



## How can GPs Best Handle Social Determinants in Practice? Application in the Brussels Environment

Jean-Pierre Unger<sup>2\*</sup>, Sarah Shelmerdine<sup>2</sup>, Casper van der Veer<sup>3</sup> and Michel Roland<sup>1</sup>

<sup>1</sup>Médecins du Monde Belgium, Belgium

<sup>2</sup>Institute of Tropical Medicine, Department of Public Health, Belgium

<sup>3</sup>Self-employed general practitioner, Belgium

\*Corresponding author: Professor Jean-Pierre Unger, Institute of Tropical Medicine, Department of Public Health, Nationalestraat 155, B-2000 Antwerpen, Belgium, Tel: +32-3-247.62.54, Fax: +32-3-247.62.58, E-mail: [jpunger@itg.be](mailto:jpunger@itg.be)

### Abstract

**Purpose:** Properly addressing patients' social problems in clinical decisions is central to the widely advocated delivery of biopsychosocial care. Against the backdrop of a wealth of scientific studies describing social determinants acting upon health status, this position paper aims to orient general practitioners in the practical management of these determinants. This paper follows on from a previous one that dealt with the use of family therapy techniques in addressing interpersonal and emotional stress in general practice in Low and Middle Income Countries.

**Information, source and validation:** Synthesizing the professional experience of the authors, we first compared biological risks to social ones. Then, we analyzed social suffering and identified the tools available to general practitioners to alleviate it and applied them to categories of people at risk (e.g. unemployed, migrants, illegal people, retired people, delinquents) in Brussels.

**Viewpoint:** Using Maslow's needs hierarchy, we identify the social stresses related to biological conditions and provide insight into the clinical epidemiology of social risks. Exploring the tools available to handle medical-social problems we illustrate them with situations and data from Brussels: community oriented primary care or community medicine; prevention/treatment of common problems in risk groups, trans-theoretical model of behavioural change, use of social organizations, systemic therapy, working on self-esteem, use of geographical information system and GP contribution to the development of a local health system.

**Conclusions:** Numerous techniques can enhance the effectiveness and efficiency with which GPs handle their patients' social problems. These need to be the object of continuous medical education and reflexive methods.

### Keywords

Health systems strengthening, First line health care, Family medicine, Social determinants of care

### Abbreviations

AIDS: Acquired Immune Deficiency Syndrome, GHQ(s): General Health Questionnaire, GP(s): General Practitioner(s), HIV: Human Immunodeficiency Virus, NGO(s): Non-Governmental Organization(s), STD(s): Sexually Transmitted Disease(s), WHO: World Health Organization

### Introduction

Eugenio Espejo (1747-1795) and Rudolf Virchow (1821-1905) were amongst the first to employ the concept of social determinants of health. There is strong empirical justification for concern about the contribution of growing income inequalities to health and the distribution of disease [1]. Inequalities in health remain pervasive in industrialized countries, although less apparent than one might think [2]. Belgium is no exception to this rule: Between 1991 and 1997, for instance, the difference in life expectancy between university graduates and non-graduates was five and a half years at 25 years (Table 1). Sir Michael Marmot, in collaboration with the British Medical Association, recently stressed again the importance of recognizing these inequalities and how social determinants of health can be affected by the actions of doctors [3,4]. This article aims to present practical tools to enhance the efficiency with which general practitioners working in an urban environment in a high-income country handle patients' social problems.

