewhat more likely to have used them.From semistructured staff interviews, it appeared that, while largely acceptable within practice, introducing e-consults had potential for adverse interactions with pre-existing practice systems. CONCLUSIONS: There is potential to assess the impact of new systems on consultation patterns by extracting routine data from practice databases. Staff and patients noticed subtle changes to responsibilities associated with online options. Greater uptake requires good communication between practice and patients, and organisation of systems to avoid conflicts and misuse. Further research is required to evaluate the full potential of webGP in managing practice workload.

Casey, M., Shaw, S. et Swinglehurst, D. (2017). "Experiences with online consultation systems in primary care: case study of one early adopter site." Br J Gen Pract **67**(664): e736-e743.

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BACKGROUND: There is a strong policy drive towards implementing alternatives to face-to-face consultations in general practice to improve access, efficiency, and cost-effectiveness. These alternatives embrace novel technologies that are assumed to offer potential to improve care. AIM: To explore the introduction of one online consultation system (Tele-Doc) and how it shapes working practices. DESIGN AND SETTING: Mixed methods case study in an inner-city general practice. METHOD: The study was conducted through interviews with IT developers, clinicians, and administrative staff, and scrutiny of documents, websites, and demonstrator versions of Tele-Doc, followed by thematic analysis and discourse analysis. RESULTS: Three interrelated themes were identified: online consultation systems as innovation, managing the 'messiness' of general practice consultations, and redistribution of the work of general practice. These themes raise timely questions about what it means to consult in contemporary general practice. Uptake of Tele-Doc by patients was low. Much of the work of the consultation was redistributed to patients and administrators, sometimes causing misunderstandings. The 'messiness' of consultations was hard to eliminate. In-house training focused on the technical application rather than associated transformations to practice work that were not anticipated. GPs welcomed varied modes of consulting, but the aspiration of improved efficiency was not realised in practice. CONCLUSION: Tele-Doc offers a new kind of consultation that is still being worked out in practice. It may offer convenience for patients with discrete, single problems, and a welcome variation to GPs' workload. Tele-Doc's potential for addressing more complex problems and achieving efficiency is less clear, and its adoption may involve unforeseeable consequences.

Chang, F., Paramsothy, T., Roche, M., et al. (2017). "Patient, staff, and clinician perspectives on implementing electronic communications in an interdisciplinary rural family health practice." Prim Health Care Res Dev **18**(2): 149-160.

Aim To conduct an environmental scan of a rural primary care clinic to assess the feasibility of implementing an e-communications system between patients and clinic staff. BACKGROUND: Increasing demands on healthcare require greater efficiencies in communications and services, particularly in rural areas. E-communications may improve clinic efficiency and delivery of healthcare but raises concerns about patient privacy and data security. METHODS: We conducted an environmental scan at one family health team clinic, a high-volume interdisciplinary primary care practice in rural southwestern Ontario, Canada, to determine the feasibility of implementing an e-communications system between its patients and staff. A total of 28 qualitative interviews were conducted (with six physicians, four phone nurses, four physicians' nurses, five receptionists, one business office attendant, five patients, and three pharmacists who provide care to the clinic's patients) along with quantitative surveys of 131 clinic patients. Findings Patients reported using the internet regularly for multiple purposes. Patients indicated they would use email to communicate with their family doctor for prescription refills (65% of respondents), appointment booking (63%), obtaining lab results (60%), and education (50%). Clinic staff expressed concerns about patient confidentiality and data security, the timeliness, complexity and responsibility of responses, and increased workload. CONCLUSION: Clinic staff members are willing to use an e-communications system but clear guidelines are needed for successful adoption and to maintain privacy of patient health data. E-communications might improve access to and quality of care in rural primary care practices.

Chen, P. R., Xiao, L. H., Gou, Z. P., et al. (2017). "Telehealth attitudes and use among medical professionals, medical students and patients in China: A cross-sectional survey." Int J Med Inform **108**: 13-21.
<Go to ISI>://WOS:000414862500003

Background: Telehealth aims to revolutionize health care by migrating health care from hospitals and satellite clinics directly into the home and onto mobile devices. Telehealth has the potential to increase public access to healthcare in China, where large segments of the population remain underserved, yet little is known about current attitudes and use of telehealth in the country. Objective: Our aim was to determine attitudes and use of telehealth in China among medical professionals and patients, as well as identify factors that may affect its use. Methods: Using a custom-designed questionnaire, we performed a cross-sectional survey of medical professionals, medical students and patients at three large hospitals in Chengdu, Sichuan, China. We used a structural model to analyze the influence of factors that may affect use of telehealth. Results: Of 600 questionnaires that were distributed, 550 (96.49%) were analyzed. Most respondents (63.28%) were familiar with using telehealth to "schedule medical appointments/pay medical fees online", but relatively few (28.55%) used this feature. Nearly half of respondents were familiar with the concept of a "virtual visit" (46.18%), but only 12.18% had ever engaged in such visits. Medical professionals and students generally showed higher awareness and greater use of telehealth than patients. The strongest concern about telehealth among respondents was "authenticity and reliability of data from remote monitoring of patients" (75.17%). The proportion of respondents concerned about the potential disadvantages of telehealth was

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highest among students and lowest among patients. Awareness and use of telehealth were associated with previous experience with health-related use of the Internet and experience with traditional forms of telehealth, but not with social status or attitude toward telehealth. Conclusions: Medical professionals and patients alike in China have a high awareness of telehealth, primarily traditional forms of telehealth, but only a small percentage actually use it. Patients have much lower awareness and use of telehealth than medical professionals and medical students, though they have generally positive attitudes towards telehealth. Telehealth is still in its infancy in China, and the environment for its development is largely favorable among current and future medical professionals.

Chiang, K. F. et Wang, H. H. (2016). "Nurses' experiences of using a smart mobile device application to assist home care for patients with chronic disease: a qualitative study." J Clin Nurs **25**(13-14): 2008-2017.

AIMS AND OBJECTIVES: To examine nurses' experiences regarding the benefits and obstacles of using a smart mobile device application in home care. BACKGROUND: The popularity of mobile phones and Internet technology has established an opportunity for interaction between patients and health care professionals. Line is an application allowing instant communication that is available for free globally. However, the literature relating to use of Line in this area is limited. DESIGN: A qualitative study involving individual in-depth interviews. METHODS: Participants included community nurses (N = 17) from six home care facilities in southern Taiwan who had used Line for home care of chronically ill patients for at least six months. The study was conducted using semi-structured in-depth interviews, which were recorded and converted into transcripts for content analysis. RESULTS: Seven themes emerged from data analysis: reduction in medical care consumption and costs, reduction in workload and stress, facilitating improvement in the quality of care, promotion of the nurse-patient relationship, perceived risk, lack of organisational incentives and operating procedures and disturbance to personal life. CONCLUSIONS: Nurses considered Line valuable for use in home care. While this application has diverse functions, its video transfer function could in particular help nursing staff make prompt decisions about patients' problems and promote nurse-patient relationships. However, there might be hidden risks including legal consequences, safety risks to patients, possible violations of professionalism and increased risk of nurse burnout. Increasing nursing staff awareness of using mobile messaging software applications is necessary. RELEVANCE TO CLINICAL PRACTICE: This study provides relevant information about the benefits, disadvantages, risks and limitations of nurses' use of Line. The study also provides suggestions for software programmers and future organisational strategy and development.

Chung, C. F., Cook, J., Bales, E., et al. (2015). "More Than Telemonitoring: Health Provider Use and Nonuse of Life-Log Data in Irritable Bowel Syndrome and Weight Management." J Med Internet Res **17**(8): 16.
<Go to ISI>://WOS:000360306600006

Background: The quantified self, self-monitoring or life-logging movement is a trend to incorporate technology into data acquisition on aspects of a person's daily life in terms of inputs (eg food consumed), states (eg mood), and performance (mental and physical). Consumer self-monitoring mobile phone apps have been widely studied and used to promote healthy behavior changes. Data collected through life-logging apps also have the potential to support clinical care. Objective: We sought to develop an in-depth understanding of providers' facilitators and barriers to successfully integrating life-log data into their practices and creating better experiences. We specifically investigated three research questions: How do providers currently use patient-collected life-log data in clinical practice? What are provider concerns and needs with respect to this data? What are the constraints for providers to integrate this type of data into their workflows? Methods: We interviewed 21 health care providers-physicians, dietitians, a nurse practitioner, and a behavioral psychologist-who work with obese and irritable bowel syndrome patients. We transcribed and analyzed interviews according to thematic analysis and an affinity diagramming process. Results: Providers reported using self-monitoring data to enhance provider-patient communication, develop personalized treatment plans, and to motivate and educate patients, in addition to using them as diagnostic and adherence tools. However, limitations associated with current systems and workflows create barriers to regular and effective review of this data. These barriers include a lack of time to review detailed records, questions about providers' expertise to review it, and skepticism about additional benefits offered by reviewing data. Current self-monitoring tools also often lack flexibility, standardized formats, and mechanisms to share data with providers. Conclusions: Variations in provider needs affect tracking and reviewing needs. Systems to support diagnosis might require better reliability and resolution, while systems to support interaction should support collaborative reflection and communication. Automatic synthesis of data logs could help providers focus on educational goals while communication of contextual information

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might help providers better understand patient values. We also discuss how current mobile apps and provider systems do, and do not, support these goals, and future design opportunities to realize the potential benefits of using life-logging tools in clinical care.

Collier, A., Morgan, D. D., Swetenham, K., et al. (2016). "Implementation of a pilot telehealth programme in community palliative care: A qualitative study of clinicians' perspectives." Palliat Med **30**(4): 409-417.

BACKGROUND: Telehealth technologies are an emerging resource opening up the possibility of greater support if they have utility for patients, carers and clinicians. They may also help to meet health systems' imperatives for improved service delivery within current budgets. Clinicians' experiences and attitudes play a key role in the implementation of any innovation in service delivery. AIM: To explore clinicians' perspectives on and experiences of the utilisation of a pilot telehealth model and its integration into a specialist community palliative care programme. DESIGN: Focus groups and interviews generated data that were analysed through the lens of a realistic evaluation theoretical framework. SETTING/PARTICIPANTS: The study was conducted in a metropolitan specialist palliative care service in South Australia. Participants (n = 10) were clinicians involved in the delivery of community specialist palliative care and the piloting of a telehealth programme. RESULTS: Service providers consider telehealth resources as a means to augment current service provision in a complementary way rather than as a replacement for face-to-face assessments. Introducing this technology, however, challenged the team to critically explore aspects of current service provision. The introduction of technologies also has the potential to alter the dynamic of relationships between patients and families and community palliative care clinicians. CONCLUSION: Implementation of a pilot telehealth programme in a specialist palliative community team needs to involve clinical staff in service redesign from the outset. Reliable IT infrastructure and technical support is critical for telehealth models to be effective and will aid uptake.

Cottrell, E., Cox, T., O'Conne, P., et al. (2015). "Patient and professional user experiences of simple telehealth for hypertension medication reminders and smoking cessation: a service evaluation." BMJ Open **5**(3): 9.
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Objectives: To establish patient and professional user satisfaction with the Advice & Interactive Messaging (AIM) for Health programme delivered using a mobile phone-based, simple telehealth intervention, 'Florence'. Design: A service evaluation using data extracted from Florence and from a professional user electronic survey. Setting: 425 primary care practices across 31 Clinical Commissioning Groups in England. Participants: 3381 patients registered on 1 of 10 AIM protocols between March 2013 and January 2014 and 77 professional users. Intervention: The AIM programme offered 10 clinical protocols, in three broad groups: (1) hypertension diagnosis/monitoring, (2) medication reminders and (3) smoking cessation. Florence sent patients prompts to submit clinical information, educational messages and user satisfaction questions. Patient responses were reviewed by their primary healthcare providers. Primary outcome measures: Patients and professional user experiences of using AIM, and within this, Florence. Results: Patient activity using Florence was generally good at month 1 for the hypertension protocols (71-80%), but reduced over 2-3 months (31-60%). For the other protocols, patient activity was 0-39% at 3 months. Minimum target days of texting were met for half the hypertension protocols. 1707/2304 (74%) patients sent evaluative texts responded at least once. Among responders, agreement with the adapted friends and family statement generally exceeded preproject aspirations. Professional responders were generally positive or equivocal about the programme. Conclusions: Satisfaction with AIM appeared optimal when patients were carefully selected for the protocol; professional users were familiar with the system, the programme addressed a problem with the previous service delivery that was identified by users and users took an active approach to achieve clinical goals. However, there was a significant decrease in patients' use of Florence over time. Future applications may be optimised by identifying and addressing reasons for the waning use of the service and enhancing support during implementation of the service.

Cottrell, M. A., Hill, A. J., O'Leary, S. P., et al. (2017). "Service provider perceptions of telerehabilitation as an additional service delivery option within an Australian neurosurgical and orthopaedic physiotherapy screening clinic: A qualitative study." Musculoskelet Sci Pract **32**: 7-16.

BACKGROUND: The Neurosurgical & Orthopaedic Physiotherapy Screening Clinic and Multidisciplinary Service (N/OPSC&MDS) originated as a complementary, non-surgical pathway for patients referred to public neurosurgical and orthopaedic specialist services. Patient access to the N/OPSC&MDS could potentially be improved with the implementation of telerehabilitation as an additional method of service delivery.

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OBJECTIVE: To evaluate service provider's views on (1) current barriers to patients' accessing N/OPSC & MD services, and (2) the implementation of telerehabilitation within the N/OPSC&MDS. DESIGN: Qualitative descriptive study design. METHODS: Healthcare providers (n = 26) were recruited from six N/OPSC&MD services located throughout Queensland, Australia. Semi-structured interviews were conducted to explore service providers' views with respect to existing barriers to patients accessing the N/OPSC&MDS, and if telerehabilitation could be feasibly adopted to address current barriers. RESULTS: Template analysis resulted in six themes: (1) barriers to some patients' accessing current N/OPSC&MD services are complex & multifaceted; (2) telerehabilitation could improve patient access to appropriate management for their musculoskeletal condition; (3) telerehabilitation may have limitations when compared to face-to-face healthcare; (4) the delivery of telerehabilitation needs to be flexible; (5) perceived barriers, and (6) facilitators to the successful implementation of telerehabilitation within the N/OPSC&MDS. CONCLUSION: This study represents a critical step in determining the readiness of service providers for the implementation of telerehabilitation within the N/OPSC&MDS. Although cautious, service providers are overall accepting of the implementation of telerehabilitation, acknowledging that it could eliminate several current barriers, subsequently achieving more equitable access to the service.

Crawford, A., Sunderji, N., Lopez, J., et al. (2016). "Defining competencies for the practice of telepsychiatry through an assessment of resident learning needs." BMC Med Educ **16**: 28.

BACKGROUND: A foundational assessment of learning needs is missing from previous reports of telepsychiatry curricula. We used an in-depth needs assessment to identify specific skills required for the practice of effective telepsychiatry, and provide an evidence base to guide the development of telepsychiatry curricula in postgraduate psychiatry training. Many of these skills set telepsychiatry apart from practice in traditional face-to-face clinical settings, or result from adaptations to clinical practice to meet the needs of a telepsychiatry interface in patient care. METHODS: We used a qualitative, modified grounded theory approach to gain insight into areas of importance for telepsychiatry training in postgraduate psychiatry residency. 16 interviews of faculty and residents (9 and 7 interviews, respectively), allowed participants to reflect on their experiences in telepsychiatry. Data were then thematically analyzed. RESULTS: Interview respondents identified important aspects of the context for telepsychiatry training; the skills required to competently practice telepsychiatry; and the desired teaching and learning methods for acquiring these skills. Specific domains of competency were identified: technical skills; assessment skills; relational skills and communication; collaborative and interprofessional skills; administrative skills; medico-legal skills; community psychiatry and community-specific knowledge; cultural psychiatry skills, including knowledge of Indigenous cultures; and, knowledge of health systems. The skills identified in this study map well to competency- based medical education frameworks. CONCLUSIONS: Telepsychiatry is increasingly being adopted as a solution to health systems problems such as regional disparities in access to care, and it requires explicit competency development. Ensuring adequate and quality exposure to telepsychiatry during residency training could positively impact our health systems and health equity.

Damhus, C. S., Emme, C. et Hansen, H. (2018). "Barriers and enablers of COPD telerehabilitation - a frontline staff perspective." Int J Chron Obstruct Pulmon Dis **13**: 2473-2482.

Background: Telerehabilitation (TR) aimed at patients with COPD has shown promising effects on symptoms, physical function, and quality of life, but little research has been conducted to understand the impact of implementation on frontline health professionals. Therefore, the aim of this study was to examine the barriers and enablers of health professionals to online exercise-based TR in patients with COPD, to support a successful implementation process. Methods: Semistructured individual and focus group interviews were conducted with 25 health professionals working with conventional COPD rehabilitation or TR. Interviews were audio-taped and transcribed verbatim. Investigator triangulation was applied during data generation. The Theoretical Domains Framework directed the interview guide and was used as a coding framework in the analysis. Results: We identified six predominant domains essential in understanding the enablers and barriers of TR from a staff perspective: 1) skills, 2) professional role and identity, 3) beliefs about capabilities, 4) beliefs about consequences, 5) environmental context and resources, and 6) social influences. We found that health professionals held both enablers and barriers important for the implementation process of TR. TR introduces new work tasks and new ways for the health professionals to communicate and exercise with the patients, which influence their professional role and self-perceived capability. Conclusion: Specific attention toward involvement of the health professionals in the decision process combined with sufficient education and skill training is highly essential to support a successful implementation of TR in clinical practice.

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Davis, M. M., Currey, J. M., Howk, S., et al. (2014). "A qualitative study of rural primary care clinician views on remote monitoring technologies." J Rural Health **30**(1): 69-78.

> PURPOSE: Remote monitoring technologies (RMTs) may improve the quality of care, reduce access barriers, and help control medical costs. Despite the role of primary care clinicians as potential key users of RMTs, few studies explore their views. This study explores rural primary care clinician interest and the resources necessary to incorporate RMTs into routine practice. METHODS: We conducted 15 in-depth interviews with rural primary care clinician members of the Oregon Rural Practice-based Research Network (ORPRN) from November 2011 to April 2012. Our multidisciplinary team used thematic analysis to identify emergent themes and a cross-case comparative analysis to explore variation by participant and practice characteristics. RESULTS: Clinicians expressed interest in RMTs most relevant to their clinical practice, such as supporting chronic disease management, noting benefits to patients of all ages. They expressed concern about the quantity of data, patient motivation to utilize equipment, and potential changes to the patient-clinician encounter. Direct data transfer into the clinic's electronic health record (EHR), availability in multiple formats, and review by ancillary staff could facilitate implementation. Although participants acknowledged the potential system-level benefits of using RMTs, adoption would be difficult without payment reform. CONCLUSIONS: Adoption of RMTs by rural primary care clinicians may be influenced by equipment purpose and functionality, implementation resources, and payment. Clinician and staff engagement will be critical to actualize RMT use in routine primary care.

de Vries, A. E., van der Wal, M. H. L., Nieuwenhuis, M. M. W., et al. (2013). "Health Professionals' Expectations Versus Experiences of Internet-Based Telemonitoring: Survey Among Heart Failure Clinics." J Med Internet Res **15**(1): 73-83.
<Go to ISI>://WOS:000313323500005

> Background: Although telemonitoring is increasingly used in heart failure care, data on expectations, experiences, and organizational implications concerning telemonitoring are rarely addressed, and the optimal profile of patients who can benefit from telemonitoring has yet to be defined. Objective: To assess the actual status of use of telemonitoring and to describe the expectations, experiences, and organizational aspects involved in working with telemonitoring in heart failure in the Netherlands. Methods: In collaboration with the Netherlands Organization for Applied Scientific Research (TNO), a 19-item survey was sent to all outpatient heart failure clinics in the Netherlands, addressed to cardiologists and heart failure nurses working in the clinics. Results: Of the 109 heart failure clinics who received a survey, 86 clinics responded (79%). In total, 31 out of 86 (36%) heart failure clinics were using telemonitoring and 12 heart failure clinics (14%) planned to use telemonitoring within one year. The number of heart failure patients receiving telemonitoring generally varied between 10 and 50; although in two clinics more than 75 patients used telemonitoring. The main goals for using telemonitoring are "monitoring physical condition", "monitoring signs of deterioration" (n=39, 91%), "monitoring treatment" (n=32, 74%), "adjusting medication" (n=24, 56%), and "educating patients" (n=33, 77%). Most patients using telemonitoring were in the New York Heart Association (NYHA) functional classes II (n=19, 61%) and III (n=27, 87%) and were offered the use of the telemonitoring system "as long as needed" or without a time limit. However, the expectations of the use of telemonitoring were not met after implementation. Eight of the 11 items about expectations versus experiences were significantly decreased (P<.001). Health care professionals experienced the most changes related to the use of telemonitoring in their work, in particular with respect to "keeping up with current development" (before 7.2, after 6.8, P=.15), "being innovative" (before 7.0, after 6.1, P=.003), and "better guideline adherence" (before 6.3, after 5.3, P=.005). Strikingly, 20 out of 31 heart failure clinics stated that they were considering using a different telemonitoring system than the system used at the time. Conclusions: One third of all heart failure clinics surveyed were using telemonitoring as part of their care without any transparent, predefined criteria of user requirements. Prior expectations of telemonitoring were not reflected in actual experiences, possibly leading to disappointment. (J Med Internet Res 2013;15(1):e4) doi:10.2196/jmir.2161

Dockweiler, C. et Hornberg, C. (2017). "The Role of Psychological and Technology-related Personality Traits and Knowledge Levels as Factors Influencing Adoption of Telemonitoring by Medical Professionals." Gesundheitswesen **79**(12): 1024-1030.
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> Objectives Information and communication technologies are becoming increasingly important in health care. Randomized clinical trials have shown that telemonitoring in particular leads to improved quality of care as well as shortened hospital stays and reduced health care costs. For its long-term anchoring in medical care,

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user-oriented technology needs to be developed, taking into account the complex structures of technology acceptance Methods Knowledge of and attitudes towards telemonitoring amongst medical professionals were investigated using an online-based approach with a random sample of n = 614; the response rate was 21 % (n = 133). The emergence of positive attitude patterns towards telemonitoring was analyzed using the relationships between psychological and technology-related personality traits, and perceived knowledge was determined using a regression model. Results Positive attitudes towards telemonitoring are significantly influenced by the individual's knowledge and agreeableness, which is strongly characterized by altruistic traits and interpersonal trust. There is a strong association with an improvement in the quality of care, while there are differences in attitudes towards telemonitoring between health care sectors and gender. Overall, only 57 % of the physicians surveyed feel sufficiently informed about the use of telemonitoring. Conclusion Medical evidence is crucial for the further development of telemedicine in general and telemonitoring in particular. Improvements need to be made in knowledge transfer, the exchange of best practice solutions and the anchoring of telemedicine in education and training.

