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An Evaluation of the Health Ageing and Retirement Project (PARI): Phase 1

Is it possible to Use Administrative Data to Identify Risks for Vulnerable Elders?

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The Health Ageing and Retirement Project (Programme d'Action pour une Retraite Indépendante), known as the Pari project, implemented by the Social Security Fund for Self-employed Workers (Régime Social des Indépendants, or RSI), is aimed at RSI contributors aged between 60 and 79. Using the RSI's medico-administrative documents, the plan aims to produce a diagnostic analysis of individual situations in order to detect economic, social, and health-related frailty and anticipate loss of autonomy, by providing coordinated solutions that are adapted to specific cases.

The Pari project's efficacy is primarily based on its ability to detect individual needs. This preliminary study aims to assess the effectiveness of the Pari plan's capacity to detect individual needs. Its objective is to assess to what extent 'target individuals' whose loss of autonomy could be anticipated thanks to a suitable service offering, are correctly identified using the Pari project's diagnostic tool. The preliminary results of the evaluation demonstrate that the project's detection system detected persons who had needs, particularly social ones, that were hitherto undetected. This evaluation study will need to be complemented by controlled experimentation aimed at analysing and ascertaining the effectiveness of the supportive initiatives implemented by the Pari plan.

The French legislation relating to Social Adaptation to an Ageing Population (Adaptation de la Société au Vieillissement, or ASV), which entered into force on 1 January 2016, introduced a series of measures with two principal objectives: anticipating the process of loss of autonomy and providing support to dependent elderly persons, as well as to their informal caregivers. Although the issues relating to the funding of dependency are subject to public debate (Bozio et al., 2016), prior anticipation of the process of loss of autonomy is an equally important strategic issue.

Since 2011, the main social protection schemes have been working together to implement social welfare initiatives coordinated around preventative measures that are designed to address the risks relating to ageing. The latter is based, in particular, on individual initiatives to assist fragile persons, via a global evaluation of their homecare needs and the introduction of personalised support schemes. This approach focuses on a personalised definition of the risk of loss of autonomy and goes beyond the usual limitations of preventative measures, in which subpopulations with the lowest levels of risk are often the most receptive to the messages and follow good practices. The aim is to

provide the appropriate solutions for specific cases, particularly with regard to high-risk populations that are not necessarily easily detectable.

The implementation of a coordinated initiative by the social security schemes means that a tool needs to be developed to diagnose individual risks and provide an appropriate service offering. A service offering for the elderly already exists, but in most cases it results from know-how accumulated over the years by developing the assistance provided by pension schemes to their contributors and associated beneficiaries. The efficacy of this assistance in terms of its ability to anticipate (avoid or slow down) the process of loss of autonomy has nonetheless never been empirically tested, although several initiatives are currently attempting to bridge these gaps. An essential issue, therefore, is the capacity to identify loss of autonomy on an individual basis. The focus of these policies lies in detecting individuals who might benefit from a specific services offering, but who, for the time being, are provided with a potentially inappropriate offering, or receive no assistance whatsoever.

The Pari plan: detecting frailty and anticipating loss of autonomy

Over recent years, the social protection schemes that have been developing methods for detecting individual risks based on their management file data have all used the term 'frailty' (the term 'fragile' elderly person is employed in the 'ASV' legislation concerning social adaptation to an ageing population), thereby adding a social dimension to a concept that originates in geriatric terminology (Sirven, 2013). Hence, each social protection scheme, via its 'pensions' branch, has its own method for assessing levels of 'frailty'. The Pari (Health Ageing and Retirement Project) project, implemented by the Social Security Fund for Self-employed Workers (RSI), is designed to assess individual situations and detect economic, social, and health-related frailty, and anticipate loss of autonomy by providing coordinated solutions that are adapted to an individual's specific circumstances. The programme is aimed at RSI contributors aged between 60 and 79 and involves: (i) identifying and detecting — in the population benefitting from the RSI's health cover — elderly persons who have one or more frailty criteria that could induce the risk of reversible loss of autonomy; (ii) assessing their health-related and medical-social needs; (iii) and offering this target population — working in conjunction with their GP or family doctor — specific solutions or service offerings provided either by the RSI or by other service providers operating in the person's local area who are capable of responding to their individual needs.