Our approach differs from that of international organizations, which tend to address this issue, by means of vertical programs [5] with objectives such as prevention of juvenile suicide and unwanted pregnancies in underprivileged environments and promotion of good nutrition. Such an approach, however, does not require the

**Table 1:** Life expectancy in Belgium at 25 years of age (1991-1997).

Education level	Life expectancy	
	Men	Women
No diploma	48.1	55.0
Primary school diploma	48.2	55.6
General lower secondary diploma	50.4	57.3
Technical lower secondary diploma	50.0	57.8
Vocational Lower secondary diploma	50.4	57.0
General superior secondary diploma	50.6	57.5
Technical superior secondary diploma	51.2	58.1
Vocational superior secondary diploma	50.9	57.6
Short-type superior education diploma	53.4	58.1
Long-type superior education (including university)	53.6	58.5
Total	49.6	55.9

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involvement of first line general practitioners, is not amenable to the integration of bio-psychosocial care and bureaucratizes clinical practice and administration [6]. In contrast, we argue that it is important to trust doctors' creativity and capacity to address each patient's personal problems, in the hope that this freedom, when combined with appropriate intellectual stimulation, will enhance their motivation. Of course, this does not mean that public health programs aimed at responding to medical-social problems are useless. Rather, we argue that they are not sufficient on their own. The knowledge on which we base this argument is both professional and academic and is based on the experience of the authors rather than on publications or demonstrations. Our 'red thread' is the following: after having compared the treatment of biological and social ailments, and having analyzed social suffering, we identify tools available to general practitioners for the alleviation of suffering. We then apply these tools to certain categories of people at risk in the Brussels region (unemployed, temporary personnel, migrants, illegal people, retired people, delinquents, the mentally and chronically ill). In so doing, we aim not to help solve problems related to poverty, nor to make society more equitable, but to make consultation time more productive, to avoid missed opportunities, and to contribute to the integration of bio-psychosocial care [7].

### Suffering specific to social risk

Social suffering is not only related to unmet basic needs – access to water, food or care. Maslow [8] proposes an elaborate categorization of man's needs that could lead to the formulation of rights such as access to education or to justice. According to him, the hierarchy of human needs is established on the biological and physiological needs. Then, successively come the safety needs (protection, security, stability), the belongingness and love needs (family, affection, relationships, work group), the esteem needs (achievement, status, responsibility, reputation) and finally self-actualization (personal growth and fulfilment).

Implicitly, Maslow's hierarchy of needs makes the GP responsible for handling (sometimes in the form of merely listening to) some less visible forms of suffering, including, for example, sexual frustration, insomnia, a feeling of insecurity (whether justified or not), the absence of affection, solitude, harassment at work, stigmatization linked to race, poverty, language, amongst others, existential emptiness, monotonous jobs, and personal or relational stagnation, to name a few. Not only might stresses related to these causal factors be linked to stomach ulcers, psoriasis, cardiovascular disease, depression and so on. Even independently of such pathologies, if health is conceptualized as more than merely the absence of illness (as it is according to the World Health Organization), the experienced GP should be able to propose solutions for patients' problems without unnecessarily medicalising their conditions and while continuing to balancing their safety and autonomy [9]. Notice that if the GP is unaware of the five levels of Maslow's theory, the balance of medication/autonomy has little chance of being optimal. In conclusion, the more experienced a GP is, the more he/she will be able to detect and resolve these kinds of problems.

### Social risk: a parallel with biological risk

It is possible to draw a parallel between social and biological risks that justifies calling upon clinical epidemiology. Clinical epidemiology aims to establish the probability of the presence of a pathology in a complaint, a sign, a laboratory result, or medical imagery. Its main parameters are predictive positive and negative values and likelihood ratios. All these vary with the frequency of illness, as well as with the sensitivity and specificity of the signs (which, by contrast, remain independent of the disease prevalence/incidence itself).

As the predictive values and likelihood ratios vary with the frequency of illness to which they refer, and even though the sensitivity of a brain scan is independent of the prevalence of brain tumors/metastases, the predictive value of a headache for the presence of these conditions is lower among patients of first line care than among those visiting a neurologist after having previously

been screened by a general practitioner (rem.: it is, amongst others, because the clinical experience of general practitioners is so different from the experience of specialists that the training of medicine should not be solely entrusted to the latter).