Donelan, K., Barreto, E. A., Sossong, S., et al. (2019). "Patient and Clinician Experiences With Telehealth for Patient Follow-up Care." American Journal of Managed Care **25**(1): 40-+.
<Go to ISI>://WOS:000456388800010

> OBJECTIVES: The increasing and widespread availability of personal technology offers patients and clinicians the opportunity to utilize real-time virtual communication to enhance access to health services. Understanding the perceived value of different modes of care may help to shape the future use of technology. STUDY DESIGN: Cross-sectional surveys of patients and clinicians participating in telehealth virtual video visits (VVVs) in an academic health system. METHODS: We administered surveys to 426 unique established patients and 74 attending physicians in our hospital to measure perceptions of the comparative experience of VVVs and office visits; 254 patients and 61 physicians completed the surveys. RESULTS: When comparing VVVs and office visits, 62.6% of patients and 59.0% of clinicians reported no difference in "the overall quality of the visit." VVVs were vastly preferred to office visits by patients for convenience and travel time. A majority 152.5 /01 of clinicians reported higher efficiency of a VVV appointment. CONCLUSIONS: For established patients, VVVs may provide effective follow-up and enhanced convenience when compared with traditional office visits.

Doyle, C., Jackson, D., Loi, S., et al. (2016). "Videoconferencing and telementoring about dementia care: evaluation of a pilot model for sharing scarce old age psychiatry resources." Int Psychogeriatr **28**(9): 1567-1574.

> BACKGROUND: While videoconferencing, telementoring, and peer support have been shown to enhance services in some instances, there has been no research investigating the use of these technologies in supporting professionals managing clients with dementia. The objective of this research was to evaluate expansion of an old age psychiatry consultation service and pilot test a model to improve medical supervision and clinical governance for staff within regional and remote areas using remote information technology. METHODS: The design was a mixed methods (qualitative and quantitative) evaluation using before, mid-point and post-implementation semi-structured interviews and questionnaires to examine orientation, acceptance, and impact underpinned by theoretical approaches to evaluation. Education evaluations used a Likert style response template. Participants were 18 dementia service staff, including staff from linked services and old age psychiatrists. Qualitative interviews addressed the pilot implementation including: expectations, experiences, strategies for improving the pilot, and perceived impact on work practice and professional development opportunities. RESULTS: There was high satisfaction with the program. The case conference process contributed to perceived improved outcomes for clients, family, and staff. Clinicians perceived improvement in family carer and staff carer stress and their confidence in managing clients with behavioral and psychological symptoms of dementia (BPSD). Thematic analysis indicated that the pilot enhanced professional development, decreased travel time, and improved team cohesion. CONCLUSIONS: Given the increasing aging population in regional, rural, and remote areas, initiatives using videoconferencing and telementoring will help to develop a confident and skilled workforce. This pilot program was found to be acceptable and feasible. Potential benefits for clients and family carers should be examined in future reserasch.

Driessen, J., Bonhomme, A., Chang, W., et al. (2016). "Nursing Home Provider Perceptions of Telemedicine for Reducing Potentially Avoidable Hospitalizations." J Am Med Dir Assoc **17**(6): 519-524.

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OBJECTIVE: Potentially avoidable hospitalizations (PAHs) of nursing home (NH) residents are common, costly, and can have significant economic consequences. Telemedicine has been shown to reduce emergency department and hospitalization of NH residents, yet adoption has been limited and little is known about provider's perceptions and desired functionality for a telemedicine program. The goal of this study was to survey a nationally representative sample of NH physicians and advanced practice providers to quantify provider perceptions and desired functionality of telemedicine in NHs to reduce PAHs. DESIGN/SETTING/PARTICIPANTS/MEASUREMENT: We surveyed physicians and advanced practice providers who attended the 2015 AMDA-The Society for Post-Acute and Long-Term Care Medicine Annual Conference about their perceptions of telemedicine and desired attributes of a telemedicine program for managing acute changes of condition associated with PAHs. RESULTS: We received surveys from 435 of the 947 conference attendees for a 45.9% response rate. Providers indicated strong agreement with the potential for telemedicine to improve timeliness of care and fill existing service gaps, while disagreeing most with the ideas that telemedicine would reduce care effectiveness and jeopardize resident privacy. Responses indicated clear preferences for the technical requirements of such a program, such as high-quality audio and video and inclusion of an electronic stethoscope, but with varying opinions about who should be performing the consults. CONCLUSION: Among NH providers, there is a high degree of confidence in the potential for a telemedicine solution to PAHs in NHs, as well as concrete views about features of such a solution. Such consensus could be used to drive an approach to telemedicine for PAHs in NHs that retains the theoretical strengths of telemedicine and reflects the needs of facilities, providers, and patients. Further research is needed to objectively study the impact of successful telemedicine implementations on patient, provider, and economic outcomes.

Driessen, J., Chang, W., Patel, P., et al. (2018). "Nursing Home Provider Perceptions of Telemedicine for Providing Specialty Consults." Telemed J E Health **24**(7): 510-516.

BACKGROUND: Nursing homes (NHs) provide care to a complex patient population and face the ongoing challenge of meeting resident needs for specialty care. A NH telemedicine care model could improve access to remote specialty providers. INTRODUCTION: Little is known about provider interest in telemedicine for specialty consults in the NH setting. The goal of this study was to survey a national sample of NH physicians and advanced practice providers to document their views on telemedicine for providing specialty consults in the NH. MATERIALS AND METHODS: We surveyed physician and advanced practice providers who attended the 2016 AMDA-The Society for Post-Acute and Long-Term Care Medicine Annual Conference about their likelihood of referral to and perceptions of a telemedicine program for providing specialty consults in the NH. RESULTS: We received surveys from 524 of the 1,274 conference attendees for a 41.1% response rate. Respondents expressed confidence in the ability of telemedicine to fill existing service gaps and provide appropriate, timelier care. Providers showed the highest level of interest in telemedicine for dermatology, geriatric psychiatry, and infectious disease. Only 13% of respondents indicated that telemedicine was available for use in one of their facilities. DISCUSSION: There appears to be unmet demand for telemedicine in NHs for providing specialty consults to residents. CONCLUSIONS: The responses of NH providers suggest support for the concept of telemedicine as a modality of care that can be used to offer specialty consults to NH residents.

Duineveld, L. A., Wieldraaijer, T., Wind, J., et al. (2016). "Primary care-led survivorship care for patients with colon cancer and the use of eHealth: a qualitative study on perspectives of general practitioners." BMJ Open **6**(4): e010777.

OBJECTIVES: The aim of this study was to explore the perspectives of general practitioners (GPs) regarding their current and future role in survivorship care of patients with colon cancer, and to assess their perspectives on patients' self-management capacities and the value of the eHealth application Oncokompas(2.0) used by patients. SETTING: GPs from the central part of the Netherlands were interviewed at their location of preference. PARTICIPANTS: 20 GPs participated (10 men, 10 women, age range 34-65 years, median age 49.5 years). The median years of experience as a GP was 14.5 years (range 3-34 years). RESULTS: GPs indicated attempting to keep in contact with patients after colon cancer treatment and mentioned being aware of symptoms of recurrent disease. Most participants would have liked to be more involved and expected to be able to provide survivorship care of colon cancer. Requirements mentioned were agreements with secondary care and a protocol. GPs considered Oncokompas(2.0), which stimulates patients to structure their own survivorship care, as a useful additional tool for a specific group of patients (ie, young and highly-educated patients). CONCLUSIONS: Based on the perspectives of the GPs, survivorship

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care of colon cancer in primary care is deemed feasible and the use of an eHealth application such as Oncokompas(2.0) is expected to benefit specific groups of patients after colon cancer treatment.

Egerton, T., Nelligan, R., Setchell, J., et al. (2017). "General practitioners' perspectives on a proposed new model of service delivery for primary care management of knee osteoarthritis: a qualitative study." BMC Fam Pract **18**(1): 85.

BACKGROUND: Effective management of people with knee osteoarthritis (OA) requires development of new models of care, and successful implementation relies on engagement of general practitioners (GPs). This study used a qualitative methodology to identify potential factors influencing GPs' engagement with a proposed new model of service delivery to provide evidence-based care for patients with knee OA and achieve better patient outcomes. METHODS: Semi-structured telephone interviews with 11 GPs were conducted. Based on a theoretical model of behaviour, interview questions were designed to elicit perspectives on a remotely-delivered (telephone-based) service to support behaviour change and self-management for patients with knee OA, with a focus on exercise and weight loss. Transcripts were analysed using an inductive thematic approach, and GPs' opinions were organised using the APEASE (affordability, practicability, effectiveness, acceptability, safety/side effects and equity) criteria as themes. RESULTS: GPs expressed concerns about potential for confusion, incongruence of information and advice, disconnect with other schemes and initiatives, loss of control of patient care, lack of belief in the need and benefits of proposed service, resistance to change because of lack of familiarity with the procedures and the service, and reluctance to trust in the skills and abilities of the health professionals providing the care support. GPs also recognised the potential benefits of the extra support for patients, and improved access for remote patients to clinicians with specialist knowledge. CONCLUSION: The findings can be used to optimise implementation and engagement with a remotely-delivered 'care support team' model by GPs.

Eikelboom, R. H. et Swanepoel, W. (2016). "International Survey of Audiologists' Attitudes Toward Telehealth." Am J Audiol **25**(3s): 295-298.

Purpose: A better understanding of the attitudes of audiologists toward teleaudiology and their willingness to use teleaudiology is required to progress the application of teleaudiology technologies and services into clinical practice. Audiologists around the world were surveyed on their attitudes toward teleaudiology and their willingness to use it. Method: An online survey was sent to audiologists through professional associations' mailing lists. The survey included questions on the use of computer and video-conferencing technologies, awareness and previous use of teleaudiology, and willingness to use teleaudiology. Results: Responses were provided by 269 people from 28 different countries, representing a wide cross-section of experience, qualification, and work settings; 77.8% of respondents were women. Almost all respondents had used PC-based video-conferencing; most had used related technologies and reported positive attitudes toward using these. However, less than 25% had used teleaudiology. Conclusions: Despite positive attitudes toward telehealth and associated technology, the low number of audiologists who have used teleaudiology for services indicates limited clinical adoption.

Fairbrother, P., Pinnock, H., Hanley, J., et al. (2013). "Exploring telemonitoring and self-management by patients with chronic obstructive pulmonary disease: a qualitative study embedded in a randomized controlled trial." Patient Educ Couns **93**(3): 403-410.

OBJECTIVE: To explore patient and professional views on self-management in the context of telemonitoring in chronic obstructive pulmonary disease (COPD). METHODS: Semi-structured interviews with patients with COPD and healthcare professionals participating in a randomized controlled trial of telemonitoring in Lothian, Scotland, explored experiences of using telemonitoring, and dynamics in patient-practitioner relationships. Transcribed data were analyzed using the Framework approach. RESULTS: 38 patients (mean age 67.5 years) and 32 professionals provided 70 interviews. Patients considered that telemonitoring empowered self-management by enhancing their understanding of COPD and providing additional justification for their decisions to adjust treatment or seek professional advice. Professionals discussed telemonitoring as promoting compliance with medical advice and encouraged patients to exercise personal responsibility within clinical parameters, but expressed concerns about promoting the sick role and creating dependence on telemonitoring. CONCLUSION: Telemonitoring assisted many patients to embrace greater responsibility for their health but the model of service provision remained clinician-centered. A medical model of 'compliant self-management' may paradoxically have promoted dependence on professionals. PRACTICE IMPLICATIONS: Patients and professionals shared responsibility for meeting the central objective

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of prompt management of exacerbations of COPD. Care is needed, however, to minimize the risk in some patients, of telemonitoring increasing dependence on practitioner support.

Fairweather, G. C., Lincoln, M. A. et Ramsden, R. (2017). "Speech-language pathology telehealth in rural and remote schools: the experience of school executive and therapy assistants." Rural Remote Health **17**(3): 13.
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Introduction: Difficulties in accessing allied health services, especially in rural and remote areas, appear to be driving the use of telehealth services to children in schools. The objectives of this study were to investigate the experiences and views of school executive staff and therapy assistants regarding the feasibility and acceptability of a speech-language pathology telehealth program for children attending schools in rural and remote New South Wales, Australia. The program, called Come N See, provided therapy interventions remotely via low-bandwidth videoconferencing, with email follow-up. Over a 12-week period, children were offered therapy blocks of six fortnightly sessions, each lasting a maximum of 30 minutes. Methods: School executives (n=5) and therapy assistants (n=6) described factors that promoted or threatened the program's feasibility and acceptability, during semistructured interviews. Thematic content analysis with constant comparison was applied to the transcribed interviews to identify relationships in the data. Results: Emergent themes related to (a) unmet speech pathology needs, (b) building relationships, (c) telehealth's advantages, (d) telehealth's disadvantages, (e) anxiety replaced by joy and confidence in growing skills, and (f) supports. Conclusions: School executive staff and therapy assistants verified that the delivery of the school-based telehealth service was feasible and acceptable. However, the participants saw significant opportunities to enhance this acceptability through building into the program stronger working relationships and supports for stakeholders. These findings are important for the future development of allied health telehealth programs that are sustainable as well as effective and fit the needs of all crucial stakeholders. The results have significant implications for speech pathology clinical practice relating to technology, program planning and teamwork within telehealth programs.

Firet, L., de Bree, C., Verhoeks, C. M., et al. (2019). "Mixed feelings: general practitioners' attitudes towards eHealth for stress urinary incontinence - a qualitative study." BMC Fam Pract **20**(1): 21.

BACKGROUND: Stress urinary incontinence (SUI) is the most prevalent subtype of urinary incontinence and is a bothering condition in women. Only a minority of those with SUI consult a general practitioner (GP). EHealth with pelvic floor muscle training (PFMT) is effective in reducing incontinence symptoms and might increase access to care. The role of the GP regarding such an eHealth intervention is unknown. The aim of the study is to gain insight into the attitudes towards a PFMT internet-based, eHealth, intervention for SUI. METHODS: A qualitative study was conducted. Data were collected through semi-structured interviews among purposively sampled GPs. Audio records were fully transcribed, and analysed thematically. RESULTS: Thirteen GPs were interviewed, nine females and four males. Three themes emerged: appraisal of eHealth as a welcome new tool, mixed feelings about a supportive role, and eHealth is no cure-all. GPs welcomed eHealth for SUI as matching their preferences for PFMT and having advantages for patients. With eHealth as stand-alone therapy GPs were concerned about the lack of feedback, and the loss of motivation to adhere to the intervention. Therefore, GPs considered personal support important. The GP's decision to recommend eHealth was strongly influenced by a woman's motivation and her age. GPs' treatment preferences for elderly are different from those for young women with SUI; both PFMT and eHealth are perceived less suitable for older women. CONCLUSION: EHealth with PFMT fits into the GPs' routine practice of SUI and adds value to it. Although there is evidence that eHealth as a stand-alone intervention is effective, GPs consider personal support important to supplement the perceived shortcomings. Probably GPs are not aware of, or convinced of the existing evidence. Training should address this issue and should also focus on common misunderstandings about regular care for women with SUI, such as the idea that PFMT is not suitable for the elderly. Improving GPs' knowledge that eHealth can be a stand-alone therapy for SUI facilitates the implementation in daily care.

Giussi Bordoni, M. V., Plazzotta, F., Sommer, J., et al. (2015). "Providers Expectations on Telemedicine: A Qualitative Research in a Large Healthcare Network of Latin America." Stud Health Technol Inform **216**: 890.

UNLABELLED: The benefits of Telemedicine make it a viable, reliable and useful discipline for dispensing health care. This qualitative study is aimed to understand the expectations, opinions and previous knowledge of the professionals about telemedicine at the Hospital Italiano de Buenos Aires. RESULTS: Professionals realize that Telemedicine is inserted into their usual practice in an informal way. They consider telemedicine

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as an alternative to the traditional delivery of health care, but are afraid of their role in health care is undermined. Professionals point out very specific applications of Telemedicine such as monitoring the health of patients remotely, drug doses adjustments and sharing clinical information. CONCLUSION: Results suggest that professionals are not familiar with telemedicine and will be necessary to develop a training plan before implementation.

Glenn, I. C., Bruns, N. E., Hayek, D., et al. (2017). "Rural surgeons would embrace surgical telementoring for help with difficult cases and acquisition of new skills." Surg Endosc **31**(3): 1264-1268.

BACKGROUND: Surgical telementoring, consisting of an expert surgeon guiding a less experienced surgeon through advanced or novel cases from a remote location, is an evolving technology which has potential to become an integral part of surgical practice. This study sought to apprise the attitudes of rural general surgeons toward the possible benefits and applications of surgical telementoring in their practices. METHODS: A survey assessing demographics and attitudes toward telementoring was e-mailed to members of the American College of Surgeons (ACS) Advisory Council for Rural Surgery and posted to the ACS website in areas targeting rural surgeons. A link to a webpage with a description of surgical telementoring and brief demonstrative video were included with the survey. RESULTS: There were 159 respondents, with 82.3 % of them practicing in communities smaller than 50,000 people. Overall, 78.6 % felt that telementoring would be useful to their practice, and 69.8 % thought it would benefit their hospitals. There was no correlation between years of practice and perceived usefulness of surgical telementoring. When asked the single most useful, or primary, application of surgical telementoring there was a split between learning new techniques (46.5 %) and intraoperative assistance with unexpected findings (39.0 %). When asked to select all applications in which they would be interested in using telementoring from a list of possible uses, surgeons most frequently selected: intraoperative consultation for unexpected findings (67.7 %), trauma consultation (32.9 %), and laparoscopic colectomy (32.9 %). CONCLUSIONS: Surgical telementoring is on the verge of widespread use but industry and surgical societies remain ambivalent about supporting its implementation due to concerns over lack of interest. This study demonstrates interest among rural surgeons. While there are differing opinions regarding compensation of the telementoring, the most common, single interest in the use of surgical telementoring was for learning new techniques or skill sets.

Goedken, C. C., Moeckli, J., Cram, P. M., et al. (2017). "Introduction of Tele-ICU in rural hospitals: Changing organisational culture to harness benefits." Intensive Crit Care Nurs **40**: 51-56.

