Multiprofessional Group Practices Generate Gains in Terms of Productivity and Expenditures

Results of the Evaluation of Multidisciplinary Group Practices (MGP), Health Care Networks (HCN) and Health Care Centers (HCC) Participating in Experiments with New Modes of Remuneration (ENMR)

Julien Mousquès (Irdes), in collaboration with Fabien Daniel (Irdes)

What are the impacts of multiprofessional group practice in the three types of health care facility (multidisciplinary group practices, MGP), (health care networks, HCN) and health care centers, HCC) having participated in the Experiments with New Modes of Remuneration (ENMR) between 2010 and 2014? Are general practitioners working in ENMR sites more active and productive than the others? Do they have similar practice structures? Do their patients use the different categories of ambulatory care more or less frequently? Are their medical expenditures lower or higher? Are the results homogeneous or heterogeneous between the different types of sites participating in ENMR?

These questions are adressed in this fifth publication in a series evaluating multiprofessional group practices in health centers having participated in ENMR. The quantitative evaluation analyses measuring the impact of multiprofessional group practice on health care activities and services are based on a quasi experimental design.

ther than the greater attractivity for health professionals tested in a previous study (Chevillard *et al.*, 2014), the interest in supporting the development of primary care health structures is based on the hypothesis that it will lead to an improvement in health care activities and services (Afrite *et al.*, 2014). The study was conducted on two main dimensions: in a first phase, activity, productivity and expenditures asso-

ciated with health care and services were analysed using a constant comparative analysis method; in a second phase, the quality of health care and services delivered were analysed, the results of which will be presented in the following edition of *Issues in Health Economics*.

Multiprofessional group practice implies productivity gains due to economies of scope and scale related to the degree of

integration between health professionals belonging to the same or different disciplines (Mousquès, 2011). These economies are the result of reduced transaction costs between general practitioners and between general practitioners and para-medical professionals. They are also the result of reduced health care delivery costs due to the use of common production factors. Finally, they result from the optimisation of comple-

CONTEXT

IRDES was charged with evaluating the Experiments with New Modes of Remuneration (ENMR) for multiprofessional group practices from 2009-2012. This article, based on a more in-depth analysis (Mousquès, Bourgueil *et al.*, 2014), is the fifth in the series. The first presented evaluation aims and methodology in general (Afrite *et al.*, 2013), the second, the geographic distribution of sites and the impact on on the density of general practitioners (Chevillard *et al.*, 2013) and the third, using the results of a qualitative survey, the different forms of multiprofessional working and the role of ENMR in their development (Fournier *et al.*, 2014), and the fourth a typology of ENMR sites based on organisational and functional characteristics (Afrite et Mousquès, 2014).

mentaries and substitutions between the referring general practitioner (GP) and the other GPs and between GPs and paramedical staff. Production efficiency gains thus lead to a lower use of specialised care and lower associated costs without generating a notable increase in primary care expenditures (Brilleman *et al.*, 2014; Martin *et al.*, 2011; Shi, 2012; Strumpf *et al.*, 2014).

In order to specifically measure production efficiency gains, GP activity, patients' use of health care and ambulatory care expenditures in health care facilities participating in the Experiments with New Modes of Remuneration (ENMR) were compared with control sites over a period of four years. For each site, the territorial context (Chevillard *et al.*, 2014) the type of multiprofessional group practice according to a five class typology indicating degree of integration (Insert page 5), and the active patient list characteristics was also studied.

The most productive multiprofessional structures

The analyses were conducted on a sub-sample of 88 ENMR sites, of which 25 health care centers (HCC) [in French, *"centers de santé"*], 54 multidisciplinary group practices (MGP) [in French, *"maisons de santé"*] and 9 health care networks

(HCN) [in French, *"pôles de santé"*][1], counting a total of 430 general practitioners which were compared to 1,124 solo practice GPs acting as controls.

An equivalent number of days worked per GP in MGP, HCN and solo practices, fewer in HCC.