Hence the Pari project aims to detect individual risks and adopts a multidisciplinary approach to meeting the person's needs, combining social and medical factors in the form of a personalised service. The Pari project operates according to the hypothesis that detecting persons at risk of loss of autonomy based on data provided by the RSI, prior to any demand from the insured party — and implementing preventative initiatives and coordinating individual services with the aim of anticipating loss of autonomy — may also improve the RSI's management of resources for these beneficiaries. From this perspective, the Pari project is an initiative that is integral to the current debate about how to 'age well'. Our study evaluates the Pari project's detection of individuals: the approach mainly focuses on the efficacy of the detection of fragile persons, that is to say on the capacity of the Pari algorithm to detect, within a given population of insured persons, a number of individuals likely to benefit from a service offering that would be considered appropriate to their needs.

Source and method

The data was provided by the RSI's management files. The core sample comprised individuals aged 60 to 79 who benefit from the RSI's health cover (only the insured persons, not the associated beneficiaries) and whose quarterly contributions were mainly made to the RSI. For structural reasons (pensioners who have worked in the liberal professions are managed by the National Fund for Old-Age Pensions for the Liberal Professions (Caisse Nationale d'Assurance Vieillesse des Professions Libérales, or CNAVPL), the data extraction was limited to the professions of artisans and shopkeepers, and concerned pensioners, working individuals, and working pensioners. The data was extracted on 31 March 2015 and concerned 396,048 individuals (not known to be deceased in the survey year). The variables were established based on files recorded over the preceding 36 months, apart from the variables relating to welfare benefits provided by the RSI as part of the Specific Solidarity Allowance (Allocation de Solidarité Spécifique, or ASS), which related to only 27 months of the period running from 1 January 2013 to 31 March 2015.

The analysis of the determinants of those receiving ASS non-statutory benefits was conducted using an estimated logistic model for all of the individuals in the sample, distributed in age groups spanning five years (between 60 and 79 years old). The explained variable was given the value 1 if the individual already received this kind of benefit, otherwise the value is 0. The explained variables were mainly comprised of the new Pari' score or IMS' indicators (in which S' only relates to statutory benefits) of which it was composed, to which were added the person's gender, the year (2014 or 2015), and the fact that the individual was affiliated to one of the ten experimental RSI funds that had already implemented the Pari project. The model intended to quantify the effect of the Pari' score on the probability of benefiting from a non-statutory ASS service offering (Table 2).

The Pari methodology makes it difficult to evaluate its efficacy

The level of the risk of 'frailty' in the Pari project is established by producing a score (called the 'Pari score'), using an algorithm that combines a number of variables according to a predefined rule established by 'experts' (see inset on page 3). The score obtained enables the individuals to be classified into four groups. Those in the third group (Pari=3) are considered 'fragile' and will be offered a personalised plan to evaluate their needs. The variables used in the algorithm for calculating the score provide information that clarifies three distinct risk factors: I, M, and S, representing respectively: individual (age, gender, labour market status, region, etc.), medical (medical consumption, situation with regard to chronic ailments, number of days of receipt of sickness benefits), and social (receiving statutory or non-statutory benefits from the RSI).

The inclusion of welfare benefit variables in the Pari score is problematic in terms of assessing its effectiveness, because they are part of both the diagnosis and

the solution provided in the form of a service offering. One of the aims of the Pari system is to improve the benefits that the individuals sometimes already receive, but the use of welfare benefits criteria over-represents the individuals who already benefit from a service offering. Hence, there is a form of endogeneity in the detection process: all things being equal, the decision is most often made to assist those persons who already receive welfare benefits.