OBJECTIVE: This study evaluates rural hospital staff perceptions of a telemedicine ICU (Tele-ICU) before and after implementation. METHODS: We conducted a longitudinal qualitative study utilising semistructured group or individual interviews with staff from three rural ICU facilities in the upper Midwest of the United States that received Tele-ICU support. Interviews occurred pre-implementation and at two time points post-implementation. Interviews were conducted with: ICU administrators (n=6), physicians (n=3), nurses (n=9), respiratory therapists (n=5) and other (n=1) from July 2011 to May 2013. Transcripts were analysed for thematic content. FINDINGS: Overall, rural ICU staff viewed Tele-ICU as a welcome benefit for their facility. Major themes included: (1) beneficial where recruitment and retention of staff can be challenging; (2) extra support for day shifts and evening, night and weekend shifts; (3) reduction in the number of transfers larger tertiary hospitals in the community; (4) improvement in standardisation of care; and (5) organisational culture of rural ICUs may lead to under-utilisation. CONCLUSIONS: ICU staff at rural facilities view Tele-ICU as a positive, useful tool to provide extra support and assistance. However, more research is needed regarding organisational culture to maximise the potential benefits of Tele-ICU in rural hospitals.

Grassl, N., Nees, J., Schramm, K., et al. (2018). "A Web-Based Survey Assessing the Attitudes of Health Care Professionals in Germany Toward the Use of Telemedicine in Pregnancy Monitoring: Cross-Sectional Study." JMIR Mhealth Uhealth **6**(8): e10063.

BACKGROUND: The demand for fetal monitoring and constant reassurance is high in pregnant women. Consequently, pregnant women use various health apps and are more likely to visit emergency departments due to subjective but nonurgent complaints. However, electronic health (eHealth) and mobile health (mHealth) solutions are rarely used to prevent nonurgent emergency consultations. To implement modern care solutions, a better understanding of the attitudes, fears, and hopes of health care professionals toward eHealth and mHealth is needed. OBJECTIVE: The aim of this study was to investigate the attitudes of health care professionals in obstetrics toward telemedicine. METHODS: A quantitative Web-based survey on health

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care professionals in obstetrics in Germany was conducted. The participants included nurses, midwives, and physicians of all age groups and job positions working in hospitals that provide various levels of health care. The questionnaire comprised 24 questions about the characteristics of the study population, views about emergency consultations in obstetrics, attitude toward telemedicine, job satisfaction, and sleeping behavior. RESULTS: In total, 244 health care professionals participated in the Web-based survey. In general, health care professionals were skeptical (170/233, 72.9%) about the use of telemedicine in obstetrics; however, 55.8% (130/233) recognized its potential. Moreover, 72% (62/86) of physicians were optimistic in using apps for pregnancy monitoring, whereas 36.1% (47/130) of nonphysicians (P<.001) were not. Significantly, more nonphysicians rejected such developments (75/130, 57.7% rejected) compared with physicians (24/86, 28%; P<.001). We also found that obstetricians with more than 10 years of work-experience are more skeptical; however, approximately 49% (18/37) of them believed that telemedicine could reduce nonurgent emergency consultations, whereas 73.2% (106/145) of obstetricians with less than 5 years of experience (P=.01) thought otherwise. Our survey revealed a high job satisfaction and a prevalence of regular sleeping problems of 45.9% (91/198) among health care professionals in obstetrics. Surprisingly, both job satisfaction and sleeping problems were independent from the number of night shifts per month (P=.77 and P=.99, respectively). Yet, 56.6% (112/198) of the survey participants thought they would be happier with their job if they had to work fewer night shifts per month. CONCLUSIONS: Our study reveals an ambivalent attitude toward the use of telemedicine among health care professionals in obstetrics in Germany at the moment. Efforts to promote the use of telemedicine should focus on nurses and midwives because these groups are the most skeptical. By contrast, particularly young physicians recognize the potential of apps in patient care and would like to use such technology in pregnancy monitoring.

Greenhalgh, T., A'Court, C. et Shaw, S. (2017). "Understanding heart failure; explaining telehealth - a hermeneutic systematic review." BMC Cardiovasc Disord **17**(1): 156.

BACKGROUND: Enthusiasts for telehealth extol its potential for supporting heart failure management. But randomised trials have been slow to recruit and produced conflicting findings; real-world roll-out has been slow. We sought to inform policy by making sense of a complex literature on heart failure and its remote management. METHODS: Through database searching and citation tracking, we identified 7 systematic reviews of systematic reviews, 32 systematic reviews (including 17 meta-analyses and 8 qualitative reviews); six mega-trials and over 60 additional relevant empirical studies and commentaries. We synthesised these using Boell's hermeneutic methodology for systematic review, which emphasises the quest for understanding. RESULTS: Heart failure is a complex and serious condition with frequent co-morbidity and diverse manifestations including severe tiredness. Patients are often frightened, bewildered, socially isolated and variably able to self-manage. Remote monitoring technologies are many and varied; they create new forms of knowledge and new possibilities for care but require fundamental changes to clinical roles and service models and place substantial burdens on patients, carers and staff. The policy innovation of remote biomarker monitoring enabling timely adjustment of medication, mediated by "activated" patients, is based on a modernist vision of efficient, rational, technology-mediated and guideline-driven ("cold") care. It contrasts with relationship-based ("warm") care valued by some clinicians and by patients who are older, sicker and less technically savvy. Limited uptake of telehealth can be analysed in terms of key tensions: between tidy, "textbook" heart failure and the reality of multiple comorbidities; between basic and intensive telehealth; between activated, well-supported patients and vulnerable, unsupported ones; between "cold" and "warm" telehealth; and between fixed and agile care programmes. CONCLUSION: The limited adoption of telehealth for heart failure has complex clinical, professional and institutional causes, which are unlikely to be elucidated by adding more randomised trials of technology-on versus technology-off to an already-crowded literature. An alternative approach is proposed, based on naturalistic study designs, application of social and organisational theory, and co-design of new service models based on socio-technical principles. Conventional systematic reviews (whose goal is synthesising data) can be usefully supplemented by hermeneutic reviews (whose goal is deepening understanding).

Hanley, J., Pinnock, H., Paterson, M., et al. (2018). "Implementing telemonitoring in primary care: learning from a large qualitative dataset gathered during a series of studies." BMC Fam Pract **19**: 11.
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Background: Telemonitoring for long term conditions such as hypertension and diabetes has not been widely adopted despite evidence of efficacy in trials and policy support. The Telescot programme comprised a series of seven trials and observational studies of telemonitoring for long term conditions in primary care, all with an explanatory qualitative component which had been analysed and published separately. There

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were changes to the models of care within and between studies and combining datasets would provide a longitudinal view of the evolution of primary care based telemonitoring services that was not available in the individual studies, as well as allowing comparison across the different conditions monitored. We aimed to explore what drove changes to the way telemonitoring was implemented, compare experience of telemonitoring across the range of long term conditions, and identify what issues, in the experience of the participants, need to be considered in implementing new telemonitoring systems. Method: Synthesis and thematic reanalysis of transcribed qualitative interview and focus group data from the Telescot programme adopting an interpretive description approach. All transcribed and coded text was re-read and data relating to the experience of the telemonitoring services, perceptions of future use and strategies for implementation were recoded into one consistent system. This was analysed thematically. Results: The combined dataset contained transcribed qualitative interview and focus group data from 181 patients and 109 professionals. Four major themes were identified, using data, empowering patients, adjusting the model of care and system design. Conclusion: Telemonitoring was valued by patients who found it empowering and convenient. This, combined with initial professional concern that increased surveillance may create dependency led to the development of a more patient led service. However, despite a number of initial concerns being addressed as the service evolved, primary care professionals identified a number of barriers to widespread routine adoption of telemonitoring, many of which could be addressed by improved system design.

Hanley, J., Ure, J., Pagliari, C., et al. (2013). "Experiences of patients and professionals participating in the HITS home blood pressure telemonitoring trial: a qualitative study." BMJ Open **3**(5): 10.
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Objectives: To explore the experiences of patients and professionals taking part in a randomised controlled trial (RCT) of remote blood pressure (BP) telemonitoring supported by primary care. To identify factors facilitating or hindering the effectiveness of the intervention and those likely to influence its potential translation to routine practice. Design: Qualitative study adopting a qualitative descriptive approach. Participants: 25 patients, 11 nurses and 9 doctors who were participating in an RCT of BP telemonitoring. A maximum variation sample of patients from within the trial based on age, sex and deprivation status of the practice was sought. Setting: 6 primary care practices in Scotland. Method: Data were collected via taped semistructured interviews. Initial thematic analysis was inductive. Multiple strategies were employed to ensure that the analysis was credible and trustworthy. Results: Prior to the trial, both patients and professionals were reluctant to increase the medication based on single BP measurements taken in the surgery. BP measurements based on multiple electronic readings were perceived as more accurate as a basis for action. Patients using telemonitoring became more engaged in the clinical management of their condition. Professionals reported that telemonitoring challenged existing roles and work practices and increased workload. Lack of integration of telemonitoring data with the electronic health record was perceived as a drawback. Conclusions: BP telemonitoring in a usual care setting can provide a trusted basis for medication management and improved BP control. It increases patients' engagement in the management of their condition, but supporting telemetry and greater patient engagement can increase professional workloads and demand changes in service organisation. Successful service design in practice would have to take account of how additional roles and responsibilities could be realigned with existing work and data management practices. The embedded qualitative study was included in the protocol for the HITS trial registered with ISRCTN no. 72614272.

Hanna, T. N., Shekhani, H., Lamoureux, C., et al. (2017). "Emergency Radiology Practice Patterns: Shifts, Schedules, and Job Satisfaction." J Am Coll Radiol **14**(3): 345-352.

PURPOSE: To assess the practice environment of emergency radiologists with a focus on schedule, job satisfaction, and self-perception of health, wellness, and diagnostic accuracy. METHODS: A survey drawing from prior radiology and health care shift-work literature was distributed via e-mail to national societies, teleradiology groups, and private practices. The survey remained open for 4 weeks in 2016, with one reminder. Data were analyzed using hypothesis testing and logistic regression modeling. RESULTS: Response rate was 29.6% (327/1106); 69.1% of respondents (n = 226) were greater than 40 years old, 73% (n = 240) were male, and 87% (n = 284) practiced full time. With regard to annual overnight shifts (NS): 36% (n = 118) did none, 24.9% (n = 81) did 182 or more, and 15.6% (n = 51) did 119. There was a significant association between average NS worked per year and both perceived negative health effects (P < .01) and negative impact on memory (P < .01). There was an inverse association between overall job enjoyment and number of annual NS (P < .05). The odds of agreeing to the statement "I enjoy my job" for radiologists who work no NS

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is 2.21 times greater than for radiologists who work at least 119 NS, when shift length is held constant. Radiologists with 11+ years of experience who work no NS or 1 to 100 NS annually have lower odds of feeling overwhelmed when compared with those working the same number of NS with <10 years' experience. CONCLUSION: There is significant variation in emergency radiology practice patterns. Annual NS burden is associated with lower job satisfaction and negative health self-perception.

Harland, N. et Blacklidge, B. (2017). "Physiotherapists and General Practitioners attitudes towards 'Physio Direct' phone based musculoskeletal Physiotherapy services: a national survey." Physiotherapy **103**(2): 174-179.

OBJECTIVES: Physiotherapy phone based, "Physio Direct" (PD) musculoskeletal triage and treat services are a relatively new phenomena. This study explored Physiotherapist and GP attitudes towards PD services. DESIGN: Online national survey via cascade e-mail initiated by study leads. PARTICIPANTS: 488 Physiotherapists and 68 GPs completed the survey. OUTCOME MEASURES: The survey asked three negatively worded and three positively worded Likert scale questions regarding PD services. It also collected demographic data and more global attitudes including a version of the friends and family test. RESULTS: Overall both Physiotherapists and GP's have positive attitudes towards PD services. There was global agreement that PD triage was a good idea but in both groups the majority of respondents who expressed a definite opinion thought that patients would still eventually need to be seen face to face. The vast majority of all respondents also thought patients should be given a choice about first accessing PD services. Physiotherapists with experience of PD services had more positive and less negative attitudes than those without experience. More detailed results are discussed. CONCLUSIONS: Relevant clinical stakeholders have generally positive attitudes towards PD services, but more so when they have experience of them. Counter to research findings significant proportions of respondents believe patients accessing PD services will still need to be seen face to face. The significant majority of respondents believe patients should be given a choice whether they access PD services in the first instance or not.

Henry, B. W., Ames, L. J., Block, D. E., et al. (2018). "Experienced Practitioners' Views on Interpersonal Skills in Telehealth Delivery." Internet Journal of Allied Health Sciences and Practice **16**(2): 10.
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Background. As telehealth becomes a larger part of the health care landscape, clinicians are becoming prepared to operate technology-based systems for conducting routine care and exchanging information. Less defined are interpersonal skills for telehealth care delivery such as communication and therapeutic relationships that can influence clinical outcomes. Examples include clinician adaptability to the communication process via telehealth, clinician congeniality in communications, and clinician commitment to achieve telepresence. The purpose of this study was to describe interpersonal skills for telehealth delivery to assist in the preparation of health professionals. Methods. A qualitative methods approach was used to build on results from our previously published systematic review. Semi-structured, in-depth interviews were conducted with experienced practitioners or educators (n=6) at multiple regional telehealth centers. Video/audio-recorded sessions were transcribed verbatim and researchers conducted thematic analysis of data until achieving saturation of data. Results. Participants provided their perspectives about interpersonal skills important for quality telehealth delivery based on professional experiences. Analysis of responses across interviews showed strong alignment with the six themes identified previously as non-technical clinician attributes: pre-interactional, verbal communication, non-verbal communication, relational, environmental, and educational. Also, an additional theme of management/operations emerged. Suggested training topics crossed clinical disciplines and ranged from telemedicine etiquette and verbal skills to equipment operation and billing and coding. Each study participant commented on benefits from preparation of telehealth clinicians related to the clinician-patient interaction such as patient engagement, patient-centered care, patient satisfaction, patient implementation of care plans, effective communication with patients, and quality assessment of telehealth sessions. Conclusions. This study identified interpersonal skills that may be applied in professional education for telehealth delivery from the perspective of experienced practitioners. Further research could explore outcomes from professional preparation for interpersonal skills and patient perspectives.

Hines, M., Brunner, M., Poon, S., et al. (2017). "Tribes and tribulations: interdisciplinary eHealth in providing services for people with a traumatic brain injury (TBI)." BMC Health Serv Res **17**(1): 757.

BACKGROUND: eHealth has potential for supporting interdisciplinary care in contemporary traumatic brain injury (TBI) rehabilitation practice, yet little is known about whether this potential is being realised, or what

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needs to be done to further support its implementation. The purpose of this study was to explore health professionals' experiences of, and attitudes towards eHealth technologies to support interdisciplinary practice within rehabilitation for people after TBI. METHODS: A qualitative study using narrative analysis was conducted. One individual interview and three focus groups were conducted with health professionals (n = 17) working in TBI rehabilitation in public and private healthcare settings across regional and metropolitan New South Wales, Australia. RESULTS: Narrative analysis revealed that participants held largely favourable views about eHealth and its potential to support interdisciplinary practice in TBI rehabilitation. However, participants encountered various issues related to (a) the design of, and access to electronic medical records, (b) technology, (c) eHealth implementation, and (d) information and communication technology processes that disconnected them from the work they needed to accomplish. In response, health professionals attempted to make the most of unsatisfactory eHealth systems and processes, but were still mostly unsuccessful in optimising the quality, efficiency, and client-centredness of their work. CONCLUSIONS: Attention to sources of disconnection experienced by health professionals, specifically design of, and access to electronic health records, eHealth resourcing, and policies and procedures related to eHealth and interdisciplinary practice are required if the potential of eHealth for supporting interdisciplinary practice is to be realised.

Holderried, M., Hoeper, A., Holderried, F., et al. (2018). "Attitudes Toward e-Health: The Otolaryngologists' Point of View." Telemed J E Health **24**(6): 425-432.

INTRODUCTION: Online communication and the number of e-health applications have noticeably increased. However, little is known about the otolaryngologists' use behavior and their attitudes toward the potential of e-health. The aims of the study were to evaluate the documentation, information, and communication technologies used by otolaryngologists and to get a better understanding of their attitudes toward the potential of e-health for cross-sectoral patient care. METHODS: A survey was developed and tested by otolaryngologists, healthcare-information technology experts, and health services researchers. A total of 334 otolaryngologists in private practice were asked to participate in this cross-sectional study. In total, 234 of them took part in the study, and 157 returned completed questionnaires. Statistical analysis was performed by using crosstabs, including chi-square tests, and multivariate logistic regressions. Results and Materials: Digital technologies are widely used by otolaryngologists (e.g., 89.6% use an electronic health record). However, the majority of intersectoral communication is still based on analogue techniques (e.g., fax use in 63.7%). From the otolaryngologists' perspectives, the potential of e-health for intersectoral care is mostly in appointment scheduling, further referrals to hospitals, and automated appointment reminders. The physicians' attitudes toward e-health are associated with their Internet use behavior in daily life (odds ratio = 4.30, confidence interval 1.11-16.64, p = 0.035) but not with their demographics. DISCUSSION: The otolaryngologists are well prepared and have an overall positive attitude toward e-health for deeper use in cross-sectoral care. Therefore, e-health in otolaryngology needs more attention and resources for further studies, especially with a focus on quality and safety of care.

Hollenbach, J. P., Cushing, A., Melvin, E., et al. (2017). "Understanding clinicians' attitudes toward a mobile health strategy to childhood asthma management: A qualitative study." J Asthma **54**(7): 754-760.

OBJECTIVES: Mobile technology for childhood asthma can provide real-time data to enhance care. What real-time adherence information clinicians want, how they may use it, and if the data meet their clinical needs have not been fully explored. Our goal was to determine whether pediatric primary care and pulmonary clinicians believe if a sensor-based mobile intervention is useful in caring for patients with asthma. METHODS: We recruited participants from 3 urban, primary care and 1 pulmonary practice from July to September 2015 in Hartford, CT. Forty-one participated in four focus groups, which included a demonstration of the technology. Participants were probed with open-ended questions on the type, frequency, and format of inter-visit patient information they found useful. RESULTS: 41 participants (mean age 49 (+/-13.7) years) were board-certified clinicians (41% MDs and 20% mid-level practitioners), practiced medicine on an average of 19 (+/-14) years, were primarily white (59%) and women (78%). Clinicians wanted 1) adherence to prescribed inhaler therapy and 2) data on inhaler technique. Clinicians wanted it at the time of a scheduled clinic visit but also wanted inter-visit alerts for excessive use of rescue therapy. Pulmonologists liked the mobile spirometer's provision of inter-visit lung function data; pediatricians did not share this view. Concerns with data accuracy were raised due to families who shared inhalers, access to smartphones, and protection of health information. CONCLUSIONS: Overall, clinicians view an asthma

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mobile health technology as enhancing the patient-centered medical home. Pediatric primary care clinicians and pulmonologists want different information from a mobile app.

Holyk, T., Pawlovich, J., Ross, C., et al. (2017). "The role of telehealth in improving continuity of care: The Carrier Sekani Family Services primary care model." British Columbia Medical Journal **59**(9): 459-464.
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Background: Residents of rural communities face unique challenges when accessing primary care services. In both developed and developing countries, technology has been found to increase access to and continuity of care in rural and remote areas, especially when used in a thoughtful manner. In BC, telehealth has been shown to benefit patients in rural areas by increasing access to care, and to benefit health care professionals by providing additional support through increased communication with specialists and other practitioners based in urban centres. In 2010, Carrier Sekani Family Services (CSFS) began developing a sustainable, high-quality community-based primary care model to address the challenges presented by geography, high client need, and the difficulties of physician recruitment and retention in First Nations communities with higher than average proportions of complex care issues and poor access to primary care services. Today the model combines delivery of on-site services and telehealth services using a fully equipped clinic, an electronic medical record system, telehealth and IT equipment, and administrative support. Methods: To evaluate the effectiveness of the CSFS primary care model, we surveyed patients 18 years or older who had accessed primary care services at least once in the 6-month period prior to April 2016 from the clinics serving the 11 member CSFS First Nations of the region. Participants were asked questions related to medical trust, satisfaction, usability, effectiveness, and convenience of telehealth. The questions were dichotomous (yes/no) or scored on a five-point Likert scale, and were informed by the work of Field, Holden and Dew, and the developers of the EQUIP Healthcare intervention. Results: Data were analyzed from questions answered by 210 study participants. Overall, answers indicated that continuity of care has been improved by the introduction of telehealth, especially for those patients who viewed CSFS as their primary care home. Of survey respondents who had made use of telehealth services, 78 (77%) stated they had been able to see their doctor more regularly and 83 (82%) indicated that they were able to attend more appointments since telehealth became available in their community. The use of telehealth services did not have an impact on patients' levels of medical trust, with no significant difference found in patient scores for face-to-face physician visits and telehealth visits. Patients were found more likely to be satisfied with telehealth if they considered the clinic where they accessed this service their primary care home. Similarly, patient ratings of usability, effectiveness, and convenience of telehealth services were higher when they accessed telehealth at the clinic they considered their primary care home. Conclusions: Study findings indicate that telehealth improved continuity of care by increasing access to care and reducing the need for travel and associated costs. Patient scores for satisfaction, usability, effectiveness, and convenience of telehealth care were affected by whether telehealth services were provided at a patient's primary care home, suggesting that the benefits of telehealth increase in association with face-to-face visits and when a relationship has been established with a specific physician and primary care home.