The number of days worked per GP are similar in MGP, HCN and control sites with slightly fewer in HCC, in terms of equivalent Full Time Equivalent (FTE) activity, if not less for HCC. In the first phase, the descriptive statistics are presented in average annual values for the period 2009-2012 using the following main indicators:
- The *inputs*: the number of general practitioners and number of days worked per GP during the course of the year expressed in FTE[2]
- The *outputs*: activity measured according to three criteria: the active patient list; that is to say the number of patients aged 16 and over received at least once for a general medical procedure, among which the number of patients registered with a preferred GP, and finally the number of consultations, visits and technical acts administered to these patients
- Productivity: which consists in establishing the relationship between *outputs* and *inputs*

Considerably lower working time in HCC compared with MGP and HCN

The average FTE GPs in HCC was 3.7, taking into account that the annual average number of working days per GP in HCC is considerably lower than for control GPs in private practices (0.63 *versus* 0.90) due to the fact that the majority of GPs work part time. The number of patients aged 16 and over received per FTE (active patient list), the number of patients registered (preferred GP) per FTE and the number of medical acts delivered to patients in the active patient file or registered with a GP per FTE are lower in HCC than their control sites, especially in "associative" HCC (class 1). The activity structure is also very different in HCC where GPs perform few home visits but considerably more technical acts. However, for the patients registered with a preferred GP, the number of

general medical procedures performed per year are equivalent to those performed by control GPs.

In the MGP and HCN, the "less well integrated" HCN (class 3) count 4.3 FTE GPs against 3.3 in "less well integrated" MGP (class 4) and 3.5 in the "better integrated" MGP (class 5) [Table 1]. The average FTE per GP working in MGP or HCN is homogeneous according to typology class (0.90) and similar to that of control GPs. However, the proportion of women GPs is higher in MGP or HCN compared to private practices in the control group (31% *vs* 23%) and the average age of GPs is also lower (48 *vs* 54 years old). Compared with the control group GPs, activity per FTE GPs is quasi equivalent, if not slightly lower, in MGP and HCN. Activity per FTE GPs is higher in class 5 MGP (better integrated) and 4 (poorly integrated) compared with class 3 HCN (less well integrated). The difference is particularly noticeable for patients registered with a preferred GP, the number of acts delivered and more especially, home visits. They perform slightly fewer home visits but a higher number of technical acts than the control GPs. Finally, for the patients registered with a preferred GP, the annual number of general medical acts is slightly inferior or equivalent to the number performed by control GPs.

A globally superior productivity, especially in the better integrated MGP, which is also more efficient technically, even before participation in the ENMR

In a second phase, the analysis of productivity over the period 2009-2012 was based on a comparison of average activity between sites participating in ENMR and

---

[1] Primary care team can be split into three categories: multidisciplinary group practices (MGP) where all professionals work in the same location/setting. They are called in France "*maison de santé*" and correspond to patient-centered medical home in the US. The second category are Primary Health care networks (HCN) [called in France "*pôle de santé*" with at least two different settings but with large variation in the latter number and distances]. In both cases, health professional are self-employed. This is not the case of the third category of primary care team called "health care center" (HCC) where health professionals are salaried.

[2] The number of days worked in MGP and HCN and their control sites is estimated from the days on which medical acts here delivered by the general practitioner identified in National Insurance data. A minimum number of 10 acts per day was retained as a day's work.

control GPs. To achieve this, the main explanatory variable was the number of days worked by GPs on site during the course of the year, all other things being equal. The results of the modelling show that MGP and HCN are the most productive. In effect, all other things being equal, general medicine activity is higher than that of control GPs in terms of active patient list (13.4%), the number of patients registered (15.6%) and, more modestly, the number of acts delivered (2%). If the results are similar between MGP and HCN, whatever typology class, only the better integrated MGP (class 5) perform a significantly higher number of acts than

the control GPs. On the contrary, in the HCC, all other things being equal, the results are more contrasted. Additional activity only concerns "municipal" HCC (class 2): 15% for the active patient file and 11.3% for patients registered with a preferred GP.

Finally, we estimated the degree of technical or productive efficiency, which measures the gap between observed and potential productivity based on the stochastic production frontier econometric method. The models showed that the HCC are less efficient from a technical point of view compared to their control sites. On the

other hand, the MGP and HCN, whatever their class, are more efficient in terms of active patient list size. However, only the better integrated class 5 MGP were as efficient as their control site GPs in terms of numbers of registered patients. Finally, the MGP and HCN were less efficient in terms of the number of acts of general medicine delivered, though principally in classes 3 and 4.