... and an innovative methodological approach needs to be introduced

The aim of the evaluation is to measure the Pari scheme's efficacy in detecting situations of frailty, for which the individuals in question could benefit from a service offering, while at the time of the diagnosis they receive no assistance whatsoever. This means that an evaluation method needs to be developed that takes into account the problem of the partly tautological nature of the detection process. The detection of the individuals is based on a score calculated using individual variables provided by the RSI's medico-administrative file data. The Pari score can be expressed in terms of four ordinated values, ranging from Pari=1 to Pari=4, with the first level indicating persons who require no assistance and the fourth those with a proven loss of autonomy. Given its objective of anticipating loss of autonomy, the Pari system detects the persons identified as Pari=3, that is to say in terms of the risk of loss of autonomy. If supportive steps are not taken, there is a high risk of dependency for these persons, which explains why the RSI wishes to intervene at this critical phase. The methodology used in the RSI's Pari system establishes a principle that defines target individuals (classified as Pari=3) as those that have 'at least two level 3 I, M, or S composite indicators'. The non-statutory benefits provided by the RSI's Sanitary and Social Action (Action Sanitaire et Sociale, or ASS) — such as help with the payment of contributions and personal social security contributions, financial assistance, and dependency support — are distinguished from the statutory benefits relating to the transfer of responsibility from the French state to the RSI and based on general economic criteria: Complementary Health Insurance (Couverture Maladie Universelle Complémentaire, or CMU), the Solidarity Allowance for the Elderly (Allocation de Solidarité pour les Personnes Âgées, or Aspa), the Active Solidarity Income (Revenu de Solidarité Active, or RSA), and exoneration from the General Social Contribution (Contribution Sociale Généralisée, or CSG), or the Contribution to the Reimbursement of Social Debt (Contribution au Remboursement de la Dette Sociale, or CRDS). Non-statutory benefits are therefore specific to the RSI.

The problem of the endogeneity of the detection process is linked to the fact that the score of non-statutory benefits is taken into account in the calculation, in the sense that these kinds of benefits presuppose that the individuals have, in reality, already been identified, before the application of Pari, as having specific needs. To effectively assess the efficacy of Pari's capacity for detection, the evaluation method proposed in this study is based on the calculation of a new imaginary score (called Pari'), which differs from the Pari score in that it does not include non-statutory benefits. Hence, this new Pari' score is calculated using the same algorithm as before, but based on the 'risks' I, M, and S', this last group of variables consisting solely of statutory benefits.

An evaluation of the effectiveness of Pari's capacity for detection is feasible if it can answer the following question: based on information recorded in the RSI's management files, is it possible to detect persons who potentially have a specific need that corresponds to the RSI's service offering, and who do not currently benefit from it at the time of the diagnosis? Initially, this involves verifying that the

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Establishing the Pari score

The Pari (Health Ageing and Retirement Project) algorithm is based on a system that cross-references data relating to those insured by the Social Security Fund for Self-employed Workers (RSI). This data is grouped into three main areas:

- 'Administrative' or 'individual': age, activity (working, working pensioner, or non-working pensioner), or handicap (incapacity and invalidity)
- 'Medical': (1) healthcare consumption (hospitalisation for more than eight days, at least one nursing or kinesiology consultation, at least two GP consultations, the number of dental and ophthalmological consultations, the consumption of psychotropic medicaments, and differences in consumption over two semesters), (2) chronic ailment(s), (3) the number of days of sickness benefit paid. These criteria are taken into account over an 18- to 24-month period.
- 'Social': (1) non-statutory benefits provided by the RSI's Social and Sanitary Action Fund (Action Sanitaire and Sociale, or ASS), such as assistance for contributions and personal social security contributions, financial assistance, assistance for dependency), and (2) statutory benefits resulting from the transfer of responsibility from the French state to the RSI and based on general economic criteria: Complementary Health Insurance (Couverture Maladie Universelle Complémentaire, or CMU-C), Solidarity Allowance for the Elderly (Allocation de Solidarité pour les Personnes Âgées, or Aspa), Active Solidarity Income (Revenu de Solidarité Active, or RSA), exoneration from the General Social Contribution (Contribution Sociale Généralisée, or CSG), or the Contribution to the Reimbursement of Social Debt (Contribution au Remboursement de la Dette Sociale, or CRDS).