Inskip, J. A., Lauscher, H. N., Li, L. C., et al. (2018). "Patient and health care professional perspectives on using telehealth to deliver pulmonary rehabilitation." Chron Respir Dis **15**(1): 71-80.
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The objective of this study was to identify the necessary features of pulmonary telerehabilitation (P-TR) from the perspectives of individuals living with chronic lung disease and health care professionals (HCPs) who deliver pulmonary rehabilitation (PR). Focus groups were carried out with patients (n = 26) and HCPs (n = 26) to elicit and explore their opinions about the critical elements of in-person PR and ideas for how these elements could be supported using technology. A questionnaire was used to assess technology use, PR experience, and general health status. Four key elements of PR were identified as critical to P-TR: the social aspect of PR; communicating with HCPs for education and support; using biosensors for monitoring and promoting self-knowledge; and the evolution of support with progress over time. A range of technology-enabled devices and programs were suggested as means to recreate aspects of these integral elements. Consultations with patients and HCPs suggest that users are interested in technology and want to ensure it recreates the important aspects of PR. Patients and HCPs identified similar key elements for P-TR. The opinions and suggestions of patients and HCPs should be the driving force of innovation if P-TR is to succeed in improving health outcomes.

Jetty, A., Moore, M. A., Coffman, M., et al. (2018). "Rural Family Physicians Are Twice as Likely to Use Telehealth as Urban Family Physicians." Telemedicine and E-Health **24**(4): 268-276.

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www.irdes.fr/documentation/syntheses-et-dossiers-bibliographiques.html
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> Background:Telehealth has the potential to reduce health inequities and improve health outcomes among rural populations through increased access to physicians, specialists, and reduced travel time for patients.Introduction:Although rural telehealth services have expanded in several specialized areas, little is known about the attitudes, beliefs, and uptake of telehealth use in rural American primary care. This study characterizes the differences between rural and urban family physicians (FPs), their perceptions of telehealth use, and barriers to further adoption.Materials and Methods:Nationally representative randomly sampled survey of 5,000FPs.Results:Among the 31.3% of survey recipients who completed the survey, 83% practiced in urban areas and 17% in rural locations. Rural FPs were twice as likely to use telehealth as urban FPs (22% vs. 10%). Logistic regressions showed rural FPs had greater odds of reporting telehealth use to connect their patients to specialists and to care for their patients. Rural FPs were less likely to identify liability concerns as a barrier to using telehealth.Discussion:Telemedicine allows rural patients to see specialists without leaving their communities and permits rural FPs to take advantage of specialist expertise, expand their scope of practice, and reduce the feeling of isolation experienced by rural physicians.Conclusion:Efforts to raise awareness of current payment policies for telehealth services, addressing the limitations of current reimbursement policies and state regulations, and creating new avenues for telehealth reimbursement and technological investments are critical to increasing primary care physician use of telehealth services.

Jhaveri, D., Larkins, S., Kelly, J., et al. (2016). "Remote chemotherapy supervision model for rural cancer care: perspectives of health professionals." Eur J Cancer Care (Engl) **25**(1): 93-98.

> Townsville Cancer Centre (TCC), a tertiary cancer centre in North Queensland, Australia, provides chemotherapy services to surrounding small rural towns using the Queensland Remote Chemotherapy Supervision model (QReCS). Under this model, selected chemotherapy regimens are administered in rural hospitals by rural based generalist doctors and nurses, under the supervision of TCC-based medical oncologists and chemotherapy competent nurses through videoconferencing. We sought to explore the perspectives of health professionals participating in QReCS. This qualitative study used semi-structured interviews with 19 participants, including nine nurses, eight doctors, one rural pharmacist and one administration officer. The interviews were recorded and transcribed. Transcripts were examined using iterative thematic analysis. Four major themes were identified from the data: (1) benefits of the model, (2) enablers of implementation, (3) operational requirements for optimal functioning and (4) disadvantages of the model. The reported benefits of the model were patient convenience, inter-professional communication across health district borders, expanded scope of practice, continuity of care and maintenance of patient safety and compliance with guidelines while delivering chemotherapy. Further improvements in the quality of training for rural nurses, coordination between urban and rural sites and between health professionals and documentation of clinical encounters would optimise the operation of the model. QReCS appears to provide many benefits to patients and health professionals and a framework for safe administration of chemotherapy in rural areas. Coordination of care, the quality of training for rural nurses as well as clinical documentation needs to improve to optimise the operation of the model.

Johansson, A. M., Lindberg, I. et Soderberg, S. (2017). "Healthcare personnel's experiences using video consultation in primary healthcare in rural areas." Prim Health Care Res Dev **18**(1): 73-83.

> BACKGROUND: Patients living in rural areas often need to travel long distances for access to specialist care. To increase access to specialist care, video consultation between patients in primary healthcare and specialist care has been used. In order for this new method to be developed and used to the fullest, it is important to understand healthcare personnel's experiences with this intervention. OBJECTIVE: The aim of this study was to describe healthcare personnel's experiences using video consultation in their work in primary healthcare. METHOD: A mixed methods design was used, and the data were analysed using qualitative and quantitative analysis methods. Interviews were conducted with eight general practitioners and one district nurse, all of whom had conducted a video consultation with a patient and a specialist physician or a cardiac specialist nurse. After each video consultation, the participants completed a consultation report/questionnaire. RESULTS: Healthcare personnel considered video consultation to provide quicker access to specialist care for the patient, and greater security when the video consultation encounter was conducted at their own primary healthcare centre. They considered video consultation an opportunity to provide education and for the patients to ask questions. CONCLUSION: Video consultation is a satisfactory tool for healthcare personnel, and the technology is a new, useful method, especially for the district nurses. Further, video consultation is an opportunity for healthcare personnel to learn. However, for it to work as an accepted method, the

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technology must function well and be user friendly. It must also be clear that it is beneficial for the patients and the healthcare personnel.

Kampik, T., Larsen, F. et Bellika, J. G. (2015). "Internet-based remote consultations - general practitioner experience and attitudes in Norway and Germany." Stud Health Technol Inform **210**: 452-454.

> UNLABELLED: The objective of the study was to identify experiences and attitudes of German and Norwegian general practitioners (GPs) towards Internet-based remote consultation solutions supporting communication between GPs and patients in the context of the German and Norwegian healthcare systems. METHODS: Interviews with four German and five Norwegian GPs were conducted. The results were qualitatively analyzed. RESULTS: All interviewed GPs stated they would like to make use of Internet-based remote consultations in the future. Current experiences with remote consultations are existent to a limited degree. No GP reported to use a comprehensive remote consultation solution. The main features GPs would like to see in a remote consultation solution include asynchronous exchange of text messages, video conferencing with text chat, scheduling of remote consultation appointments, secure login and data transfer and the integration of the remote consultation solution into the GP's EHR system.

Kane, C. K. et Gillis, K. (2018). "The Use Of Telemedicine By Physicians: Still The Exception Rather Than The Rule." Health Aff (Millwood) **37**(12): 1923-1930.

> Using data from the American Medical Association's 2016 Physician Practice Benchmark Survey, we provide the first nationally representative estimates of physicians' use of telemedicine. In 2016, 15.4 percent of physicians worked in practices that used telemedicine for a wide spectrum of patient interactions, including e-visits as well as diagnoses made by radiologists who used telemedicine to store and forward data. In the same year, 11.2 percent of physicians worked in practices that used telemedicine for interactions between physicians and health care professionals. We found that in addition to specialty, larger practice size was an important correlate of telemedicine use. This suggests that despite regulatory and legislative changes to encourage the use of telemedicine, the financial burden of implementing it may be a continuing barrier for small practices.

Kenney, A. S., Yiannias, J. A., Raghu, T. S., et al. (2016). "Measures of satisfaction for providers and patients using same day teledermoscopy consultation." Int J Dermatol **55**(7): 781-785.

> BACKGROUND: We aimed to determine whether patients and providers were satisfied with teledermoscopy consultation for skin lesions. METHODS: From 2010 to 2011, patients with clinically suspicious lesions were referred for teledermoscopy by internal medicine physicians. Lesions were digitally photographed using a dermatoscope accessory lens. Images were interpreted by an on-call dermatologist. We conducted same day surveys of providers and patients after the evaluations. RESULTS: The survey response rate was 100%. Of the 20 patients surveyed, all agreed that a teledermoscopic consult was convenient and helpful. Nineteen patients (95%) strongly agreed that teledermoscopy potentially was a cost-saving tool. All providers thought the evaluations were helpful. Ninety-five percent of providers and patients reported satisfaction with the ease of use of this technology. CONCLUSIONS: Teledermoscopy may give primary care providers the ability to consult with dermatologists when seeing patients in remote or medically underserved areas. This can streamline the referral process and decrease the number of referrals for benign lesions.

Kenton, E. J., Culebras, A., Fayad, P. B., et al. (2018). "Impact of Stroke Call on the Stroke Neurology Workforce in the United States: Possible Challenges and Opportunities." J Stroke Cerebrovasc Dis **27**(7): 2019-2025.

> BACKGROUND: The Stroke & Vascular Neurology Section of the American Academy of Neurology was charged to identify challenges to the recruitment and retention of stroke neurologists and to make recommendations to address any identified problems. The Section initiated this effort by determining the impact of stroke on-call requirements as a barrier to the recruitment and retention of vascular neurologists. METHODS: This is a cross-sectional survey of a sample of US Neurologists providing acute stroke care. RESULTS: Of the 900 neurologists who were sent surveys, 313 (35%) responded. Of respondents from institutions providing stroke coverage, 71% indicated that general neurologists and 45% indicated that vascular neurologists provided that service. Of those taking stroke call, 36% agreed with the statement, "I spent too much time on stroke call," a perception that was less common among those who took less than 12-hour shifts (P < .0001); 21% who participated in stroke call were dissatisfied with their current job. Forty-

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six percent indicated that their stroke call duties contributed to their personal feeling of "burnout." CONCLUSIONS: Although the reasons are likely multifactorial, our survey of neurologists providing stroke care suggests that over-burdensome on-call responsibilities may be contributing to the vascular neurology workforce burnout and could be affecting recruitment and retention of vascular neurologists. Strategies to reduce the lifestyle impact of stroke call may help address this problem.

Kjelle, E., Lysdahl, K. B., Olerud, H. M., et al. (2018). "Managers' experience of success criteria and barriers to implementing mobile radiography services in nursing homes in Norway: a qualitative study." BMC Health Serv Res **18**(1): 301.

BACKGROUND: In order to meet the future challenges posed by ageing populations, new technology, telemedicine and a more personalized healthcare system are needed. Earlier research has shown mobile radiography services to be highly beneficial for nursing home residents in addition to being cost-effective. Despite the benefits, mobile radiography services are uncommon in Europe and Norway. The purpose of this study was to explore success criteria and barriers in the process of implementing mobile radiography services, from the point of view of the hospital and municipal managers. METHODS: Eleven semi-structured interviews were conducted with managers from five hospitals and six municipalities in Norway where mobile radiography services had been implemented. Core issues in the interview guide were barriers and facilitators in the different phases of implementation. The framework method for thematic analysis was used for analysing the data inductively in a research team. RESULTS: Five main categories were developed through the success criteria and barriers experienced by the participants: national health policy, regional and municipal policy and conditions, inter-organizational implementation projects, experienced outcome, and professional skills and personal characteristics. The categories were allocated into three higher-order classifications: macro, meso and micro levels. The main barriers experienced by the managers were financial, procedural and structural. In particular, the reimbursement system, lack of management across healthcare levels and the lack of compatible information systems acted as barriers. The main facilitators were external funding, enthusiastic individuals in the organizations and good collaboration between hospitals and municipalities. CONCLUSIONS: The managers experienced financial, structural and procedural barriers. The main success criteria in the process were external funding, and the support and engagement from the individuals in the organizations. This commitment was mainly facilitated by the intuitive appeal of mobile radiography. Changes in healthcare management and in the financial system might facilitate services across healthcare levels. In addition, compatible information systems across healthcare levels are needed in order to facilitate the use of new technology and mobile services.

Klack, L., Ziefle, M., Wilkowska, W., et al. (2013). "Telemedical versus conventional heart patient monitoring: a survey study with German physicians." Int J Technol Assess Health Care **29**(4): 378-383.

OBJECTIVES: In this study, we explored crucial factors that explain a person's attitude toward and his or her assessment of telemedical systems. Special focus lies on the link between the perspective of physicians (telemedicine users) and technicians (telemedicine designers) to find potential barriers hindering the broad application of telemedical systems in hospitals and doctors' offices. METHODS: A survey among medical professionals (n = 34), technical professionals (n = 39), and a control group (n = 44) was conducted. The collected data were assessed in terms of domain knowledge, attitudes toward telemedicine, and potential implementation barriers. RESULTS: Participants favored the conventional method over telemedical monitoring in regards to privacy, security, and time efficiency. In contrast, telemedicine was preferred with reference to efficiency of data analysis, long-term care, and emergency adequacy. Significant differences between the professional groups were found regarding perceived cost effectiveness, patients' compliance, privacy protection, and false alarm sensitivity. Medical professionals exhibited the most reluctance toward using telemedical treatments. CONCLUSIONS: The perceived drawbacks are attributed to a general uncertainty about the reliability of telemedical systems, in combination with concerns about personal data privacy, security, and loss of control. The reported fear of not being able to correctly use and handle the systems assumes a low usability of devices. To acquaint medical professionals with the benefits and limitations of telemedical systems, telemonitoring and tele-treatment should be included in the education of medical personnel at an early stage.

Knudsen, L. R., de Thurah, A. et Lomborg, K. (2018). "Experiences With Telehealth Followup in Patients With Rheumatoid Arthritis: A Qualitative Interview Study." Arthritis Care & Research **70**(9): 1366-1372.
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Objective. To explore the experiences of a patient-reported outcome (PRO)-based telehealth followup from the perspective of patients with rheumatoid arthritis (RA) and their experiences of increasing their active role, and responsibility for disease control in particular. Methods. Adopting a strategy of interpretive description, we conducted individual, semistructured interviews with 15 RA patients participating in a telehealth followup. Participants were selected purposively and consecutively from both sexes and with various ages, disease durations, and disease severity. The analysis was inductive, with a constant comparative approach. First, we identified the main themes conveying the participants' experiences. Then we constructed patient typologies to explain different perspectives on the telehealth followup. Results. Five themes covered the participants' experiences: a flexible solution, responsibility, knowledge of RA, communication and involvement, and continuity. Two typologies, the keen patient and the reluctant patient, represented opposite perspectives and preferences regarding the core value of and approach to the telehealth followup. Conclusion. The participants had positive perceptions of the PRO-based telehealth followup and saw it as a flexible and resource-saving solution. They reported disadvantages related to missing face-to-face contact with health professionals. The 2 typologies, the keen and the reluctant patient, help us understand the patients' different needs, wishes, and abilities to take part in telehealth followup. Our findings reveal a need for more insight into how telehealth followup could be integrated in routine clinical practice, paying special attention to how reluctant patients may be supported.

Koivunen, M. et Saranto, K. (2018). "Nursing professionals' experiences of the facilitators and barriers to the use of telehealth applications: a systematic review of qualitative studies." Scandinavian Journal of Caring Sciences **32**(1): 24-44.
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> The aim of the study was to synthesise the best available research evidence on nursing professionals' experiences of the facilitators and barriers to the use of online telehealth services in nursing practice. Telehealth is used to deliver healthcare services and health-related information by means of information and communication technology (ICT). The systematic review of qualitative studies was conducted using thematic synthesis of previous studies. International electronic databases PubMed, CINAHL, Eric, Web of Science/Web of Knowledge and Scopus, and Finnish databases Medic and Ohtanen were searched in spring 2013. In addition, the search was complemented in fall 2015. Following critical appraisal, 25 studies from 1998 to fall 2015 were reviewed and the findings were synthesised. Both facilitators and barriers were grouped into five main categories which were related to nurses' skills and attitudes, nurses' work and operations, organisational factors, patients and technology. The highest number of facilitators and barriers was found in the category focusing on nurses' work and operations. Based on the findings, nurses' skills and attitudes are preventing factors in the implementation of telehealth. There is also a need to focus on patients' role in telehealth usage although the findings support positive adoption of ICT tools among patients. The findings call for further development of technological tools used in nursing practice and healthcare services. The change from traditional face-to-face nursing to the use of telehealth calls for local agreements and further discussions among professionals on how this change will be accepted and implemented into practice. In addition, organisations need to make sure that nurses have enough resources and support for telehealth use.

Korpershoek, Y. J. G., Vervoort, S., Trappenburg, J. C. A., et al. (2018). "Perceptions of patients with chronic obstructive pulmonary disease and their health care providers towards using mHealth for self-management of exacerbations: a qualitative study." BMC Health Serv Res **18**(1): 757.

> BACKGROUND: Self-management of exacerbations in COPD patients is important to reduce exacerbation impact. There is a need for more comprehensive and individualized interventions to improve exacerbation-related self-management behavior. The use of mobile health (mHealth) could help to achieve a wide variety of behavioral goals. Understanding of patients and health care providers perspectives towards using mHealth in promoting self-management will greatly enhance the development of solutions with optimal usability and feasibility. Therefore, the aim of this study was to explore perceptions of COPD patients and their health care providers towards using mHealth for self-management of exacerbations. METHODS: A qualitative study using focus group interviews with COPD patients (n = 13) and health care providers (HCPs) (n = 6) was performed to explore perceptions towards using mHealth to support exacerbation-related self-management. Data were analyzed by a thematic analysis. RESULTS: COPD patients and HCPs perceived mostly similar benefits and barriers of using mHealth for exacerbation-related self-management. These perceived benefits and barriers seem to be important drivers in the willingness to use mHealth. Both patients and HCPs strengthen the need for a multi-component and tailored mHealth intervention that improves

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patients' exacerbation-related self-management by determining their health status and providing adequate information, decision support and feedback on self-management behavior. Most importantly, patients and HCPs considered an mHealth intervention as support to improve self-management and emphasized that it should never replace patients' own feelings nor undermine their own decisions. In addition, the intervention should be complementary to regular contact with HCPs, as personal contact with a HCP was considered to be very important. To optimize engagement with mHealth, patients should have a positive attitude toward using mHealth and an mHealth intervention should be attractive, rewarding and safe. CONCLUSIONS: This study provided insight into perceptions of COPD patients and their HCPs towards using mHealth for self-management of exacerbations. This study points out that future mHealth interventions should focus on developing self-management skills over time by providing adequate information, decision support and feedback on self-management behavior and that mHealth should complement regular care. To optimize engagement, mHealth interventions should be attractive, rewarding, safe and tailored to the patient needs.

Krog, M. D., Nielsen, M. G., Le, J. V., et al. (2018). "Barriers and facilitators to using a web-based tool for diagnosis and monitoring of patients with depression: a qualitative study among Danish general practitioners." BMC Health Serv Res **18**(1): 503.

BACKGROUND: Depression constitutes a significant part of the global burden of diseases. General practice plays a central role in diagnosing and monitoring depression. A telemedicine solution comprising a web-based psychometric tool may reduce number of visits to general practice and increase patient empowerment. However, the current use of telemedicine solutions in the field of general practice is limited. This study aims to explore barriers and facilitators to using a web-based version of the Major Depression Inventory (eMDI) for psychometric testing of potentially depressive patients in general practice. METHODS: Semi-structured individual interviews were conducted with nine general practitioners (GPs) from eight general practices in the Central Denmark Region. All interviewees had previous experience in using the eMDI in general practice. Determinants for using the eMDI were identified in relation to the GPs' capability, opportunity and motivation to change clinical behaviour (the COM-B system). RESULTS: Our results indicate that the main barriers for using the eMDI are related to limitations in the GPs' opportunity in regards to having the time it takes to introduce change. Further, the use of the eMDI seems to be hampered by the time-consuming login process. Facilitating factors included behavioural aspects of capability, opportunity and motivation. The implementation of the eMDI was facilitated by the interviewees' previous familiarity with the paper-based version of the tool. Continued use of the eMDI was facilitated by a time-saving documentation process and motivational factors associated with clinical core values. These factors included perceptions of improved consultation quality and services for patients, improved possibilities for GPs to prioritise their patients and improved possibilities for disease monitoring. Furthermore, the flexible nature of the eMDI allowed the GPs to use the paper-based MDI for patients whom the eMDI was not considered appropriate. CONCLUSIONS: Implementation of a telemedicine intervention in general practice can be facilitated by resemblance between the intervention and already existing tools as well as the perception among GPs that the intervention is time-saving and improves quality of care for the patients.