These results confirm that group practices, through sharing patient care throughout the week, lead to an increase in daily activity, and from daily production, without reducing the relational continuity

T1

ENMR site general practitioners' activity (2009-2012)										
		Health care centers (HCC) (*Centers de santé*)				Multidisciplinary group practices or healthcare networks (MGP or HCN) (*Maisons* or *pôles de santé*)					
		Classe 1		Class 2		Class 3		Class 4		Class 5	
		Case n=10; N=40[a]	Control n=197; N=709[a]	Case n=16; N=63[a]	Control n=287; N=964[a]	Case n=9; N=36[a]	Control n=81; N=254[a]	Case n=19; N=76[a]	Control n=202; N=619[a]	Case n=35; N=140[a]	Control n=357; N=1,178[a]
		Average	Average	Average	Average	Average	Average	Average	Average	Average	Average
Activity per Full Time Equivalent (FTE) general practitioners											
Active patient list of patients aged 16 or over		504	1,280	1,355	1,491	1,044	1,350	1,168	1,386	1,184	1,242
Number of patients registered with a GP		353	821	538	806	644	719	700	786	768	770
Number of acts		2,948	5,575	5,046	6,183	4,963	5,785	5,425	5,957	6,464	5,976
Number of consultations		2,704	4,877	4,797	5,424	4,507	5,068	4,724	5,071	5,116	5,024
Number of visits		80	427	11	430	373	406	414	524	589	664
Number of technical acts		61	38	234	20	57	42	137	30	130	32
Inputs											
General practitioners (GP)	Number of FTE	3.8	0.8	3.7	0.9	4.3	0.9	3.3	0.9	3.5	0.9
	Number of FTE per GP	0.8	0.8	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Composition											
General practitioners	Women (%)	-	15.2	-	23.2	27.8	25.2	33.4	26.7	31.1	21.8
	Median age	-	52.9	-	53.1	48.9	52.7	49.1	54.7	47.9	54.3
		N=1,694; n=486[a] Marginal effect				N=2,303; n=703[a] Marginal effect					
Generalised linear models of activity (panel), *Ceteris paribus*: **input,** patient characteristics, year, surgery, environment											
Active patient file		0.012		**0.150***		**0.139***				**0.130***	
Patients registered with a GP		**0.045**		**0.114***		**0.158***				**0.155***	
General medical acts delivered		0.015		-0.014		0.007				**0.029***	
		N=1,694[a] Coefficient (case *vs.* control)				N=2,303[a] Coefficient (case *vs.* control)					
Stochastic frontier production and technical inefficiency modelisation, *Ceteris paribus*: **input,** patient characteristics, year, surgery, environment											
Active patient file		1.096***		0.235**		-0.349***				-0.418***	
Patients registered with a GP		3.202		-18.393		-0.332***				-0.467	
General medical acts delivered		-2.808		-7.221		0.219***				0.488***	

[a] Obs (N): number of observations over the period 2009-2012; Obs (n): number of individuals observed at least once (one year) over the period 2009-2012.
*** p<0.01; ** p<0.05; * p<0.1

Sources: National Health Insurance Inter-regime Information System database (*Système national d'information inter-régimes de l'Assurance maladie*, SNIIRAM, CNAMTS). Inter-regime consumption datamart (*Datamart de consommation inter-régimes*, DCIR), National Inter-regime information system for health professionals (*Système national inter-régimes pour les professionnels de santé*, SNIR-PS).

Exploitation: Irdes.

⌖ **Data available for download.**

with patients which remains equivalent between ENMR sites and their control sites (Mousquès, Bourgueil *et al.*, 2014).

Patients' health care expenditures lower in ENMR sites

The analyses of health care use and total ambulatory care expenditures per category of care were conducted using a sub-sample of 94 ENMR sites (55 MGP, 29 HCC, and 10 HCN) and their control sites for respectively 0.3 and 2.7 million patients (*cf.* Methods insert).