The variables described above are 'primary indicators' that are combined using a scoring method: each criterion provides a certain number of points that are added together. These weighting adjustments were selected by a technical committee on the basis of a review of scientific literature on the determinants of the frailty of the elderly. Using this scoring system, in each of the categories I, M, and S, the individuals are classified into four risk categories: (1) low, (2) medium, (3) high, and (4) proven. The global Pari score is established from the I, M, and S scores, as follows:

- Pari=1: each of the 3 composite indicators (I, M, S) is less than level 3 (3= high risk);
- Pari=2: only one of the 3 composite indicators (I, M, S) equals level 3;
- Pari=3: at least 2 composite indicators (I, M, S) equal level 3;
- Pari=4: at least 1 composite indicator (I, M, S) equals level 4.

This decision-making rule produces an individual Pari score that reflects increasing levels of the risk of loss of autonomy. There are, however, several overriding 'forcing' criteria that classify individuals who would initially be classified elsewhere as Pari=3. This relates to several traceable pathologies (stroke, cystic fibrosis, severe chronic respiratory ailments, etc.), handicaps, or functional limitations (iso-resource groups (Gir), or those receiving welfare benefits such as the Active Solidarity Income (RSA), Solidarity Allowance for the Elderly (Aspa), and Home Nursing Benefits (Apa)).

variables I, M and S' are predictive of the requirement for the non-statutory benefits offered as part of the RSI's social initiatives. In a second phase, the aim would be to identify to what extent the 'target individuals' (that is to say those persons who would be likely to be eligible for the non-statutory benefits provided in the RSI's social initiatives, but who currently receive no benefits at the time of the diagnosis) can be detected using the original Pari score. By determining the percentage of 'target individuals' (i.e. those identified as Pari'=3 and who do not receive non-statutory social benefits) out of all the individuals in Pari=3, it will be possible to assess the capacity of the Pari score to identify a hitherto 'undetected social need', that is to say those individuals likely to receive non-statutory benefits provided as part of the RSI's social welfare initiatives. The main limitation of this approach is that it only takes into account a part of the possible response in terms of benefits, by focusing on non-statutory welfare benefits, and excludes the services offering relating to the medical field, for example, which is part of the RSI's package of support initiatives for the elderly.

How can the diagnosis be separated from the solution?

The first phase of the analysis is therefore based on the establishment of a new Pari' score using the variables of the I, M, and S' groups, excluding non-statutory benefits. For each of these groups, a combination of variables produces an intermediary composite indicator, which is coded 1 for 'low risk' up to 4 for 'proven risk'. To arrive at the original Pari score, the target individuals (Pari=3) were defined as those accumulating at least two level 3 composite indicators. To apply this rule to the new Pari' score, the new social risk S' needs to be defined beforehand. This attributes the value of the initial social risk (S=1, 2, 3, or 4) for individuals who do not receive the RSI's non-statutory social welfare benefits (in other words, the Pari' score value has not altered). However, the new social risk S' of the individuals who already receive non-statutory social benefits needs to be given a different code because the latter are no longer included in determining the new Pari' risk. The initial Pari algorithm also included a certain number of forcing rules (see figure) that enable individuals with high levels of risk (3 or 4) to be automatically classified when they had certain characteristics (certified disability, significant dependency measured by the iso-resource group (Gir), etc.). The new Pari' algorithm is based on the new social risk S' (non-statutory benefits are not included in the risk calculation) and, in addition, does not take the forcing rules into account.

Out of the total sample population, only 4% (15,109 individuals) are classified as Pari'=3, compared with 5.5% (20,522 individuals) as Pari=3. Specifically, persons with an individual risk of level 3 (I=3) represent less than 1% of the sample, the level 3 medical risk (M=3) concerns 18%, and the new level 3 social risk (S'=3) concerns 19% of the sample population. The vast majority of the individuals in Pari'=3 (92%) only accumulate both the level 3 medical risk (M=3) and level 3 social risk (S'=3). Hence, the requirement to have 'at least two level 3 risks' to classify the individuals in Pari'=3 only takes into account a relatively limited population, whose main