Kuo, K. M., Talley, P. C., Lee, C. M., et al. (2015). "The influence of telemedicine experience on physicians' perceptions regarding adoption." Telemed J E Health **21**(5): 388-394.

BACKGROUND: The purposes of this study were to explore the factors influencing physicians' intention of adopting telemedicine and to conduct a multigroup analysis comparing the perceptions about telemedicine adoption between experienced and inexperienced physicians. Based on the Theory of Planned Behavior, we conducted a cross-sectional survey to collect data from 15 hospitals in Taiwan. MATERIALS AND METHODS: In total, 106 valid questionnaires were returned. We used structural equation modeling to analyze the collected data. RESULTS: Attitude (AT), subjective norm (SN), and perceived behavioral control (PBC) were found to be positively related to behavioral intention (BI) for combined data. Moreover, the relationships between AT-->BI, SN-->BI, and PBC-->BI varied significantly between experienced and inexperienced physicians. Experienced physicians held stronger beliefs about the relationship between AT-->BI than inexperienced physicians. CONCLUSIONS: According to the results, our study suggests that differing strategies for experienced and inexperienced physicians must be formulated to substantially boost the adoption of telemedicine technology.

Kwok, J., Olayiwola, J. N., Knox, M., et al. (2018). "Electronic consultation system demonstrates educational benefit for primary care providers." J Telemed Telecare **24**(7): 465-472.

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Background Electronic consultation systems allow primary care providers to receive timely speciality expertise via iterative electronic communication. The use of such systems is expanding across the USA with well-documented high levels of user satisfaction. We characterise the educational impact for primary care providers of a long-standing integrated electronic consultation and referral system. Methods Primary care providers' perceptions of the educational value inherent to electronic consultation system communication and the impact on their ability to manage common speciality clinical conditions and questions were examined by electronic survey using five-point Likert scales. Differences in primary care providers' perceptions were examined overall and by primary care providers' speciality, provider type and years of experience. Results Among 221 primary care provider participants (35% response rate), 83.9% agreed or strongly agreed that the integrated electronic consultation and referral system provided educational value. There were no significant differences in educational value reported by provider type (attending physician, mid-level provider, or trainee physician), primary care providers' speciality, or years of experience. Perceived benefit of the electronic consultation and referral system in clinical management appeared stronger for laboratory-based conditions (i.e. subclinical hypothyroidism) than more diffuse conditions (i.e. abdominal pain). Nurse practitioners/physician assistants and trainee physicians were more likely to report improved abilities to manage specific clinical conditions when using the electronic consultation and/or referral system than were attending physicians, as were primary care providers with </=10 years experience, versus those with >20 years of experience. Conclusions Primary care providers report overwhelmingly positive perceptions of the educational value of an integrated electronic consultation and referral system. Nurse practitioners, physician assistants, trainee physicians and less-experienced primary care providers report the greatest clinical educational benefit, particularly for conditions involving lab-based diagnosis and management.

Lapao, L. V., da Silva, M. M. et Gregorio, J. (2017). "Implementing an online pharmaceutical service using design science research." BMC Med Inform Decis Mak **17**(1): 31.

BACKGROUND: The rising prevalence of chronic diseases is pressing health systems to introduce reforms. Primary healthcare and multidisciplinary models have been suggested as approaches to deal with this challenge, with new roles for nurses and pharmacists being advocated. More recently, implementing healthcare based on information systems and technologies (e.g. eHealth) has been proposed as a way to improve health services. However, implementing online pharmaceutical services, including their adoption by pharmacists and patients, is still an open research question. In this paper we present ePharmacare, a new online pharmaceutical service implemented using Design Science Research. METHODS: The Design Science Research Methodology (DSRM) was chosen to implement this online service for chronic diseases management. In the paper, DSRM's different activities are explained, from the definition of the problem to the evaluation of the artifact. During the design and development activities, surveys, observations, focus groups, and eye-tracking glasses were used to validate pharmacists' and patients' requirements. During the demonstration and evaluation activities the new service was used with real-world pharmacists and patients. RESULTS: The results show the contribution of DSRM in the implementation of online services for pharmacies. We found that pharmacists spend only 50% of their time interacting with patients, uncovering a clear opportunity to implement online pharmaceutical care services. On the other hand, patients that regularly visit the same pharmacy recognize the value in patient follow-up demanding to use channels such as the Internet for their pharmacy interactions. Limitations were identified regarding the high workload of pharmacists, but particularly their lack of know-how and experience in dealing with information systems (IST) for the provision of pharmaceutical services. CONCLUSIONS: This paper summarizes a research project in which an online pharmaceutical service was proposed, designed, developed, demonstrated and evaluated using DSRM. The main barriers for pharmacists' adoption of online pharmaceutical services provision were the lack of time, time management and information systems usage skills, as well as a precise role definition within pharmacies. These problems can be addressed with proper training and services reorganization, two proposals to be investigated in future works.

Lopes, E. L. V., Beaton, A. Z., Nascimento, B. R., et al. (2018). "Telehealth solutions to enable global collaboration in rheumatic heart disease screening." J Telemed Telecare **24**(2): 101-109.
<Go to ISI>://WOS:000424768300005

Background: The global burden of rheumatic heart disease is nearly 33 million people. Telemedicine, using cloud-server technology, provides an ideal solution for sharing images performed by non-physicians with cardiologists who are experts in rheumatic heart disease. Objective: We describe our experience in using

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telemedicine to support a large rheumatic heart disease outreach screening programme in the Brazilian state of Minas Gerais. Methods: The Programa de Rastreamento da Valvopatia Reumatica (PROVAR) is a prospective cross-sectional study aimed at gathering epidemiological data on the burden of rheumatic heart disease in Minas Gerais and testing of a non-expert, telemedicine-supported model of outreach rheumatic heart disease screening. The primary goal is to enable expert support of remote rheumatic heart disease outreach through cloud-based sharing of echocardiographic images between Minas Gerais and Washington. Secondary goals include (a) developing and sharing online training modules for non-physicians in echocardiography performance and interpretation and (b) utilising a secure web-based system to share clinical and research data. Results: PROVAR included 4615 studies that were performed by non-experts at 21 schools and shared via cloud-telemedicine technology. Latent rheumatic heart disease was found in 251 subjects (4.2% of subjects: 3.7% borderline and 0.5% definite disease). Of the studies, 50% were preformed on full functional echocardiography machines and transmitted via Digital Imaging and Communications in Medicine (DICOM) and 50% were performed on handheld echocardiography machines and transferred via a secure Dropbox connection. The average time between study performance date and interpretation was 10 days. There was 100% success in initial image transfer. Less than 1% of studies performed by non-experts could not be interpreted. Discussion: A sustainable, low-cost telehealth model, using task-shifting with non-medical personal in low and middle income countries can improve access to echocardiography for rheumatic heart disease.

Ly, B. A., Bourgeault, I. L., Labonte, R., et al. (2017). "Physicians' perceptions on the impact of telemedicine on recruitment and retention in underserved areas: a descriptive study in Senegal." Hum Resour Health **15**(1): 67.

BACKGROUND: Similar to many places, physicians in Senegal are unevenly distributed. Telemedicine is considered a potential solution to this problem. This study investigated the perceptions of Senegal's physicians of the impact of telemedicine on their recruitment to and retention in underserved areas. METHODS: We conducted individual interviews with a random sample of 60 physicians in Senegal, including 30 physicians working in public hospitals and 30 physicians working in district health centres between January and June 2014, as part of a mixed methods study. Data were collected using a semi-structured interview guide comprising both open- and close-ended questions. Interviews were recorded, transcribed and coded thematically using NVivo 10 software using a priori and emergent codes. Participants' characteristics were analyzed descriptively using SPSS 23. RESULTS: The impact of telemedicine on physicians' recruitment and retention in underserved areas was perceived with some variability. Among the physicians who were interviewed, most (36) thought that telemedicine could have a positive impact on their recruitment and retention but many (24) believed the opposite. The advantages noted by the first included telemedicine's ability to break their professional isolation and reduce the stress related to this, facilitate their distance learning and improve their working conditions. They did acknowledge that it is not sufficient in itself, an opinion also shared by physicians who did not believe that telemedicine could affect their recruitment and retention. Both identified contextual, economic, educational, family, individual, organizational and professional factors as influential. CONCLUSION: Based on these opinions of physicians, telemedicine promotion is one intervention that, alongside others, could be promoted to assist in addressing the multiple factors that influence physicians' recruitment and retention in underserved areas.

Ly, B. A., Labonte, R., Bourgeault, I. L., et al. (2017). "The individual and contextual determinants of the use of telemedicine: A descriptive study of the perceptions of Senegal's physicians and telemedicine projects managers." PLoS One **12**(7): e0181070.

Telemedicine is considered to be an effective strategy to aid in the recruitment and retention of physicians in underserved areas and, in doing so, improve access to healthcare. Telemedicine's use, however, depends on individual and contextual factors. Using a mixed methods design, we studied these factors in Senegal based on a micro, meso and macro framework. A quantitative questionnaire administered to 165 physicians working in public hospitals and 151 physicians working in district health centres was used to identify individual (micro) factors. This was augmented with qualitative descriptive data involving individual interviews with 30 physicians working in public hospitals, 36 physicians working in district health centres and 10 telemedicine project managers to identify contextual (meso and macro) factors. Physicians were selected using purposeful random sampling; managers through snowball sampling. Quantitative data were analyzed descriptively using SPSS 23 and qualitative data thematically using NVivo 10. At the micro level, we found that 72.1% of the physicians working in public hospitals and 82.1% of the physicians working in district health centres were likely to use telemedicine in their professional activities. At the meso level, we identified

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several technical, organizational and ethical factors, while at the macro level the study revealed a number of financial, political, legal, socioeconomic and cultural factors. We conclude that better awareness of the interplay between factors can assist health authorities to develop telemedicine in ways that will attract use by physicians, thus improving physicians' recruitment and retention in underserved areas.

MacNeill, V., Sanders, C., Fitzpatrick, R., et al. (2014). "Experiences of front-line health professionals in the delivery of telehealth: a qualitative study." British Journal of General Practice **64**(624): E401-E407.
<Go to ISI>://WOS:000338927800003

Background Telehealth is an emerging field of clinical practice but current UK health policy has not taken account of the perceptions of front-line healthcare professionals expected to implement it. Aim To investigate telehealth care for people with long-term conditions from the perspective of the front-line health professional. Design and setting A qualitative study in three sites within the UK (Kent, Cornwall, and the London Borough of Newham) and embedded in the Whole Systems Demonstrator evaluation, a large cluster randomised controlled trial of telehealth and telecare for patients with long-term and complex conditions. Method Semi-structured qualitative interviews with 32 front-line health professionals (13 community matrons, 10 telehealth monitoring nurses and 9 GPs) involved in the delivery of telehealth. Data were analysed using a modified grounded theory approach. Results Mixed views were expressed by front-line professionals, which seem to reflect their levels of engagement. It was broadly welcomed by nursing staff as long as it supplemented rather than substituted their role in traditional patient care. GPs held mixed views; some gave a cautious welcome but most saw telehealth as increasing their work burden and potentially undermining their professional autonomy. Conclusion Health care professionals will need to develop a shared understanding of patient self-management through telehealth. This may require a renegotiation of their roles and responsibilities.

Magann, E. F., McKelvey, S. S., Hitt, W. C., et al. (2011). "The use of telemedicine in obstetrics: a review of the literature." Obstet Gynecol Surv **66**(3): 170-178.

UNLABELLED: Telemedicine has been advertised for increasing efficiency, extending the scope of obstetric practice, improving pregnancy outcomes, and reducing costs in the healthcare system. The extent of telemedicine use in obstetrics was identified with a literature search. A total of 268 articles were identified of which 60 are the basis for this review. Telemedicine has been used to read ultrasounds, interpret nonstress tests, counsel patients, manage diabetes, manage postpartum depression, and support parents and children postpartum from remote sites. Reductions in time lost from work, transportation costs, more efficiency for the health care providers, and reducing medical costs all have been suggested as benefits of telemedicine. Despite the information published about telemedicine in obstetrics, this technology has not been shown to have adverse effects in obstetrics but neither has it demonstrated unequivocal benefits. Properly structured and powered investigations will be needed to determine the role of telemedicine in the future. TARGET AUDIENCE: Obstetricians & Gynecologists. LEARNING OBJECTIVES: After completing this CME activity, physicians should be better able to diagnose and treat diabetes using telemedicine techniques; assess the current scope of research in telemedicine in obstetrics; implement clinical telemedicine consultations based on the interaction and the needs of the participants; and the opportunities for further research in telemedicine in obstetrics.

Marsh-Feiley, G., Eadie, L. et Wilson, P. (2018). "Paramedic and physician perspectives on the potential use of remotely supported prehospital ultrasound." Rural Remote Health **18**(3): 4574.

INTRODUCTION: During remotely supported prehospital ultrasound (RSPU), an ultrasound operator performs a scan and sends images to a remote expert for interpretation. This novel technology has been undergoing investigation in the randomised controlled SatCare trial, which seeks to assess the capability of RSPU to improve patient outcomes and standard of prehospital care in the Highlands of Scotland. This study aimed to explore the views of emergency medicine physicians and paramedics prior to starting the trial. METHODS: An interview schedule was prepared a priori and was based upon normalisation process theory (NPT), which can be used to assess ways in which practitioners work to embed novel technologies in clinical practice. Semi-structured interviews were conducted with four consultant physicians and eight paramedics, who were recruited using purposive sampling until theoretical saturation. Analysis used open and hierarchical axial coding, and NPT as a framework to assist in the management and analysis of codes. RESULTS: The prospect of RSPU evoked significantly different responses from emergency care physicians and paramedics. Paramedics thought of RSPU as a logical progression of prehospital care, which addresses core

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prehospital challenges such as lack of decision-making support and a limited ability to identify life-threatening occult conditions. Paramedics saw RSPU as part of a trend to increase their skills and responsibilities, and viewed ultrasound as a validated tool within emergency medicine. Paramedics felt that ultrasound was simple to learn and would be practical for use within the prehospital arena. In contrast, physicians expressed a greater spectrum of views; most saw limited value to prehospital diagnosis and were concerned that RSPU would distract both paramedics and physicians from their existing roles (particularly in the context of the increasing demand and workload within Scotland's publicly funded National Health Service). Physicians were also concerned that ultrasound skills were poorly incorporated into training and practice in the British emergency medicine system. Furthermore, they believed that ultrasound was difficult to learn, prone to misinterpretation and easy to become deskilled in. Both sets of participants believed that the relational skills required between the two groups and the practical complexities of RSPU may pose challenges in its implementation. In particular, concerns were raised regarding the time that would be required to conduct the ultrasound scans and difficulties with transmission and communication in the Highlands. Both groups questioned the likelihood of measurable benefits from RSPU for patients. Furthermore, both groups were unsure how the technology would benefit those patients in urban areas close to the emergency department or whether RSPU would be effectively utilised in rural areas where serious emergencies are infrequent. CONCLUSION: There are substantial differences in emergency physician and paramedic perspectives on RSPU; however, both parties were willing to engage with the research process. Both groups have reservations, especially the emergency physicians who perceive significant barriers to the acquisition of skills, as well as the relational and contextual integration of RSPU. This study demonstrates the importance of conversations with physicians and paramedics throughout the research process, particularly as the role of prehospital care remains controversial.

McKenzie, R. et Williamson, M. (2016). "The league of extraordinary generalists: a qualitative study of professional identity and perceptions of role of GPs working on a national after hours helpline in Australia." BMC Health Serv Res **16**: 142.

> BACKGROUND: Telephone triage and advice services (TTAS) have become commonplace in western health care systems particularly as an aid to patient access and demand management in the after hours period. In 2011 an after hours general practitioner (GP) helpline was established as a supplementary service to existing 24-h nurse-TTAS in Australia. Callers to the service in the after hours period who are triaged by a nurse as needing to see a GP immediately or within 24 h may speak with a GP on the line to obtain further assessment and advice. While much research has been undertaken on the roles of nurses in TTAS and the professional identities and attitudes to new technology of community-based GPs, little is known of the perceptions of role and identity of GPs providing after hours advice on primary care helplines. This qualitative study explored the perceptions of professional identity and role, motivations and contributions to the health system of GPs employed on the Australian afterhours GP helpline in 2011-2013. METHODS: The study took a phenomenographic approach seeking to understand the essence of being a telephone GP, probing professional identity while also exploring role tensions. Twelve GPs, or 15% of the helpline GP workforce participated in the qualitative study. RESULTS: The GPs experienced both personal and professional benefits and believed they were strengthening patient care and the Australian health system. However the role required a re-alignment of practice that challenged professional autonomy, the doctor-patient relationship and commitment to continuity of care. Some GPs made this role realignment more readily than others and were well suited to the helpline role. There was a strong collegial bond amongst the helpline GPs which facilitated the maintenance of professional autonomy. CONCLUSIONS: Telephone GP assessment and advice does not demonstrate the same breadth as face-to-face practice and provides little opportunity for continuity of care, but this has not prevented those performing the role from identifying as a new form of generalist. The establishment of an after hours GP helpline in Australia has seen the emergence of a new generalist primary care identity as telehealth innovators.

Miles, C., Arden-Close, E., Thomas, M., et al. (2017). "Barriers and facilitators of effective self-management in asthma: systematic review and thematic synthesis of patient and healthcare professional views." NPJ Prim Care Respir Med **27**(1): 57.

> Self-management is an established, effective approach to controlling asthma, recommended in guidelines. However, promotion, uptake and use among patients and health-care professionals remain low. Many barriers and facilitators to effective self-management have been reported, and views and beliefs of patients and health care professionals have been explored in qualitative studies. We conducted a systematic review

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and thematic synthesis of qualitative research into self-management in patients, carers and health care professionals regarding self-management of asthma, to identify perceived barriers and facilitators associated with reduced effectiveness of asthma self-management interventions. Electronic databases and guidelines were searched systematically for qualitative literature that explored factors relevant to facilitators and barriers to uptake, adherence, or outcomes of self-management in patients with asthma. Thematic synthesis of the 56 included studies identified 11 themes: (1) partnership between patient and health care professional; (2) issues around medication; (3) education about asthma and its management; (4) health beliefs; (5) self-management interventions; (6) co-morbidities (7) mood disorders and anxiety; (8) social support; (9) non-pharmacological methods; (10) access to healthcare; (11) professional factors. From this, perceived barriers and facilitators were identified at the level of individuals with asthma (and carers), and health-care professionals. Future work addressing the concerns and beliefs of adults, adolescents and children (and carers) with asthma, effective communication and partnership, tailored support and education (including for ethnic minorities and at risk groups), and telehealthcare may improve how self-management is recommended by professionals and used by patients. Ultimately, this may achieve better outcomes for people with asthma.

Moeckli, J., Cram, P., Cunningham, C., et al. (2013). "Staff acceptance of a telemedicine intensive care unit program: a qualitative study." J Crit Care **28**(6): 890-901.

PURPOSE: We conducted an evaluation to identify factors related to intensive care unit (ICU) staff acceptance of a telemedicine ICU (Tele-ICU) program in preimplementation and postimplementation phases. METHODS: Individual or group semistructured interviews and site observations were conducted with staff from the Veterans Affairs Midwest Health Care Network Tele-ICU and affiliated ICUs. A qualitative content analysis of preimplementation and postimplementation transcripts and field notes was undertaken to identify themes positively and negatively influencing Tele-ICU acceptance. RESULTS: Telemedicine ICU training, Tele-ICU understanding, perceived need, and organizational factors emerged as influencing acceptance of the Tele-ICU before implementation. After implementation, Tele-ICU understanding, impact on work systems, perceived usefulness, and relationships were factors influencing acceptance and utilization. Barriers to implementation included confusion about how to use the Tele-ICU, disruptions to communication and workflows, unmet expectations, and discomfort with being monitored. Facilitators included positive experiences, discovery of new benefits, and recognition of Tele-ICU staff as complementing bedside care. CONCLUSIONS: Telemedicine ICU implementation is complex. Time and resources should be allocated for local coordination, continuous needs assessment for Tele-ICU support, staff training, developing interpersonal relationships, and systems design and evaluation. Such efforts are likely to be rewarded with more rapid staff acceptance of this new technology.