Annual average ambulatory care expenditures for patients registered with a preferred GP were lower in ENMR sites

First, the descriptive statistics are presented as an average annual value for the period 2009-2012. In addition to the total expenditures for ambulatory care, health care use and associated expenditures, the main indicators used were:
- Primary care: general medicine (general practitioners), expenditures only, nursing care and massage-physiotherapy, paramedical professions often associated in multiprofessional group practices
- Specialist care: rheumatology, endocrinology, cardiology, dermatology, gynecology, otorhinolaryngology (ORL), disciplines for which part of the care activity can be performed by general practitioners within the framework of a multiprofessional practice
- Medication and biology, which can be influenced by team work practice in that it can favour more economic prescription practices that are more homogeneous between practitioners

The descriptive statistics show that ambulatory care expenditures are globally lower for patients registered with an ENMR site GP (-9%). This difference is essentially explained by lower expenditures in specialised care and pharmacy. The percentage of individuals using specialised care in ENMR sites is thus lower, as are associated expenditures whatever the type of specialised care considered (rheumatology, endocrinology, cardiology, dermatology, gynecology, ORL). The same

T2

Health care use and expenditures for ENMR site patients and their control sites (2009-2012) by category of care and site status

a)

	Ambulatory	General practitioners	Specialists	Nursing care	Massage-physiotherapy	Biology	Pharmacy
Expenditures for patients using health care services in HCC							
HCC patients							
Average	1,447	131	228	172	381	150	574
Obs. (N)[a]	202,834	202,788	153,260	75,016	32,699	134,377	194,015
Obs. (n)[a]	85,518	85,493	72,020	42,521	20,732	64,526	82,492
Control patients							
Average	1,763	144	296	405	468	148	632
Obs. (N)[a]	2,964,219	2,963,994	2,316,925	667,130	587,895	1,981,519	2,881,230
Obs. (n)[a]	1,168,733	1,168,633	1,015,342	391,160	354,033	905,748	1,144,378
Expenditures for patients using health care services in MGP							
MGP patients							
Average	1,623	149	217	266	401	133	585
Obs. (N)[a]	563,924	563,828	400,910	227,246	102,503	373,617	547,102
Obs. (n)[a]	206,504	206,465	173,023	110,606	63,631	163,873	202,671
Control patients							
Average	1,706	149	240	311	416	135	634
Obs. (N)[a]	3,094,379	3,094,071	2,266,542	1,077,278	550,113	2,053,992	3,016,043
Obs. (n)[a]	1,163,920	1,163,793	983,691	551,753	341,376	911,334	1,143,166
Expenditures for patients using health care services in HCN							
HCN patients							
Average	1,730	135	291	442	419	140	607
Obs. (N)[a]	55,559	55,541	41,680	15,676	10,958	36,975	53,545
Obs. (n)[a]	22,319	22,314	19,062	8,572	6,835	17,473	21,814
Control patients							
Average	1,701	140	288	340	418	143	616
Obs. (N)[a]	361,817	361,790	270,226	100,408	65,716	242,158	352,088
Obs. (n)[a]	146,397	146,377	124,109	55,611	41,099	113,519	143,414

b) Results of the logistic models (probability of using health care) and linear models (log-expenditure)

Preferred GP site status (*ref.* control sites),
Ceteris paribus: input, patient characteristics, year, surgery, environment

			Ambulatory	General practitioners	Specialists	Nursing care	Massage-physiotherapy	Biology	Pharmacy
Health care centers	Class 1	OR[b]	---	---	0.708***	2.620***	1.402***	1.058***	0.557***
		ME[c]	-0.010***	0.009***	-0.016***	-0.047***	0.005***	0.024***	-0.015***
	Class 2	OR[b]	---	---	1.190***	2.695***	0.639***	1.254***	0.560***
		ME[c]	-0.023***	-0.028***	-0.028***	-0.180***	-0.026***	0.015***	-0.007***
Multidisciplinary group practices or healthcare networks	Class 3	OR[b]	---	---	0.939***	1.306***	1.122***	1.089***	0.762***
		ME[c]	-0.004***	-0.007***	-0.008***	0.024***	-0.005***	-0.012***	-0.012***
	Class 4	OR[b]	---	---	0.820***	1.582***	1.072***	1.064***	0.777***
		ME[c]	-0.008***	-0.004***	-0.019***	-0.032***	-0.014***	-0.010***	-0.022***
	Class 5	OR[b]	---	---	0.757***	2.525***	0.959***	0.994	0.979
		ME[c]	-0.007***	0.014***	-0.033***	-0.005***	-0.012***	-0.010***	-0.006***
Obs. (N)[a]			7,394,872	7,394,098	5,554,025	2,240,563	1,379,757	4,906,234	7,191,654
Obs. (n)[a]			2,856,554	2,856,205	2,437,615	1,196,274	846,433	2,220,424	2,799,776