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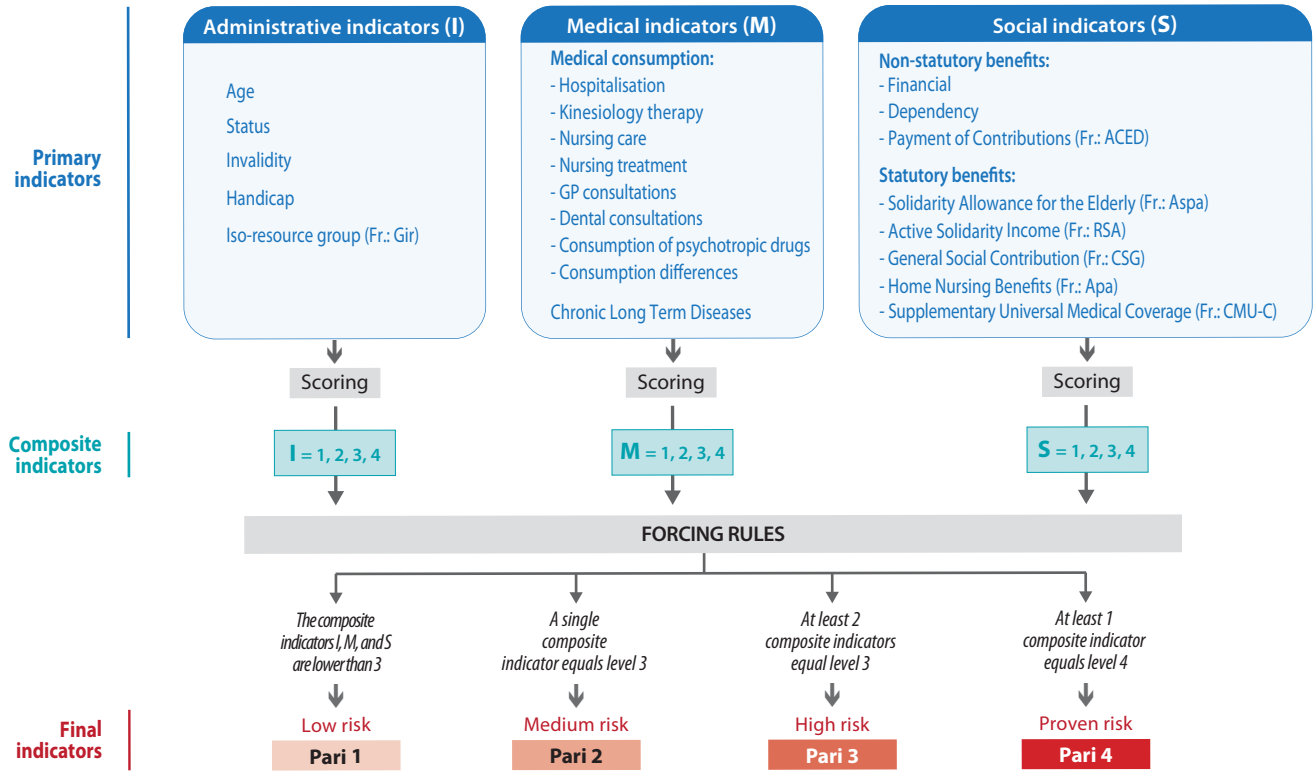
The establishment of the individual scores in the Pari system



Source: Social Security Fund for Self-employed Workers (RSI)

characteristic is a combination of medical and social MS' risks (statutory benefits). The breakdowns according to age indicate that the prevalence of other risk combinations (IM, IS', and IMS') increases with age, although it does not negate the predominance of the medical and social risks.

The Pari score is quite robust with methodological modifications

Table 1 cross-references the numbers of classified individuals, with the Pari score on the lines, versus the Pari' score in the columns. On the diagonal are the individuals who are classified in the same way by both scores (algorithms), and who represent 98% of the sample. Pari and Pari' are therefore very comparable. These results indicate that neither the use of non-statutory benefits nor the application of a forcing rule in the establishment of Pari have a significant effect on the score (due to the relatively low weighting adjustments associated with them).

However, these methodological options are not entirely neutral, particularly for the reference category Pari=3. Table 1 indicates that 5,754 persons were reclassified as Pari'=2, while they were classified as Pari=3. The abovementioned methodological options contribute to augmenting by 40% the numbers in the Pari=3 classification compared with what they would be without these options as Pari'=3. Three hundred and seventy-seven individuals were classified as Pari'=3, while they were in Pari=4, either because the suppression of the non-statutory benefits in the Pari' calculation reduced their risk level, or because they were classified as Pari=4 due to the application of a forcing rule that was no longer included in the Pari' score (77% of them).