Montero-Marin, J., Carrasco, J. M., Roca, M., et al. (2013). "Expectations, experiences and attitudes of patients and primary care health professionals regarding online psychotherapeutic interventions for depression: protocol for a qualitative study." BMC Psychiatry **13**: 64.

BACKGROUND: In the year 2020, depression will cause the second highest amount of disability worldwide. One quarter of the population will suffer from depression symptoms at some point in their lives. Mental health services in Western countries are overburdened. Therefore, cost-effective interventions that do not involve mental health services, such as online psychotherapy programs, have been proposed. These programs demonstrate satisfactory outcomes, but the completion rate for patients is low. Health professionals' attitudes towards this type of psychotherapy are more negative than the attitudes of depressed patients themselves. The aim of this study is to describe the profile of depressed patients who would benefit most from online psychotherapy and to identify expectations, experiences, and attitudes about online psychotherapy among both patients and health professionals that can facilitate or hinder its effects. METHODS: A parallel qualitative design will be used in a randomised controlled trial on the efficiency of online psychotherapeutic treatment for depression. Through interviews and focus groups, the experiences of treated patients, their reasons for abandoning the program, the expectations of untreated patients, and the attitudes of health professionals will be examined. Questions will be asked about training in new technologies, opinions of online psychotherapy, adjustment to therapy within the daily routine, the virtual and anonymous relationship with the therapist, the process of online communication, information necessary to make progress in therapy, process of working with the program, motivations and attitudes about treatment, expected consequences, normalisation of this type of therapy in primary care, changes in the physician-patient relationship, and resources and risks. A thematic content analysis from the grounded

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theory for interviews and an analysis of the discursive positions of participants based on the sociological model for focus groups will be performed. DISCUSSION: Knowledge of the expectations, experiences, and attitudes of both patients and medical personnel regarding online interventions for depression can facilitate the implementation of this new psychotherapeutic tool. This qualitative investigation will provide thorough knowledge of the perceptions, beliefs, and values of patients and clinicians, which will be very useful for understanding how to implement this intervention method for depression.

Moore, M. A., Coffman, M., Jetty, A., et al. (2017). "Family Physicians Report Considerable Interest in, but Limited Use of, Telehealth Services." Journal of the American Board of Family Medicine **30**(3): 320-330.
<Go to ISI>://WOS:000401006800009

Purpose: Little is known about the attitudes toward and adoption of telehealth services among family physicians (FPs), the largest primary care physician group. We conducted a national survey of FPs, randomly sampled from membership organization files, to investigate use of and barriers to using telehealth services. Methods: Using bivariate analyses, we examined how telehealth usage affected FPs' identified barriers to using telehealth services. Logistic regressions show the factors associated both with using telehealth services and with barriers to using telehealth services. Results: Surveys reached 4980 FPs; 1557 surveys were eligible for analysis (31% response rate). Among FPs, 15% reported using telehealth services during 2014. After controlling for the characteristics of the physicians and their practice, FPs who were based in a rural setting, worked in a practice owned by an integrated health system or other ownership structure, and provided hospital/urgent/emergency care were more likely to use telehealth. Physician and practice characteristics by telehealth use status, sex of the physician, practice location, years in practice, care provided, and practice ownership were associated with the barriers identified. Conclusions: Telehealth use was limited among FPs. Many of the barriers to using telehealth services cited by FPs are amenable to policy modification.

Muigg, D., Kastner, P., Modre-Osprian, R., et al. (2018). "Is Austria Ready for Telemonitoring? A Readiness Assessment Among Doctors and Patients in the Field of Diabetes." Stud Health Technol Inform **248**: 322-329.

BACKGROUND: Telemonitoring offers new opportunities in the treatment of chronically ill patients and could help to improve their quality of life while reducing healthcare costs. OBJECTIVES: The willingness to use telemonitoring is examined for both physicians and patients. From the perspective of the most important stakeholders, advantages and disadvantages as well as barriers for telemonitoring are analysed. METHODS: A Telehealth Readiness Assessment was carried out with physicians (n = 41) and patients (n = 47) in a cross-sectional study. A stakeholder survey was conducted by use of interviews (n = 28). RESULTS: Average readiness for telemonitoring is 58% for physicians, and 65% for patients. Both are thus in a position where there are several arguments which adversely affect the success of telemonitoring. The most important advantage is the intensified care, while the biggest concerns are data protection as well as the loss of personal communication. The greatest barriers are the lack of funding, the weak clinical and economic evidence and the organisation of the Austrian healthcare system. CONCLUSION: There are still some barriers to overcome, especially financial, political and organisational.

Newbould, J., Abel, G., Ball, S., et al. (2017). "Evaluation of telephone first approach to demand management in English general practice: observational study." Bmj **358**: j4197.

Objective To evaluate a "telephone first" approach, in which all patients wanting to see a general practitioner (GP) are asked to speak to a GP on the phone before being given an appointment for a face to face consultation.Design Time series and cross sectional analysis of routine healthcare data, data from national surveys, and primary survey data.Participants 147 general practices adopting the telephone first approach compared with a 10% random sample of other practices in England.Intervention Management support for workload planning and introduction of the telephone first approach provided by two commercial companies.Main outcome measures Number of consultations, total time consulting (59 telephone first practices, no controls). Patient experience (GP Patient Survey, telephone first practices plus controls). Use and costs of secondary care (hospital episode statistics, telephone first practices plus controls). The main analysis was intention to treat, with sensitivity analyses restricted to practices thought to be closely following the companies' protocols.Results After the introduction of the telephone first approach, face to face consultations decreased considerably (adjusted change within practices -38%, 95% confidence interval -45% to -29%; P<0.001). An average practice experienced a 12-fold increase in telephone consultations (1204%, 633% to 2290%; P<0.001). The average duration of both telephone and face to face consultations decreased, but there was an overall increase of 8% in the mean time spent consulting by GPs, albeit with large

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uncertainty on this estimate (95% confidence interval -1% to 17%; P=0.088). These average workload figures mask wide variation between practices, with some practices experiencing a substantial reduction in workload and others a large increase. Compared with other English practices in the national GP Patient Survey, in practices using the telephone first approach there was a large (20.0 percentage points, 95% confidence interval 18.2 to 21.9; P<0.001) improvement in length of time to be seen. In contrast, other scores on the GP Patient Survey were slightly more negative. Introduction of the telephone first approach was followed by a small (2.0%) increase in hospital admissions (95% confidence interval 1% to 3%; P=0.006), no initial change in emergency department attendance, but a small (2% per year) decrease in the subsequent rate of rise of emergency department attendance (1% to 3%; P=0.005). There was a small net increase in secondary care costs.Conclusions The telephone first approach shows that many problems in general practice can be dealt with over the phone. The approach does not suit all patients or practices and is not a panacea for meeting demand. There was no evidence to support claims that the approach would, on average, save costs or reduce use of secondary care.

Ng, Y. P., Rashid, A. et O'Brien, F. (2017). "Determining the effectiveness of a video-based contact intervention in improving attitudes of Penang primary care nurses towards people with mental illness." PLoS One **12**(11): e0187861.

BACKGROUND: Mental illness-related stigma is common, and is associated with poorer outcomes in people with mental illness. This study evaluated the attitudes of primary care nurses towards people with mental illness and its associated factors; and the effectiveness of a short video-based contact intervention (VBCI) in improving these attitudes using a Malay version of the 15-item Opening Minds Stigma Scale for Healthcare Providers (OMS-HC-15-M). METHODS: A 5-minute VBCI was developed comprising elements of psychoeducation and interviews of people with mental illness and the people they interact with, relating to experience of mental illness and recovery. A pre-post cross-sectional study was conducted on 206 randomly selected primary care nurses in Penang, Malaysia. The OMS-HC-15-M questionnaire was administered before and immediately after participants viewed the VBCI. The difference in mean pre-post VBCI scores using paired t-tests, effect size and standardised response mean (SRM) were obtained. Factors correlating to attitudes were obtained using univariate and multivariate regression analyses. RESULTS: Differences in pre-post VBCI score were statistically significant (p<0.001) with a 14% score reduction, a moderate effect size and SRM at 0.97 (0.85-0.11) and 1.1 (0.97-1.2) respectively. By factoring in the Minimal Detectable Change statistic of 7.76, the VBCI produced a significant improvement of attitudes in 30% of the participants. Factors associated with less stigmatising attitudes at baseline were previous psychiatry-related training, desiring psychiatric training, and positive contact with people with mental illness. CONCLUSIONS: This is the first study in Malaysia to show that a brief VBCI is effective in improving attitudes of primary care nurses towards people with mental illness in the immediate term. Further studies are needed to determine if these results can be sustained in the longer term and generalizable to other health care professionals. Qualitative studies are warranted to provide insight to the factors correlating to these attitudes. (300 words).

Ose, D., Baudendistel, I., Pohlmann, S., et al. (2017). "[Personal health records on the Internet. A narrative review of attitudes, expectations, utilization and effects on health outcomes]." Z Evid Fortbild Qual Gesundhwes **122**: 9-21.

BACKGROUND: The integration of information and communication technologies (ICT) is increasingly considered in the development of healthcare structures. This fact is also recognised in the e-Health Act. In this context, personal health records (PHR) have a specific meaning. The aim of this paper is to provide an overview on utilization, barriers and possible effects on the implementation of PHR. METHODS: This analysis is based on a literature search in Web of Science (Core Collection) (01/2000 to 12/2014) using the following terms: "personal health record", "personal medical record", "personal electronic health record", "interpersonal health record", "personally controlled health record". RESULTS: In general, patients have positive attitudes towards the electronic exchange of personal health information (PHI) on a PHR. Even the sharing of PHI with physicians, health professionals, family and friends appears to be an option for many patients. Physicians also see the potential of a PHR on the internet, but they are more critical than patients. Barriers exist towards the use of complex and non-intuitive PHR concepts along with technical faults and the lack of functionality. From the physicians' perspective, prejudices concerning the use of PHR have not been confirmed and, other than previously expected, the workload has not increased so much. However, clinical outcomes have so far been rather moderate. Stronger effects may be achieved by embedding the PHR in a broader healthcare concept. CONCLUSION: In the context of chronic disease, a connected PHR (patient-controlled, cross-sectoral, and interoperable) can be a valuable tool for organizing healthcare for patients. To take full effect, the development of such systems should focus on patients and their families as well as on

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physicians and other healthcare professionals. Whether the e-Health Act is a step in the right direction will have to be established by future analysis.

Patel, S., Cain, R., Neailey, K., et al. (2015). "General Practitioners' Concerns About Online Patient Feedback: Findings From a Descriptive Exploratory Qualitative Study in England." J Med Internet Res **17**(12): e276.

BACKGROUND: The growth in the volume of online patient feedback, including online patient ratings and comments, suggests that patients are embracing the opportunity to review online their experience of receiving health care. Very little is known about health care professionals' attitudes toward online patient feedback and whether health care professionals are comfortable with the public nature of the feedback. OBJECTIVE: The aim of the overall study was to explore and describe general practitioners' attitudes toward online patient feedback. This paper reports on the findings of one of the aims of the study, which was to explore and understand the concerns that general practitioners (GPs) in England have about online patient feedback. This could then be used to improve online patient feedback platforms and help to increase usage of online patient feedback by GPs and, by extension, their patients. METHODS: A descriptive qualitative approach using face-to-face semistructured interviews was used in this study. A topic guide was developed following a literature review and discussions with key stakeholders. GPs (N=20) were recruited from Cambridgeshire, London, and Northwest England through probability and snowball sampling. Interviews were transcribed verbatim and analyzed in NVivo using the framework method, a form of thematic analysis. RESULTS: Most participants in this study had concerns about online patient feedback. They questioned the validity of online patient feedback because of data and user biases and lack of representativeness, the usability of online patient feedback due to the feedback being anonymous, the transparency of online patient feedback because of the risk of false allegations and breaching confidentiality, and the resulting impact of all those factors on them, their professional practice, and their relationship with their patients. CONCLUSIONS: The majority of GPs interviewed had reservations and concerns about online patient feedback and questioned its validity and usefulness among other things. Based on the findings from the study, recommendations for online patient feedback website providers in England are given. These include suggestions to make some specific changes to the platform and the need to promote online patient feedback more among both GPs and health care users, which may help to reduce some of the concerns raised by GPs about online patient feedback in this study.

Peek, S. T., Wouters, E. J., Luijkx, K. G., et al. (2016). "What it Takes to Successfully Implement Technology for Aging in Place: Focus Groups With Stakeholders." J Med Internet Res **18**(5): e98.

BACKGROUND: There is a growing interest in empowering older adults to age in place by deploying various types of technology (ie, eHealth, ambient assisted living technology, smart home technology, and gerontechnology). However, initiatives aimed at implementing these technologies are complicated by the fact that multiple stakeholder groups are involved. Goals and motives of stakeholders may not always be transparent or aligned, yet research on convergent and divergent positions of stakeholders is scarce. OBJECTIVE: To provide insight into the positions of stakeholder groups involved in the implementation of technology for aging in place by answering the following questions: What kind of technology do stakeholders see as relevant? What do stakeholders aim to achieve by implementing technology? What is needed to achieve successful implementations? METHODS: Mono-disciplinary focus groups were conducted with participants (n=29) representing five groups of stakeholders: older adults (6/29, 21%), care professionals (7/29, 24%), managers within home care or social work organizations (5/29, 17%), technology designers and suppliers (6/29, 21%), and policy makers (5/29, 17%). Transcripts were analyzed using thematic analysis. RESULTS: Stakeholders considered 26 different types of technologies to be relevant for enabling independent living. Only 6 out of 26 (23%) types of technology were mentioned by all stakeholder groups. Care professionals mentioned fewer different types of technology than other groups. All stakeholder groups felt that the implementation of technology for aging in place can be considered a success when (1) older adults' needs and wishes are prioritized during development and deployment of the technology, (2) the technology is accepted by older adults, (3) the technology provides benefits to older adults, and (4) favorable prerequisites for the use of technology by older adults exist. While stakeholders seemed to have identical aims, several underlying differences emerged, for example, with regard to who should pay for the technology. Additionally, each stakeholder group mentioned specific steps that need to be taken to achieve successful implementation. Collectively, stakeholders felt that they need to take the leap (ie, change attitudes, change policies, and collaborate with other organizations); bridge the gap (ie, match technology with individuals and stimulate interdisciplinary education); facilitate technology for the masses (ie, work on

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products and research that support large-scale rollouts and train target groups on how to use technology); and take time to reflect (ie, evaluate use and outcomes). CONCLUSIONS: Stakeholders largely agree on the direction in which they should be heading; however, they have different perspectives with regard to the technologies that can be employed and the work that is needed to implement them. Central to these issues seems to be the tailoring of technology or technologies to the specific needs of each community-dwelling older adult and the work that is needed by stakeholders to support this type of service delivery on a large scale.

Peeters, J. M., Krijgsman, J. W., Brabers, A. E., et al. (2016). "Use and Uptake of eHealth in General Practice: A Cross-Sectional Survey and Focus Group Study Among Health Care Users and General Practitioners." JMIR Med Inform **4**(2): e11.

BACKGROUND: Policy makers promote the use of eHealth to widen access to health care services and to improve the quality and safety of care. Nevertheless, the enthusiasm among policy makers for eHealth does not match its uptake and use. eHealth is defined in this study as "health services delivered or enhanced through the Internet and related information and communication technologies." OBJECTIVE: The objective of this study was to investigate (1) the current use of eHealth in the Netherlands by general practitioners (GPs) and health care users, (2) the future plans of GPs to provide eHealth and the willingness of health care users to use eHealth services, and (3) the perceived positive effects and barriers from the perspective of GPs and health care users. METHODS: A cross-sectional survey of a sample of Dutch GPs and members of the Dutch Health Care Consumer Panel was conducted in April 2014. A pre-structured questionnaire was completed by 171 GPs (12% response) and by 754 health care users (50% response). In addition, two focus groups were conducted in June 2014: one group with GPs (8 participants) and one with health care users (10 participants). RESULTS: Three-quarters of Dutch GPs that responded to the questionnaire (67.3%, 115/171) offered patients the possibility of requesting a prescription via the Internet, and half of them offered patients the possibility of asking a question via the Internet (49.1%, 84/171). In general, they did intend to provide future eHealth services. Nonetheless, many of the GPs perceived barriers, especially concerning its innovation (eg, insufficient reliable, secure systems) and the sociopolitical context (eg, lack of financial compensation for the time spent on implementation). By contrast, health care users were generally not aware of existing eHealth services offered by their GPs. Nevertheless, half of them were willing to use eHealth services when offered by their GP. In general, health care users have positive attitudes regarding eHealth. One in five (20.6%, 148/718) health care users perceived barriers to the use of eHealth. These included concerns about the safety of health information obtained via the Internet (66.7%, 96/144) and privacy aspects (55.6%, 80/144). CONCLUSIONS: GPs and health care users have generally positive attitudes towards eHealth, which is a prerequisite for the uptake of eHealth. But, general practitioners in particular perceive barriers to using eHealth and consider the implementation of eHealth to be complex. This study shows that there is room for improving awareness of eHealth services in primary care. It will take some time before these issues are resolved and eHealth can be fully adopted.

Penny, R. A., Bradford, N. K. et Langbecker, D. (2018). "Registered nurse and midwife experiences of using videoconferencing in practice: A systematic review of qualitative studies." J Clin Nurs **27**(5-6): e739-e752.

AIM AND OBJECTIVE: To synthesise evidence of registered nurses' and midwives' experiences with videoconferencing and identify perceptions of the appropriateness, meaningfulness and feasibility of this technology in professional and clinical practice. BACKGROUND: Videoconferencing is a form of telehealth that can facilitate access to high-quality care to improve health outcomes for patients and enable clinicians working in isolation to access education, clinical supervision, peer support and case review. Yet use of videoconferencing has not translated smoothly into routine practice. Understanding the experiences of registered nurses and midwives may provide practitioners, service managers and policymakers with vital information to facilitate use of the technology. DESIGN: A qualitative meta-synthesis of primary qualitative studies undertaken according to Joanna Briggs Institute methodology. METHOD: A systematic search of 19 databases was used to identify qualitative studies that reported on registered nurses' or midwives' experiences with videoconferencing in clinical or professional practice. Two reviewers independently appraised studies, extracted data and synthesised findings to construct core concepts. RESULTS: Nine studies met the criteria for inclusion. Five key synthesised findings were identified: useful on a continuum; broader range of information; implications for professional practice; barriers to videoconferencing; and technical support, training and encouragement. CONCLUSIONS: While videoconferencing offers benefits, it comes with personal, organisational and professional consequences for nurses and midwives. Understanding

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potential benefits and limitations, training and support required and addressing potential professional implications all influence adoption and ongoing use of videoconferencing. RELEVANCE TO CLINICAL PRACTICE: Registered nurses and midwives are well placed to drive innovations and efficiencies in practice such as videoconferencing. Nursing and midwifery practice must be reframed to adapt to the virtual environment while retaining valued aspects of professional practice. This includes ensuring professional standards keep pace with the development of knowledge in this area and addressing the findings highlighted in this meta-synthesis.

Popeski, N., McKeen, C., Khokhar, B., et al. (2015). "Perceived Barriers to and Facilitators of Patient-to-Provider E-Mail in the Management of Diabetes Care." Can J Diabetes **39**(6): 478-483.

OBJECTIVES: 1) to describe current utilization of e-mail in the clinical care of patients with diabetes; and 2) to identify barriers to and facilitators of the adoption of e-mail in diabetes care. METHODS: Participants included diabetes care providers, including 9 physicians and 7 allied health professionals (AHPs). Participation involved, first, completing a self-administered survey to evaluate the use of e-mail within diabetes-related clinical practice. Second, focus group discussions were conducted with diabetes care providers using semistructured interviews to collect data about their perceptions of using e-mail to exchange information with patients diagnosed with diabetes. Patients' perspectives on the use of e-communication with their care providers was also proposed on the basis of the discussions. RESULTS: Significant differences were found between physicians and AHPs concerning questions that were related to the use of e-mail and the amount of time spent using e-mail to communicate to patients. There was perceived function and value to the use of e-mail among AHPs, while few physicians used e-mail routinely and were uncertain about its potential in improving care. Five themes, including barriers, benefits, risks, safeguards and compensation, were developed from the focus group interviews. CONCLUSIONS: Currently, most of the physicians surveyed do not e-mail patients directly; however, AHPs frequently use e-mail in diabetes care and find this tool valuable. Variation in practices regarding clinical e-mail across care disciplines suggest that appropriate policy with guidelines for e-mail and e-communication within the health care system may improve uptake of clinical e-mail and perhaps, by extension, improve efficiency and access in diabetes care.