[a] Obs (N): number of observations over the period 2009-2012.
  Obs (n): number of individuals observed at least once (one year) over the period 2009-2012.

[b] Probability of using (odds ratio).

[c] Log-expenditure (marginal effect). *** p<0.01; ** p<0.05; * p<0.1

Sources: National Health Insurance Inter-regime Information System database (*Système national d'information inter-régimes de l'Assurance maladie*, SNIIRAM, CNAMTS). Inter-regime consumption datamart (*Datamart de consommation inter-régimes*, DCIR), National Inter-regime information system for health professionals (*Système national inter-régimes pour les professionnels de santé*, SNIR-PS).

Exploitation: Irdes.

Data available for download.

I

The five class typology of MGP, HCN and HCC

The typology based on a sub-sample of 128 sites (of the 150 studied) distinguishes two classes of HCC and three classes of MGP and HCN[1]. The HCC, MGP and HCN classes are differentiated in terms of degree of integration, that is to say, the pooling of resources (premises, health professionals or not, equipment) and activity accompanied or not by coordination between professionals, multiprofessional cooperation and information sharing including computerisation. The two HCC classes, "associative" and "municipal" are distinguished from the MGP and HCN by their status, age, accessibility but also by their size, professional composition and level of equipment as well as by the range of the roles developed by the professionals and their cooperation. They also differ by the third-party payer system for complementary health insurance practiced, the range of nursing roles and computerisation.

- **Class 1**: health care centers (HCC) [in French, "*centers de santé*"] more frequently "associative", relatively old and more frequent multiprofessional cooperation and coordination than "*municipal*" centers.

- **Class 2**: health care centers (HCC) in the majority "municipal", older, and where the range of roles and functions performed by non medical professionals is more developed than in "*associative*" centers.

- **Class 3**: essentially made up of recently established and less well integrated health care networks (HCN) [in French "*pôles de santé*"].

- **Class 4**: in the majority, fairly recent and poorly integrated multidisciplinary group practices (MGP) [in French, "*maisons de santé*"].

- **Class 5**: in the majority, relatively recent and better integrated multidisciplinary group practices (MGP).

---

[1] For further details see Afrite and Mousquès, 2014.

applies for the use of health care services and pharmacy expenditures. The comparative differences with the control sites are in fact concentrated in HCC and MGP and do not concern HCN. These lower specialised care and pharmacy expenditures do not result in higher primary care expenditures. Expenditures are equivalent for general medicine, and if there is a higher use of nursing care and equivalent for massage-physiotherapy, expenditures for patients using health care services in MGP and HCC are always lower if not equivalent (Table 2a).

Ambulatory care expenditures are even lower in "integrated" MGP, HCN and HCC

Patients' health care use and ambulatory care expenditure models by category of care (Table 2b) confirm the results of the descriptive statistics, even if the extent of the difference is less considerable, all other things being equal. The average annual ambulatory care expenditures for patients registered with an ENMR site GP over the period 2009 to 2012 are lower than for patients registered with a control site GP by: -2% for the HCC (-1% for class 1 "associative centers", -2.3% for class 2 "municipal centers" and -0.7% for MGP and HCN (-0.4% for the "poorly integrated" class 3 HCN, -0.8% for "poorly integrated" class 4 MGP, -0.7% for the "better integrated" class 5 MGP).

The results concerning the average expenditures for general medicine are more heterogeneous: expenditures are higher in class 1 HCC (+0.8%), lower in class 2 HCC (-2.8%), lower in class 3 or 4 MGP and HCN (respectively -0.7% and -0.5%), and higher in class 5 MGP (+1.4%).