T1

Comparison of the Pari and Pari' scores

	Pari'=1	Pari'= 2	Pari'= 3	Pari'= 4	Total
Pari=1	234,970	0	0	0	234,970
Pari=2	69	96,485	0	0	96,554
Pari=3	36	5,754	14,732	0	20,522
Pari=4	102	514	377	20,334	21,327
Total	235,177	102,753	15,109	20,334	373,373

Note: The Pari score includes the forcing rule. The Pari' score includes neither the non-statutory welfare benefits nor the forcing rule.

Reading: Out of the 20,522 persons detected by the initial Pari algorithm as being entitled to extra benefits (Pari=3), only 14,732 were detected by the new algorithm (Pari'=3), which did not take into account non-statutory benefits or forcing rules. Furthermore, 377 persons initially classified as level 4 in Pari were classified as level 3 in the Pari' calculations. In total, therefore the Pari' algorithm detected 15,109 (14,732+377) level 3 individuals.

Source: The Social Security Fund for Self-employed Workers (RSI) and the author's calculations.

Download the data

The persons who received non-statutory benefits were constructively detected through a process of deduction by the RSI services as requiring assistance. This detection followed an explicit written request for assistance made by the person or an 'over-the-counter' request.

Table 2 indicates that the Pari=3 category is that in which the person is most likely to receive non-statutory benefits offered as part of the RSI's social initiatives (odd-ratios between 6 and 10 depending on the age groups). Statistical tests indicate that the coefficient value for the Pari=3 category is significantly different from the values of the coefficients for the other categories. All other things being equal, these results confirm the idea that the combination of at least two level 3 IMS' risks is the most predictive decision-making rule for the receipt of non-statutory benefits. Concerning the control variables, it is evident from Table 2 that women most often

T2

The determinants of the probability of receiving the RSI's non-statutory benefits

Explained variable: 'Receiving non-statutory welfare benefits' [1]	Age groups			
	60-64 years	65-69 years	70-74 years	75-79 years
Gender				
Male	*Ref.*	*Ref.*	*Ref.*	*Ref.*
Female	1.243 ***	1.236 ***	1.381 ***	1.375 ***
Year				
2014	*Ref.*	*Ref.*	*Ref.*	*Ref.*
2015	1.047	1.011	0.947	1.083 **
Participating Pari Fund				
No	*Ref.*	*Ref.*	*Ref.*	*Ref.*
Yes	0.777 ***	0.800 ***	0.843 ***	1.021
Pari' score (excluding non-statutory benefits)				
Pari'=1	*Ref.*	*Ref.*	*Ref.*	*Ref.*
Pari'=2	2.542 ***	3.583 ***	4.118 ***	3.537 ***
Pari'=3	6.405 ***	9.233 ***	10.12 ***	6.698 ***
Pari'=4	5.150 ***	6.485 ***	6.897 ***	4.312 ***
Forcing rule				
No	*Ref.*	*Ref.*	*Ref.*	*Ref.*
Yes	0.644 ***	0.773 *	0.906	1.133 *
N obs.	139,318	103,310	68,642	62,103
Wald Test Pari3=Pari2 (p-value)	0.000	0.000	0.000	0.000
Wald Test Pari3=Pari4 (p-value)	0.014	0.000	0.000	0.000

[1] The variable is coded 1 if the person receives non-statutory benefits, otherwise it is coded 0. The estimated model is a logit one, and the deferred coefficients are represented in odds ratios (*coef.* Exponential logit).

Significance thresholds: * p<.1, ** p<.05, *** p<.01.

Reading: Women in the 60–64 age group are 24.3% more likely to receiveSocial Security Fund for Self-employed Workers (RSI) non-statutory benefits than men in the same age group. Individuals classified as Pari'=3 are 6.4 times more likely than those classified as Pari'=1 to receive the RSI's non-statutory benefits.

Source: The Social Security Fund for Self-employed Workers (RSI) and the author's calculations.