Potter, A. J., Mueller, K. J., Mackinney, A. C., et al. (2014). "Effect of tele-emergency services on recruitment and retention of US rural physicians." Rural Remote Health **14**(3): 2787.

INTRODUCTION: As competition for physicians intensifies in the USA, rural areas are at a disadvantage due to challenges unique to rural medical practice. Telemedicine improves access to care not otherwise available in rural settings. Previous studies have found that telemedicine also has positive effects on the work environment, suggesting that telemedicine may improve rural physician recruitment and retention, although few have specifically examined this. METHODS: Using a mixed-method approach, clients of a single telemedicine service in the Upper Midwestern USA were surveyed and interviewed about their views of the impact of tele-emergency on physician recruitment and retention and the work environment. Surveys were completed by 292 clinical and administrative staff at 71 hospitals and semi-structured interviews were conducted with clinicians and administrators at 16 hospitals. RESULTS: Survey respondents agreed that tele-emergency had a positive effect on physician recruitment and retention and related workplace factors. Interviewees elucidated how the presence of tele-emergency played an important role in enhancing physician confidence, providing educational opportunities, easing burden, and supplementing care, workplace factors that interviewees believed would impact recruitment and retention. However, gains were limited by hospitals' interpretation of the Emergency Medical Treatment and Labor Act as requiring on-site physician coverage even if tele-emergency was used. CONCLUSIONS: Results indicate that, all other factors being equal, tele-emergency increases the likelihood of physicians entering and remaining in rural practice. New regulatory guidance by the Centers for Medicare and Medicaid Services related to on-site physician coverage will likely accelerate implementation of tele-emergency services in rural hospitals. Telemedicine may prove to be an increasingly valuable recruitment and retention tool for rural hospitals as competition for physicians intensifies.

Prescher, S., Deckwart, O., Winkler, S., et al. (2013). "Telemedical care: feasibility and perception of the patients and physicians: a survey-based acceptance analysis of the Telemedical Interventional Monitoring in Heart Failure (TIM-HF) trial." Eur J Prev Cardiol **20**(2 Suppl): 18-24.

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BACKGROUND: The randomized Telemedical Interventional Monitoring in Heart Failure (TIM-HF) trial (NCT00543881) was performed during 2008 and 2010 to determine whether physician-led remote patient management (RPM) compared with usual care would result in reduced mortality and morbidity in stable out-patient heart failure (HF) patients. However, besides results of clinical benefit, the acceptance by patients and primary physicians is necessary for the implementation of RPM as part of the upcoming out-patient HF-care programs. METHODS: Two months after finishing of the trial, a survey based analysis of the perception of telemedical care with patients (n=288) and primary physicians (n=102) was carried out. The survey included questions regarding self-management, usability and physician-patient communication. RESULTS: The concept of RPM was perceived positively by patients and physicians. The devices were assessed as easy to use (98.6%, n=224) and robust (88.8%, n=202). Through trial participation and daily measurements most of the patients (85.5%, n=195) felt more confident in dealing with their disease than before. The perception of the nurses and physicians of the telemedical centers was professional (92.1%, n=210 and 89.9%, n=205) and committed (94.3%, n=215 and 91.7%, n=209). Also more than half of the patients noticed an improvement in the contact with their primary physician (52.6%, n=120); and for 46.1% (n=105) the contact has not been changed. CONCLUSIONS: RPM will be a medical care concept for recently hospitalized HF- patients in the near future but the optimal telemedical setting of RPM and the duration of this intervention have to be defined in further clinical trials.

Ray, K. N., Demirci, J. R., Bogen, D. L., et al. (2015). "Optimizing Telehealth Strategies for Subspecialty Care: Recommendations from Rural Pediatricians." Telemedicine and E-Health 21(8): 622-629.
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Background:Telehealth offers strategies to improve access to subspecialty care for children in rural communities. Rural pediatrician experiences and preferences regarding the use of these telehealth strategies for children's subspecialty care needs are not known. We elicited rural pediatrician experiences and preferences regarding different pediatric subspecialty telehealth strategies.Materials and Methods:Seventeen semistructured telephone interviews were conducted with rural pediatricians from 17 states within the United States. Interviewees were recruited by e-mails to a pediatric rural health listserv and to rural pediatricians identified through snowball sampling. Themes were identified through thematic analysis of interview transcripts. Institutional Review Board approval was obtained.Results:Rural pediatricians identified several telehealth strategies to improve access to subspecialty care, including physician access hotlines, remote electronic medical record access, electronic messaging systems, live video telemedicine, and telehealth triage systems. Rural pediatricians provided recommendations for optimizing the utility of each of these strategies based on their experiences with different systems. Rural pediatricians preferred specific telehealth strategies for specific clinical contexts, resulting in a proposed framework describing the complementary role of different telehealth strategies for pediatric subspecialty care. Finally, rural pediatricians identified additional benefits associated with the use of telehealth strategies and described a desire for telehealth systems that enhanced (rather than replaced) personal relationships between rural pediatricians and subspecialists.Conclusions:Rural pediatricians described complementary roles for different subspecialty care telehealth strategies. Additionally, rural pediatricians provided recommendations for optimizing individual telehealth strategies. Input from rural pediatricians will be crucial for optimizing specific telehealth strategies and designing effective telehealth systems.

Renouf, T., Alani, S., Whalen, D., et al. (2016). "City mouse, country mouse: a mixed-methods evaluation of perceived communication barriers between rural family physicians and urban consultants in Newfoundland and Labrador, Canada." BMJ Open 6(5): e010153.

OBJECTIVES: To examine perceived communication barriers between urban consultants and rural family physicians practising routine and emergency care in remote subarctic Newfoundland and Labrador (NL). DESIGN: This study used a mixed-methods design. Quantitative and qualitative data were collected through exploratory surveys, comprised of closed and open-ended questions. The quantitative data was analysed using comparative statistical analyses, and a thematic analysis was applied to the qualitative data. PARTICIPANTS: 52 self-identified rural family physicians and 23 urban consultants were recruited via email. Rural participants were also recruited at the Family Medicine Rural Preceptor meetings in St John's, NL. SETTING: Rural family physicians and urban consultants in NL completed a survey assessing perceived barriers to effective communication. RESULTS: Data confirmed that both groups perceived communication difficulties with one another; with 23.1% rural and 27.8% urban, rating the difficulties as frequent (p=0.935); 71.2% rural and 72.2% urban as sometimes (p=0.825); 5.8% rural and 0% urban acknowledged never perceiving difficulties (p=0.714). Overall, 87.1% of participants indicated that perceived communication

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difficulties impacted patient care. Primary trends that emerged as perceived barriers for rural physicians were time constraints and misunderstanding of site limitations. Urban consultants' perceived barriers were inadequate patient information and lack of native language skills. CONCLUSIONS: Barriers to effective communication are perceived between rural family physicians and urban consultants in NL.

Ruiz Morilla, M. D., Sans, M., Casasa, A., et al. (2017). "Implementing technology in healthcare: insights from physicians." BMC Med Inform Decis Mak **17**(1): 92.

BACKGROUND: Technology has significantly changed the way health organizations operate. However, the role it plays in healthcare systems remains unclear. This aim of this study was to evaluate the opinion of physicians regarding e-health and determine what factors influence their opinion and describe the advantages, inconveniences and threats they may perceive by its use. METHODS: A cross-sectional questionnaire-based study. A questionnaire which had been previously designed and validated by the authors was used to interview physicians from the Barcelona Medical Association. 930 physicians were contacted by phone to participate in the study. RESULTS: Seven hundred sixty physicians responded to the questionnaire (response rate: 82%). The usefulness of telemedicine scored 7.4 (SD 1.8) on a scale from 1-10 (from the lowest to the highest) and the importance of the Internet in the workplace was 8.2 points (SD 1.8). Therapeutic compliance (7.0 -SD 1.8-) and patient health (7.0 -SD 1.7-) showed the best scores, and there were differences between professionals who had and had not previously participated in a telemedicine project (p < 0.05). The multivariate regression model explained the 41% of the variance for 7 factors: participation in telemedicine project (p < 0.001), quality of clinical practice (p < 0.001), patient health (p < 0.001), professional workload (p = 0.005), ease-of-use of electronic device (p = 0.007), presence of incentives for telemedicine (p = 0.011) and patient preference for in-person visits (p = 0.05). CONCLUSIONS: Physicians believe in the usefulness of e-health. Professionals with previous experience with it are more open to its implementation and consider that the benefits of technology outweigh its possible difficulties and shortcomings. Physicians demanded projects with appropriate funding and technology, as well as specific training to improve their technological abilities. The relationship of users with technology differs according to their personal or professional life. Although a 2.0 philosophy has been incorporated into many aspects of our lives, healthcare systems still have a long way to go in order to adapt to this new understanding of the relationship between patients and their health.

Rush, K. L., Hatt, L., Gorman, N., et al. (2019). "Planning Telehealth for Older Adults With Atrial Fibrillation in Rural Communities: Understanding Stakeholder Perspectives." Clinical Nursing Research **28**(2): 130-149.
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Older adults with atrial fibrillation (AF) in rural communities have less access to cardiac specialty care. Telehealth offers a viable approach to provide cardiac care, yet little is known about patients' and providers' views on telehealth's potential to support rural patients with AF. This qualitative descriptive study examines patient and health providers' perspectives, an important first step in planning a telehealth initiative. Eight patients with AF, along with one partner from rural communities, were recruited through an urban-based AF clinic. Five providers were recruited through professional practice leads in the health region. Semistructured telephone interviews were conducted with both stakeholder groups. The overriding theme was variability in patient and provider receptiveness to telehealth. Receptiveness reflected differences in past experience with telehealth, in perceived adequacy of rural health services, and in perceived gaps in AF care. These are important considerations in planning effective and sustainable telehealth in rural communities.

Sabesan, S. (2015). "Specialist cancer care through Telehealth models." Australian Journal of Rural Health **23**(1): 19-23.
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ObjectiveDisparities in outcomes are experienced between people who live in rural and remote areas and those who live in larger cities. This paper explores the ability to deliver specialist cancer care through the use of telehealth models. DesignReview of telehealth models for cancer care. Setting, participants and interventionCancer patients in rural, remote and Indigenous communities who receive their care through telehealth. Outcome measures and resultsTelehealth models seem to be applicable to all fields of oncology and all health professionals. These models not only facilitate the provision of specialist services closer to home in an acceptable, safe and cost-effective manner, but also help expand the rural scope of practice and enhance service capabilities at rural centres. ConclusionNew models of telehealth are another avenue to help further decrease the disparity of access and survival outcomes between rural and urban patients. Implementation of these models requires health system wide approach for development key performance indicators and allocation of resources.

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Saleh, S., Khodor, R., Alameddine, M., et al. (2016). "Readiness of healthcare providers for eHealth: the case from primary healthcare centers in Lebanon." BMC Health Serv Res **16**(1): 644.

> BACKGROUND: eHealth can positively impact the efficiency and quality of healthcare services. Its potential benefits extend to the patient, healthcare provider, and organization. Primary healthcare (PHC) settings may particularly benefit from eHealth. In these settings, healthcare provider readiness is key to successful eHealth implementation. Accordingly, it is necessary to explore the potential readiness of providers to use eHealth tools. Therefore, the purpose of this study was to assess the readiness of healthcare providers working in PHC centers in Lebanon to use eHealth tools. METHODS: A self-administered questionnaire was used to assess participants' socio-demographics, computer use, literacy, and access, and participants' readiness for eHealth implementation (appropriateness, management support, change efficacy, personal beneficence). The study included primary healthcare providers (physicians, nurses, other providers) working in 22 PHC centers distributed across Lebanon. Descriptive and bivariate analyses (ANOVA, independent t-test, Kruskal Wallis, Tamhane's T2) were used to compare participant characteristics to the level of readiness for the implementation of eHealth. RESULTS: Of the 541 questionnaires, 213 were completed (response rate: 39.4 %). The majority of participants were physicians (46.9 %), and nurses (26.8 %). Most physicians (54.0 %), nurses (61.4 %), and other providers (50.9 %) felt comfortable using computers, and had access to computers at their PHC center (physicians: 77.0 %, nurses: 87.7 %, others: 92.5 %). Frequency of computer use varied. The study found a significant difference for personal beneficence, management support, and change efficacy among different healthcare providers, and relative to participants' level of comfort using computers. There was a significant difference by level of comfort using computers and appropriateness. A significant difference was also found between those with access to computers in relation to personal beneficence and change efficacy; and between frequency of computer use and change efficacy. CONCLUSION: The implementation of eHealth cannot be achieved without the readiness of healthcare providers. This study demonstrates that the majority of healthcare providers at PHC centers across Lebanon are ready for eHealth implementation. The findings of this study can be considered by decision makers to enhance and scale-up the use of eHealth in PHC centers nationally. Efforts should be directed towards capacity building for healthcare providers.

Scandurra, I. et Alander, T. (2015). "Is Access to eHealth Records Important for Patients?--Opinions of Healthcare Personnel." Stud Health Technol Inform **216**: 908.

> Sweden has had significant progress with the the introduction of electronic health records. A pilot county deployed in an eHealth service in 2012, giving access to health records for all of its patients. This eHealth service is, however, a controversial issue. Two surveys were conducted to discover whether healthcare professionals' opinions differ between professionals, and between staff who have had experience with patients using eHealth records and those, to date, who have had none. Experienced nurses found this eHealth service more important for the patients compared to unexperienced nurses outside the pilot county, as well as both semi-experienced physicians.

Scantlebury, A., Booth, A. et Hanley, B. (2017). "Experiences, practices and barriers to accessing health information: A qualitative study." Int J Med Inform **103**: 103-108.

> BACKGROUND: With technology advancements making vast amounts of health information available whenever and wherever it is required, there is a growing need to understand how this information is being accessed and used. OBJECTIVE: Our aim was to explore patients/public and health professionals' experiences, practices and preferences for accessing health information. METHODS: Focus groups were conducted with 35 healthcare professionals (31 nurses and 4 allied health professionals) and 14 patients/members of the public. Semi-structured interviews were conducted with 5 consultants, who were unable to attend the focus groups. Data collection took place between March and May 2013 and all data were analysed thematically. RESULTS: Health professionals and patients/members of the public reported primarily accessing health information to inform their decision making for providing and seeking treatment respectively. For all participants the internet was the primary mechanism for accessing health information, with health professionals' access affected by open access charges; time constraints and access to computers. Variation in how patients/members of the public and health professionals appraise the quality of information also emerged, with a range of techniques for assessing quality reported. CONCLUSIONS: There was a clear preference for accessing health information online within our sample. Given that this information is central

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to both patient and health professionals' decision making, it is essential that these individuals are basing their decisions on high quality information. Findings from this study have implications for educationalists, health professionals, policymakers and the public.

Schulze, N., Reuter, S. C., Kuchler, I., et al. (2018). "Differences in Attitudes Toward Online Interventions in Psychiatry and Psychotherapy Between Health Care Professionals and Nonprofessionals: A Survey." Telemed J E Health.

> BACKGROUND: Although the use of e-mental health interventions and their evaluation is already well advanced in countries such as the United States and Australia, research in this area is still in the early stages in Germany. Moreover, existing programs are used only to a small extent by patients, although physicians and therapists generally have a positive attitude toward their use. To help promote the use of online interventions in the future, an analysis of the differences in opinions and attitudes toward e-mental health interventions between health care professionals and nonprofessionals is necessary. OBJECTIVE: This study aimed to examine the differences in attitudes toward online interventions between health care professionals and nonprofessionals. METHODS: This study examined 92 physicians, 36 psychotherapists, and 1,353 randomly recruited nonprofessionals with the eight-item questionnaire entitled "Attitudes on telemedicine in psychiatry and psychotherapy (ATiPP)." RESULTS: The questionnaires of n = 62 physicians, n = 37 psychotherapists, and n = 1,353 nonprofessionals were included in the analysis. Overall, nonprofessionals rate the use of telemedicine more critically than professionals. The itemwise t tests show significant differences between health care professionals and nonprofessionals on six out of eight items. The analyses of variance with post hoc tests for each single item also found differences between the groups (physicians vs. therapists vs. telephone participants vs. practice sample). CONCLUSION: There are significant differences in attitudes toward online interventions between professionals and nonprofessionals.

Segar, J., Rogers, A., Salisbury, C., et al. (2013). "Roles and identities in transition: boundaries of work and inter-professional relationships at the interface between telehealth and primary care." Health & Social Care in the Community **21**(6): 606-613.
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> Shifting the balance of care towards home and community is viewed as requiring interventions which enhance or complement primary care. Technology-based interventions are seen as key to the future in this work. Telehealthcare implicates a new agenda for inter-professional working across boundaries of healthcare. One such interface is between telehealthcare professionals and professionals located in primary care. This study reports the findings from a qualitative study forming part of a broader project examining the potential of developing and implementing telehealth interventions to support patients with long-term conditions. Semi-structured interviews were undertaken with telehealth nurse care managers, practice nurses and general practitioners in their respective work settings (39 interviews with 62 participants). Observation was undertaken at a telehealth call centre. The research took place between April 2010 and March 2011. Thematic analysis of qualitative data was undertaken. Telehealth nurse care managers' interviews suggested narrative constructions of new roles and identities to fit telehealth work, combining a holistic ideal and retro-appeal with traditional' values of nursing, which distinguished and distanced them from counterparts in general practices. Practice nurses and general practitioners were ambivalent and often sceptical about the contribution of telehealth to long-term condition work. Practice nurses' accounts suggested a sense of protectiveness about maintaining boundaries around established remits of managing long-term conditions; general practitioners, having devolved much of the care of long-term conditions to nurses, were keen to retain their positions as gatekeepers to resources. Perceptions of shifts of professional roles, new ways of working and how they are valued form a relevant contextual element to the introduction of telehealth interventions. A pre-emptive view and response to how professionals understand and approach increasingly complex and multi-faceted roles within primary care is likely to prepare and facilitate the introduction and integration of telehealth innovations into existing patient services.

Segrelles-Calvo, G., Lopez-Padilla, D. et de Granda-Orive, J. I. (2016). "Pros and Cons of Telemedicine in the Management of Patients with Chronic Respiratory Diseases." Arch Bronconeumol **52**(12): 575-576.

Sharma, U. et Clarke, M. (2014). "Nurses' and community support workers' experience of telehealth: a longitudinal case study." BMC Health Serv Res **14**: 7.
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> Background: Introduction of telehealth into the healthcare setting has been recognised as a service that might be experienced as disruptive. This paper explores how this disruption is experienced. Methods: In a

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longitudinal qualitative study, we conducted focus group discussions prior to and semi structured interviews post introduction of a telehealth service in Nottingham, U.K. with the community matrons, congestive heart failure nurses, chronic obstructive pulmonary disease nurses and community support workers that would be involved in order to elicit their preconceptions and reactions to the implementation. Results: Users experienced disruption due to the implementation of telehealth as threatening. Three main factors add to the experience of threat and affect the decision to use the technology: change in clinical routines and increased workload; change in interactions with patients and fundamentals of face-to-face nursing work; and change in skills required with marginalisation of clinical expertise. Conclusion: Since the introduction of telehealth can be experienced as threatening, managers and service providers should aim at minimising the disruption caused by taking the above factors on board. This can be achieved by employing simple yet effective measures such as: providing timely, appropriate and context specific training; provision of adequate technical support; and procedures that allow a balance between the use of telehealth and personal visit by nurses delivering care to their patients.

Sinclair, C., Holloway, K., Riley, G., et al. (2013). "Online mental health resources in rural Australia: clinician perceptions of acceptability." <u>J Med Internet Res</u> **15**(9): e193.

BACKGROUND: Online mental health resources have been proposed as an innovative means of overcoming barriers to accessing rural mental health services. However, clinicians tend to express lower satisfaction with online mental health resources than do clients. OBJECTIVE: To understand rural clinicians' attitudes towards the acceptability of online mental health resources as a treatment option in the rural context. METHODS: In-depth interviews were conducted with 21 rural clinicians (general practitioners, psychologists, psychiatrists, and clinical social workers). Interviews were supplemented with rural-specific vignettes, which described clinical scenarios in which referral to online mental health resources might be considered. Symbolic interactionism was used as the theoretical framework for the study, and interview transcripts were thematically analyzed using a constant comparative method. RESULTS: Clinicians were optimistic about the use of online mental health resources into the future, showing a preference for integration alongside existing services, and use as an adjunct rather than an alternative to traditional approaches. Key themes identified included perceptions of resources, clinician factors, client factors, and the rural and remote context. Clinicians favored resources that were user-friendly and could be integrated into their clinical practice. Barriers to use included a lack of time to explore resources, difficulty accessing training in the rural environment, and concerns about the lack of feedback from clients. Social pressure exerted within professional clinical networks contributed to a cautious approach to referring clients to online resources. CONCLUSIONS: Successful implementation of online mental health resources in the rural context requires attention to clinician perceptions of acceptability. Promotion of online mental health resources to rural clinicians should include information about resource effectiveness, enable integration with existing services, and provide opportunities for renegotiating the socially defined role of the clinician in the eHealth era.