The probability of using nursing care is considerably higher in class 5 MGP and HCN (OR: 2,5) and in HCC (OR: 2.6) compared to the other two classes (OR: 1.5) and the control sites. Nursing care expenditures are higher in class 3 MGP and HCN (+2%), lower in class 4 MGP and HCN (-3.2%) and class 5 (-0.4%), very much lower in "associative" HCC (-5%) and even lower in "municipal" HCC (-18%).

The probability of using massage-physiotherapy is considerably higher in "associative" HCC (OR: 1.4) and lower in 'municipal' HCC (OR: 0,6) whereas it is quasi equivalent in MGP and HCN according to class (OR between 0.9 and 1.1). Expenditures are lower in "municipal" HCC (-2.6%), class 5 and 4 MGP and HCN (-1.2% and -1.4%) and, to a lesser extent, in class 3 MGP and HCN (-0.5%).

The probability of using specialised care is lower for patients using class 5 or 4 MGP (OR: 0.7 and 0.8), in class 1 HCC (OR: 0.7), higher in class 2 HCC (OR: 1.2). Specialised care expenditures are 3.2% lower for ENMR site patients using class 5 MGP and HCN, 2% lower in class 4, 0.8% lower in class 3, and respectively

M ETHOD

Activity: sample of ENMR sites per class

The analysis of activity, productivity and technical efficiency is based on comparisons between multiprofessional group practices (cases) and solo practices (controls). After eliminating non-respondents or extreme observations in terms of central variables (number of days worked, number of general practitioners), the sample was limited to: 88 case sites, 25 HCC (10 class 1 and 15 class 2 HCC) 54 MGP and 9 HCN (3 HCN, 3 MGP-HCN and 3 class 3 MGP; 17 class 4 MGP and 2 HCN; 33 class 5 MGP and 2 HCN), and 1,124 solo-practice GPs.

Expenditures: study populations and modes of constituting expenditure items

The results presented here for the period 2009-2012 is based on a sub-sample of 94 ENMR sites (29 HCC, 55 MGP and 10 HCN) for which control site GPs practicing in local control zones were constructed. The treatment and control populations were made up of health insurance beneficiaries having used general medicine services at least once during the course of a year over the period 2009-2012, registered with a GP working in one of the 94 ENMR sites or a local control zone. This represents a sample of 342,956 case patients-beneficiaries and 2,746,386 control patients observed at least once over the period concerned, for a total of 897,056 case observations over the total period and 7,071,270 control observations. The data used were health care expenditure reimbursements available in the DCIR of the SNIIRAM; that is to say expenditures reimbursed by the National Health Insurance for the period 2009-2012. The use of health care and expenditures were measured by grouping together acts, products and services according to main categories. The ambulatory care consumption categories more particularly observed, as well as their different levels of interaction were the following: a first category concerned practitioners (doctors, dentists and midwives) and for the doctors, general practitioners and specialists. For the specialists, the following disciplines were distinguished: pediatrics, gynaecology-obstetrics, medical gynecology, obstetric gynecology, cardiovascular specialists, endocrinology and metabolisms, otorhinolarinology, rheumatology, radiodiagnostics and medical imagery. A second category concerned paramedical staff: nurses, physiotherapists, chiropodists, orthoptists and speech therapists. A third category concerned goods (biology, pharmacy, devices, orthopedic and prosthetic devices and optical wear) and transport. Finally, health services and spa therapy were distinguished.

2.8% and 1.6% lower in "municipal" and "associative" HCC.

Finally patients using ENMR site GPs are more likely to consume fewer medications in MGP or HCN (OR: 0.8), especially in class 3 and 4 MGP and HCN (OR: 0.7), and also in HCC (OR 0.5). Associated pharmacy expenditures are also lower (-0.6% to -2.2%), more markedly so in class 4 MGP and HCN (-2.2%), compared with class 3 MGP and HCN (-1.2%) or class 5 (-0.6%), and (-0.6 %) for "municipal HCC" compared to "associative HCC" (-1.5%).

Savings are thus greater in MGP classes than HCN classes due to the more moderate expenditures in specialised care, and a higher use of nursing care and massage-physiotherapy. The "better integrated" class 5 MGP distinguish themselves by the greatly reduced expenditures in specialised care, and "less well integrated" class 4 facilities by a more marked reduction in pharmaceutical expenditures.