Download the data

CONTEXT

This study is the first phase of a quantitative evaluation of the Health Ageing and Retirement Project, or Pari, implemented by the French Social Social Security Fund for Self-employed Workers (Régime Social des Indépendants, or RSI). The evaluation methodology was independently developed by the author in conjunction with Irdes (Institute for Research and Information in Health Economics) researchers (Denis Raynaud, Director of IRDES; and Zeynep Or and Paul Dourgnon, IRDES research directors).
The analyses were conducted with the assistance of RSI members (Dr Pascal Perrot, director of risk management and social welfare, and national medical officer; Sandra Francisco, national coordinator for preventative initiatives; and Dr Antoinette Salama, project manager for the director of risk management and social welfare).

receive this kind of assistance and that the behaviours associated with these requests and the attribution of the assistance have not fundamentally evolved since 2015.

The Pari system effectively identifies previously undetected social needs …

On the basis of the previous analysis, a target population can be detected comprising individuals who do not receive non-statutory ASS (Action Sanitaire et Sociale, or Sanitary and Social Action) benefits despite the fact that they share the characteristics of those who do receive them (age, gender, and level of Pari' score or its components, etc.). In other words, these are individuals who are classified as having the same Pari'=3 risk level as the others, while not receiving non-statutory ASS social benefits. Specifically, in Table 1, 14,732 individuals are classified as Pari'=3 and Pari=3. Eighty-four per cent of them (12,379 individuals) did not receive non-statutory benefits. It can therefore be stated that at an equivalent risk level (Pari=3 and Pari'=3), 12,379 individuals who may potentially require benefits did not receive non-statutory RSI benefits. These 'target' individuals, who potentially required non-statutory benefits, represented almost 60% of the population classified as Pari=3 in the original algorithm (12,379 out of 20,522). This result can be interpreted as a relative performance ratio for the Pari score because of its ability to detect individuals who may have potential social requirements. The other 40% comprised individuals detected by Pari=3 because they received non-statutory benefits (around a third) or because a forcing rule was applied (about two thirds).

… despite the risk of underestimating the effectiveness of the detection process

The main limitation of this evaluation is that it is restricted to the provision of non-statutory ASS welfare benefits and does not include the RSI's healthcare offering (for example, a health and Retirement Assessment, or Bilan Santé Retraite). For this reason, the results may seem to be biased downwards: the majority (60%) of the individuals classified as Pari=3 potentially need the RSI's non-statutory social benefits, which they did not receive at the time of the survey. The ability to detect potential medical needs is not taken into account in this evaluation because, in contrast with the non-statutory benefits that have been isolated, 'medical' variables of service offerings were not distinguished from the 'medical' variables used to establish the Pari diagnosis tool. But the reason why the Pari project can identify individuals with 'undetected social needs' is because it is effective in detecting social needs.

It is feasible that, out of all these individuals with social needs, Pari can identify a fraction of persons who also have undetected medical needs (for example), even though we are unable to determine who they are a priori. Indeed, the literature on the subject of the determinants of loss of autonomy indicates that the most fragile individuals (in the physiological, and therefore medical sense) have less economic and social resources than the others (Sirven, 2013; 2014).

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The RSI's Health Ageing and Retirement Project (Programme d'Action pour une Retraite Indépendante, or Pari) is part of the legislation relating to Social Adaptation to an Ageing Population (Adaptation de la Société au Vieillissement, or ASV) and intended to be a project that helps anticipate loss of autonomy. It is based, in particular, on an innovative tool for diagnosing individual risks. The effectiveness of this system's capacity for detecting individuals is difficult to assess due to the inclusion in the Pari score of welfare benefits variables: in fact, they are both part of the diagnosis and the solution provided in the form of a service offering. However, based on the study of the individuals receiving non-statutory welfare benefits, it was possible to isolate a target population with the same characteristics as the persons receiving these benefits, but who do not receive them. Our results suggest that 60% of the individuals identified as 'fragile' by the original (Pari) diagnostic tool may be in this situation. The Pari tool is therefore capable of identifying persons with social needs that have been previously undetected. After this initial evaluation, which consists of assessing the efficacy of the detection, a second phase will involve assessing the impact of the retirement social protection system service offerings on the evolution of the process of loss of autonomy of fragile elderly persons, and eventually assess the Pari tool's efficacy. ♦

For further information

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