Tan, L., Hu, W. et Brooker, R. (2014). "Patient-initiated camera phone images in general practice: a qualitative study of illustrated narratives." <u>Br J Gen Pract</u> **64**(622): e290-294.

BACKGROUND: Camera phones have become ubiquitous in the digital age. Patients are beginning to bring images recorded on their mobile phones to share with their GP during medical consultations. AIM: To explore GP perceptions about the effect of patient-initiated camera phone images on the consultation. DESIGN AND SETTING: An interview study of GPs based in rural and urban locations in Australia. METHODS: Semi-structured telephone interviews with nine GPs about their experiences with patient-initiated camera phone images. RESULTS: GPs described how patient-initiated camera phone photos and videos contributed to the diagnostic process, management and continuity of care. These images gave GPs in the study additional insight into the patient's world. Potential harm resulting from inappropriate use of camera phones by patients was also identified. CONCLUSION: Patient-initiated camera phone images can empower patients by illustrating their narratives, thus contributing to improved communication in general practice. Potential harm could result from inappropriate use of these images. GPs shown images on patients' camera phones should make the most of this opportunity for improved understanding of the patient's world. There are however, potential medicolegal implications such as informed consent, protection of patient and doctor privacy, and the risk of misdiagnosis.

Tonn, P., Reuter, S. C., Kuchler, I., et al. (2017). "Development of a Questionnaire to Measure the Attitudes of Laypeople, Physicians, and Psychotherapists Toward Telemedicine in Mental Health." <u>JMIR Ment Health</u> **4**(4): e39.

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BACKGROUND: In the field of psychiatry and psychotherapy, there are now a growing number of Web-based interventions, mobile phone apps, or treatments that are available via remote transmission screen worldwide. Many of these interventions have been shown to be effective in studies but still find little use in everyday therapeutic work. However, it is important that attitude and expectation toward this treatment are generally examined, because these factors have an important effect on the efficacy of the treatment. To measure the general attitude of the users and prescribers toward telemedicine, which may include, for instance, Web-based interventions or interventions through mobile phone apps, there are a small number of extensive tests. The results of studies based on small groups of patients have been published too, but there is no useful short screening tool to give an insight into the general population's attitude. We have developed a screening instrument that examines such attitude through a few graded questions. OBJECTIVE: This study aimed to explore the Attitude toward Telemedicine in Psychiatry and Psychotherapy (ATiPP) and to evaluate the results of general population and some subgroups. METHODS: In a three-step process, the questionnaire, which is available in three versions (laypeople, physicians, and psychologists), was developed. Afterwards, it was evaluated by four groups: population-representative laypeople, outpatients in different faculties, physicians, and psychotherapists. RESULTS: The results were evaluated from a total of 1554 questionnaires. The sample population included 1000 laypeople, 455 outpatients, 62 physicians, and 37 psychotherapists. The reliability of all three versions of the questionnaire seemed good, as indicated by the Cronbach alpha values of .849 (the laypeople group), .80 (the outpatients' group), .827 (the physicians' group), and .855 (the psychotherapists' group). CONCLUSIONS: The ATiPP was found to be useful and reliable for measuring the attitudes toward the Web-based interventions in psychiatry and psychotherapy and should be used in different studies in this field in the future to evaluate and reflect the attitude of the participants.

Turner, J., Brown, J. C. et Carpenter, D. T. (2018). "Telephone-based CBT and the therapeutic relationship: The views and experiences of IAPT practitioners in a low-intensity service." J Psychiatr Ment Health Nurs **25**(5-6): 285-296.

WHAT IS KNOWN ON THE SUBJECT: There is a move towards the use of new ways of delivering mental health care, particularly via an increased use of telephone therapies. Although some studies have noted the advantages of telephone-delivered therapies (e.g., removing access barriers) and reported on equivalent therapeutic effects when compared to face-to-face, there are concerns about how telephone-based therapy adversely affects the therapeutic relationship. WHAT THE PAPER ADDS TO EXISTING KNOWLEDGE: It contributes new knowledge regarding psychological practitioners' experience and views about using telephone-based therapies and how this affects the therapeutic relationship. WHAT ARE THE IMPLICATIONS FOR PRACTICE: This paper provides data about the new practitioner workforce (IAPT Psychological Wellbeing Practitioners) and adds to a growing area of research regarding their clinical role. It has relevance for mental health nursing, because health services internationally and across the professions are exploring how telehealth can improve health care. This paper suggests that mental health services need to focus on what type of therapeutic relationship their practice facilitates and on offering transparency to service users. It concludes that telephone work in IAPT can accommodate a working alliance, but not other types of therapeutic relationship, which practitioners and service users hoped for. Services need to focus on what facilitates and inhibits deeper therapeutic closeness and connection. ABSTRACT: Introduction Over-the-telephone (OTT)-delivered psychological therapies as an alternative method to face-to-face (F2F) are becoming more prevalent in mental health care. Research suggests a range of benefits of OTT use in therapy, but there are growing concerns about its consequences for the therapeutic relationship. This paper presents new knowledge regarding psychological practitioners' experience and views of OTT work and its potential effects on the therapeutic relationship in the context of the UK's Increasing Access to Psychological Therapy (IAPT) programme. Aim This paper presents IAPT practitioners' experiences and views of OTT work and its potential effects on the therapeutic relationship. Methods Completed questionnaires (exploring OTT versus F2F work) which were distributed to IAPT practitioners revealed a concern about the therapeutic relationship in OTT. To explore this further, nine in-depth semi-structured interviews with PWPs were conducted and the findings from this qualitative study are reported here. Results Practitioners noted OTT use facilitated access and flexibility for service users; however, they expressed some concern over the adverse effect of OTT on the therapeutic relationship. Discussion Although a working alliance was possible OTT, this research suggests the type of therapeutic relationship formed OTT in a "low contact-high volume" service such as IAPT needs to be better defined. By addressing this, dissonance which might arise between practitioner aims and the aims of IAPT can be reduced. This research also contributes to wider debates regarding mental health care and its provision in the UK. Implications for practice This paper concludes that

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mental health services need to focus on what type of therapeutic relationship their practice facilitates and to offer transparency to service users. The findings suggest that telephone work in IAPT can accommodate a working alliance, but not other types of therapeutic relationship, which practitioners and service users hoped for. Services need to offer a more nuanced understanding of the concept of a therapeutic relationship and focus on what facilitates and inhibits deeper therapeutic closeness and connection.

van Gaalen, J. L., van Bodegom-Vos, L., Bakker, M. J., et al. (2016). "Internet-based self-management support for adults with asthma: a qualitative study among patients, general practitioners and practice nurses on barriers to implementation." BMJ Open **6**(8): e010809.

OBJECTIVES: The aim of this study was to explore barriers among patients, general practitioners (GPs) and practice nurses to implement internet-based self-management support as provided by PatientCoach for asthma in primary care. SETTING: Primary care within South Holland, the Netherlands. PARTICIPANTS: Twenty-two patients (12 women, mean age 38 years), 21 GPs (6 women, mean age 52 years) and 13 practice nurses (all women, mean age 41 years). DESIGN: A qualitative study using focus groups and interviews. OUTCOMES: Barriers as perceived by patients, GPs and practice nurses to implementation of PatientCoach. METHODS: 10 focus groups and 12 interviews were held to collect data: 4 patient focus groups, 4 GP focus groups, 2 practice nurse focus group, 2 patient interviews, 5 GP interviews and 5 practice nurse interviews. A prototype of PatientCoach that included modules for coaching, personalised information, asthma self-monitoring, medication treatment plan, feedback, e-consultations and a forum was demonstrated. A semistructured topic guide was used. Directed content analysis was used to analyse data. Reported barriers were classified according to a framework by Grol and Wensing. RESULTS: A variety of barriers emerged among all participant groups. Barriers identified among patients include a lack of a patient-professional partnership in using PatientCoach and a lack of perceived benefit in improving asthma symptoms. Barriers identified among GPs include a low sense of urgency towards asthma care and current work routines. Practice nurses identified a low level of structured asthma care and a lack of support by colleagues as barriers. Among all participant groups, insufficient ease of use of PatientCoach, lack of financial arrangements and patient characteristics such as a lack of asthma symptoms were reported as barriers. CONCLUSIONS: We identified a variety of barriers to implementation of PatientCoach. An effective implementation strategy for internet-based self-management support in asthma care should focus on these barriers.

Vest, B. M., Hall, V. M., Kahn, L. S., et al. (2017). "Nurse perspectives on the implementation of routine telemonitoring for high-risk diabetes patients in a primary care setting." Prim Health Care Res Dev **18**(1): 3-13.

Aims The purpose of this qualitative evaluation was to explore the experience of implementing routine telemonitoring (TM) in real-world primary care settings from the perspective of those delivering the intervention; namely the TM staff, and report on lessons learned that could inform future projects of this type. BACKGROUND: Routine TM for high-risk patients within primary care practices may help improve chronic disease control and reduce complications, including unnecessary hospital admissions. However, little is known about how to integrate routine TM in busy primary care practices. A TM pilot for diabetic patients was attempted in six primary care practices as part of the Beacon Community in Western New York. METHODS: Semi-structured interviews were conducted with representatives of three TM agencies (n=8) participating in the pilot. Interviews were conducted over the phone or in person and lasted ~30 min. Interviews were audio-taped and transcribed. Analysis was conducted using immersion-crystallization to identify themes. Findings TM staff revealed several themes related to the experience of delivering TM in real-world primary care: (1) the nurse-patient relationship is central to a successful TM experience, (2) TM is a useful tool for understanding socio-economic context and its impact on patients' health, (3) TM staff anecdotally report important potential impacts on patient health, and (4) integrating TM into primary care practices needs to be planned carefully. CONCLUSIONS: This qualitative study identified challenges and unexpected benefits that might inform future efforts. Communication and integration between the TM agency and the practice, including the designation of a point person within the office to coordinate TM and help address the broader contextual needs of patients, are important considerations for future implementation. The role of the TM nurse in developing trust with patients and uncovering the social and economic context within which patients manage their diabetes was an unexpected benefit.

Wade, V. A., Taylor, A. D., Kidd, M. R., et al. (2016). "Transitioning a home telehealth project into a sustainable, large-scale service: a qualitative study." BMC Health Serv Res **16**: 183.

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BACKGROUND: This study was a component of the Flinders Telehealth in the Home project, which tested adding home telehealth to existing rehabilitation, palliative care and geriatric outreach services. Due to the known difficulty of transitioning telehealth projects services, a qualitative study was conducted to produce a preferred implementation approach for sustainable and large-scale operations, and a process model that offers practical advice for achieving this goal. METHODS: Initially, semi-structured interviews were conducted with senior clinicians, health service managers and policy makers, and a thematic analysis of the interview transcripts was undertaken to identify the range of options for ongoing operations, plus the factors affecting sustainability. Subsequently, the interviewees and other decision makers attended a deliberative forum in which participants were asked to select a preferred model for future implementation. Finally, all data from the study was synthesised by the researchers to produce a process model. RESULTS: 19 interviews with senior clinicians, managers, and service development staff were conducted, finding strong support for home telehealth but a wide diversity of views on governance, models of clinical care, technical infrastructure operations, and data management. The deliberative forum worked through these options and recommended a collaborative consortium approach for large-scale implementation. The process model proposes that the key factor for large-scale implementation is leadership support, which is enabled by 1) showing solutions to the problems of service demand, budgetary pressure and the relationship between hospital and primary care, 2) demonstrating how home telehealth aligns with health service policies, and 3) achieving clinician acceptance through providing evidence of benefit and developing new models of clinical care. Two key actions to enable change were marketing telehealth to patients, clinicians and policy-makers, and building a community of practice. CONCLUSIONS: The implementation of home telehealth services is still in an early stage. Change agents and a community of practice can contribute by marketing telehealth, demonstrating policy alignment and providing potential solutions for difficult health services problems. This should assist health leaders to move from trials to large-scale services.

Walthouwer, M. J. L., Oenema, A., Soetens, K., et al. (2017). "Implementation of web-based interventions by Dutch occupational health centers." Health Promot Int **32**(5): 818-830.

The aim of this qualitative study was to identify barriers and facilitators to the adoption and particularly the implementation of a web-based computer-tailored obesity prevention intervention by occupational health centers. Participants were directors of Dutch occupational health centers who had adopted and implemented the intervention for the corresponding efficacy study (n = 8) as well as non-adopters (n = 12). Individual semi-structured interviews were carried out to study barriers and facilitators related to the intervention, the user, the organization, and the socio-political environment. All interviews were carried out by telephone, audio-recorded and transcribed verbatim. The transcripts were analyzed using a directed-content approach and coded by two persons. There were important differences in perceptions between adopters and non-adopters, particularly on barriers and facilitators related to the intervention and the personal beliefs of the implementer. The relative advantages of the intervention were considered to be most important. Participants also indicated that their personal attitudinal and self-efficacy beliefs influenced their implementation efforts. Regarding the organization, the possibilities to increase profits and integrate the intervention within the organization were considered to be important facilitators for the implementation. Participants mentioned few implementation barriers and facilitators related to the socio-political environment. Strategies to improve the implementation of web-based computer-tailored interventions by occupational health centers should be tailored to implementers' unique perceptions and particularly address the perceived advantages and disadvantages of the intervention, attitudinal and self-efficacy beliefs, and the potential to increase organizations' profits and competitiveness.

Wilhelmsen, M., Hoifodt, R. S., Kolstrup, N., et al. (2014). "Norwegian general practitioners' perspectives on implementation of a guided web-based cognitive behavioral therapy for depression: a qualitative study." J Med Internet Res **16**(9): e208.

BACKGROUND: Previous research suggests that Internet-based cognitive behavioral therapy (ICBT) has a positive effect on symptoms of depression. ICBT appears to be more effective with therapist support, but it is unclear what this support should comprise. General practitioners (GPs) have positive attitudes toward ICBT. However, ICBT is rarely used in regular care in general practice. More research is warranted to integrate the potential of ICBT as part of regular care. OBJECTIVE: The aim of this study was to explore aspects perceived by GPs to affect the implementation of guided ICBT in daily practice. Understanding their perspectives may contribute to improving the treatment of depression in the context of general practice. METHODS: A training

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package (3-day course) introducing a Norwegian translation of the ICBT program MoodGYM was developed and presented to GPs in Norway. Following training, GPs were asked to include guided ICBT in their regular care of patients with symptoms of depression by providing brief, face-to-face follow-up consultations between modules. We interviewed 11 GPs who had taken the course. Our interview guide comprised open questions that encouraged GPs to frame their responses using examples from their experiences when implementing ICBT. Thematic analysis was chosen to explore patterns across the data. RESULTS: An overall belief that ICBT would benefit both the patients' health and the GPs' own work satisfaction prompted the GPs to take the ICBT course. ICBT motivated them to invest time and effort in improving treatment. The most important motivating aspects in MoodGYM were that a program based on cognitive behavioral therapy could add a structured agenda to their consultations and empower depressed patients. Organizational aspects, such as a lack of time and varied practice, inhibited the use of ICBT. Inadequate knowledge, recalling the program, and changing own habits were also challenging. The GPs were ambivalent about whether ICBT had a negative impact on the doctor-patient interaction in the module follow-ups. Generally, GPs made an effort to recommend MoodGYM, but the expected module follow-ups were often not provided to patients and instead the GPs returned to standard treatment. CONCLUSIONS: GPs' feedback in the present study contribute to our understanding of the challenges of changing treatment for depression. Our findings indicated that recommending ICBT could add to the GP's toolkit. Offering training and highlighting the following aspects may increase recommendation of ICBT by GPs: (1) ICBT is theory-based and credible, (2) ICBT increases the GPs' work satisfaction by having a tool to offer, and (3) ICBT facilitates empowerment of patients in their own health. In addition, the present study also indicated that complex aspects must be accommodated before module follow-ups can be incorporated into GPs' treatment of depression.

Williamson, S., Beaver, K., Gardner, A., et al. (2018). "Telephone follow-up after treatment for endometrial cancer: A qualitative study of patients' and clinical nurse specialists' experiences in the ENDCAT trial." Eur J Oncol Nurs **34**: 61-67.

PURPOSE: Endometrial cancer is the sixth most common female cancer worldwide. There is little evidence that routine hospital surveillance increases survival or decreases morbidity following treatment. Gynaecology Oncology clinical nurse specialists (CNSs) are ideally placed to provide the care, information and support to enable women with a gynaecological cancer to self-manage and live well. A multi-centre randomised controlled trial (RCT) compared hospital follow-up (HFU) with telephone follow-up (TFU) by CNSs. The structured telephone intervention focused on information provision to meet patients psychosocial and information needs. This study aimed to explore the views of women who had received TFU and the CNS's who had delivered the service. METHOD: A qualitative study to complement the RCT using semi-structured interviews was conducted. Twenty-five patients were randomly selected from participants in the TFU arm stratified by study site. Seven CNSs were interviewed. RESULTS: Patient and CNS regarded TFU positively; Three themes emerged from the patient interviews; Convenient Care, Discrete Personalised Care, Confidence and Reassurance. Themes arising from the CNS interviews were Patient Centred Care, Holistic Care and, Confidence and Skills. Patients found that TFU with CNS's was convenient and enabled discussion of issues and information provision at time-points relevant to them. The CNS's found the structured format of TFU enabled them to utilise their skills and knowledge to identify and meet patients holistic needs. CONCLUSIONS: Alternative models of care such as TFU provided by CNSs provides the care, information and support to enable women treated for endometrial cancer to self-manage and live well.

Woodward, M. A., Ple-Plakon, P., Blachley, T., et al. (2015). "Eye care providers' attitudes towards tele-ophthalmology." Telemed J E Health **21**(4): 271-273.

BACKGROUND: The rapid rise of e-health and remote care systems will likely change the practice patterns of ophthalmologists. Although telemedicine practices are thriving in many specialties of medicine, telemedicine for ophthalmology has been limited primarily to asynchronous care for diabetic retinopathy. The goal of this research was to evaluate perspectives on and familiarity with telemedicine among eye care providers at a large tertiary-care medical center via an anonymous, descriptive survey. RESULTS: In total, 58 eye care physicians completed surveys (response rates of 86% for physicians-in-training and 49% for faculty physicians, respectively). Although a majority of both faculty and physicians-in-training were willing to participate in telemedicine services, trainees were more likely to be willing to interpret photographs than faculty (p=0.04). Most respondents (71%) indicated that they did not use telemedicine. Over half had received photographs (via phone or e-mail) for interpretation from referring physicians (54%) or patients (56%) within the past 3 months. A majority of providers (82%) would be willing to participate in telemedicine

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for consultations and for interpreting photographs, but a majority (59%) had low confidence in remote care for providing an opinion on patient care. CONCLUSIONS: Most eye care providers viewed telemedicine as part of the future of eye care but were concerned about the use of telemedicine. Although most providers did not practice telemedicine, over half of them were comfortable managing eye care consultations (including patients' photographs) via the Internet.

Zhang, Y. et Koch, S. (2015). "Mobile health apps in Sweden: what do physicians recommend?" Stud Health Technol Inform **210**: 793-797.

BACKGROUND: Currently over 50,000 mobile health apps are available worldwide. In general, they are considered as innovations potentially delivering benefits to patients. Physicians are considered as potential channels to disseminate these innovations to patients. However, physicians' behavior in this regard has not been studied. OBJECTIVES: To capture physicians' attitudes towards recommending health apps to patients and to describe factors influencing physicians' behavior, taking the specifics of an early adopter country, Sweden, into account. METHODS: Diffusion of Innovation theory, the Health App Maturity Model and the Six Hurdles Model were used to construct a web-based survey that was answered by 44 Swedish physicians. Survey results were followed up with 2 individual interviews. Descriptive statistics were used for quantitative data analysis and recursive abstraction for qualitative data analysis. RESULTS: Only a small group of physicians currently recommend mobile health apps to their patients. However, most physicians have a positive attitude and perceive improvement of patients' self-management ability as main benefit of health apps. Main perceived weaknesses include the lack of evidence-based content and lack of multi-language support. Regulation of health apps under the Medical Device Directive is asked for to assure quality and patient safety. CONCLUSION: Innovators and early adopters play an important role in the diffusion of mobile health apps. Interpersonal communication is seen as the most effective way for physicians gaining information and also motivates them to recommend mobile health apps to their patients. Physicians' knowledge about certified websites to ensure quality is however low.

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