These results validate the hypothesis according to which multiprofessional integration in primary health care and services generates gains in efficiency in terms of ambulatory care expenditures compared with standard practice. The characteristics of physical proximity, co-location on the same premises associated with other dimensions of integration such multiprofessional coordination and cooperation are thus associated with lower ambulatory care expenditures.

* * *

For a given consultation quality and duration, and with limited clientele character-istics, we thus reveal a higher or equivalent productivity and lower expenditures for insured patients between multiprofessional group structures and solo-practices. According to a difference-in-differences analysis developed in the report (Mousquès, Bourgueil *et al.*, 2014) not presented here, these results are almost essentially due to the initial differences observed between multiprofessional group practices or not and are thus not directly related to participation in ENMR. In addition, even if these estimations were conducted on large patient samples, the number of sites per class remains modest, especially for the HCN and HCC classes.

The next article will focus on the quality of care and services delivered which will provide an overview of the impact of multiprofessional group practices in terms of efficiency. ◆

FOR FURTHER INFORMATION

- Afrite A., Bourgueil Y., Daniel F., Mousquès J. (2013). « L'impact du regroupement pluriprofessionnel sur l'offre de soins : objectifs et méthode de l'évaluation des maisons, pôles et centers de santé dans le cadre des nouveaux modes rémunération ». Irdes, *Questions d'économie de la santé* n° 189, juillet-août.
- Afrite A., Mousquès J. (2014). « Formes du regroupement pluriprofessionnel en soins de premiers recours. Une typologie des maisons, pôles et centers de santé participant aux Expérimentations des nouveaux modes de rémunération (ENMR) ». *Document de travail* Irdes, n° 62, octobre.
- Brilleman S.L., Gravelle H., Hollinghurst S., Purdy S., Salisbury C., Windmeijer F. (2014). "Keep it Simple? Predicting Primary Health Care Costs with Clinical Morbidity Measures". *Journal of Health Economics*, 35, pp. 109-122.
- Chevillard G., Mousquès J., Lucas-Gabrielli V., Bourgueil Y. (2013). « Répartition géographique des maisons et pôles de santé en France et impact sur la densité des médecins généralistes libéraux ». Irdes, *Questions d'économie de la santé* n° 190, septembre.
- Fournier C., Frattini M.O., Naiditch M., avec la contribution de Durand G. (2014). « Dynamiques et formes du travail pluriprofessionnel dans + maisons et pôles de santé ». Rapport Irdes n° 557, septembre.
- Martin S., Smith P.C., Dusheiko M., et al. (2011). *Do Quality Improvements in Primary Care Reduce Secondary Care Costs?* London: The Health Foundation, 58 p.
- Mousquès J. (2011). Le regroupement des professionnels de santé de premier recours : quelles perspectives économiques en termes de performance in Le métier de médecin, ed. Grignon M., *Revue Française des Affaires sociales*, n°2-3, pp. 254-275.
- Mousquès J., Daniel F. (2015). « L'impact de l'exercice regroupé pluriprofessionnel sur la qualité et l'efficience des pratiques des médecins généralistes. Résultats de l'évaluation des maisons, pôles et centers de santé participant à l'Expérimentation des nouveaux modes de rémunération (ENMR), Irdes, *Questions d'économie de la santé* à paraître.
- Mousquès J., Bourgueil Y. avec les contributions de Afrite A., Cartier T., Chevillard C., Couralet P.-E., Daniel F. et Lucas-Gabrielli V. (2014). « L'évaluation de la performance des maisons, pôles et centers de santé dans le cadre des Expérimentations des nouveaux modes de rémunération (ENMR) sur la période 2009-2012 ». Rapport de l'Irdes n° 559, décembre.
- Shi L. (2012). The impact of primary care: a focused review. Scientifica (Cairo),2012, article ID 432892, 22 p.
- Strumpf E., Ammi M., Diop M., Fiset-Laniel J., Tousignant P. (2014). "The Impacts of Team-Based Primary Care on Health Care Services Utilization and Costs: Quebec's Family Medicine Groups". Communication, Séminaire "Les Mardis de l'Irdes", Irdes, 1er juillet, Paris.