The measure or semi-quantitative assessment of biological risk is key to the diagnostic approach. The order in which a patient's medical history is taken and physical examination and complementary tests performed, as well as the degree of diagnostic accuracy all depend on medical assessment of the risk, prevalence of the suspected pathology, relevance of the diagnosis to the therapeutic decision and on the consequences and cost of that decision for the patient and for the society.

Just like biological risks, social ones may alter the probability of a disease presence, sometimes to the point of justifying a demand for a test or examination. Examples include:

- Research into chronic lead poisoning in children living in dilapidated houses;
- Etiology of carbon monoxide intoxication in case of headache when sanitary equipment proves sub-standard;
- Identification of high risk pregnancies in relation to social risk (teenage pregnancies, multiple ones, for instance);
- The number of people living under the same roof is known to be a key factor in the spread of infectious disease. Thus, detection of a TB patient within a large family or in precarious housing justifies an active search for the disease in his/her cohabitants.

Social risks also present challenges to continuity of care. For example, cultural barriers associated with poverty can hinder the patient-physician dialogue, which in turn strains continuity of treatment, purchase of drugs, performance of examinations, attendance to follow-up consultations, and referral to hospital.

### At risk Social categories

What are the medical-social risk groups?

- The unemployed accounted for 20.6% of the population of Brussels Capital Region in 2011 (against 7.6% for the whole country). Not all of these are poor;
- **Table 2** provides the numbers of various categories of beneficiaries of alternative incomes (the total of which amounts to 20.5% of the population);
- There were 420,000 temporary workers [10] in Belgium;
- There are 3,000 sex workers in Belgium. Note that their pathology profile is not limited to AIDS and STDs [11] but includes alcoholism, drug addiction, the effects of violence, psychopathology, etc., and that they are concentrated in the practice population of a small number of GPs;
- The prison population is close to 1/1,000 in Belgium, but the physician is specifically concerned with the ex-offenders population, many of whom are likely to relapse and are facing difficulties finding employment. In the USA, in 2008, there were 12 – 14 million ex-offenders for a total population of 305 million [12].

**Table 2:** Number of beneficiaries of replacement incomes within the different categories.

Category	Total
VIPO	48,468
Help of CPAS ("Centre public d'action sociale" = public center for social action) (charge of Federal government)	63,227
Income guarantee to elderly people or raise of allowance	15,054
Disabled people	21,987
Children benefitting from a raised family allowance	1,596
Older long-term unemployed	19,386
OMNIO statute	53,206
Total	222,924
% of population	20.5%

- 27.6% of the Belgian population has a chronic illness [13];
- 26.0% suffers from psychological stress (GHQ 2+), 14.2% from probable mental disorders (GHQ 4 +), 11.7% from suicidal thoughts throughout life, 9.5% from depressive disorders, and 4.9 % from suicide attempts [13]. Note that in Belgium: 1. the ratio of admission to hospital or psychiatric service between the lowest socioeconomic class and the highest is 2.19; and 2. that migrants suffer from high rates of mental illness [14], particularly schizophrenia [11]. In this respect it is necessary to train generalists in intercultural communication, which should vary according to the origin of the migrants with whom the relevant generalist is working, and to motivate them to obtain information from specialized organizations.
- An estimated 100,000 illegal immigrants live in Brussels. Their social condition includes unemployment and jobs uncovered by social security, job insecurity, confinement (political refugees) and limited and late access to care, with significant excess mortality among those over 50 years.
- Finally, there were 1770 homeless people in Brussels in 2009. With 43 deaths in 2010, their mortality rate was 2.4% against 0.9% for the general population. Their most urgent needs are exclusively vital/basic: food, drink, sleep, protection from bad weather and cold and living space. Their lives are characterized by a lack of privacy, begging, forced collectivization of social space, dependency and the renunciation of autonomy (waking up, meals, etc.). GPs

should learn to direct members of this population to the appropriate social structures, and should distribute address lists for these services (including NGOs), that stipulate their specific functions.

Note that the available statistical data linked to place of living in Belgium are extremely detailed, and that the address in itself gives the doctor a significant clue as to the social risk encountered.

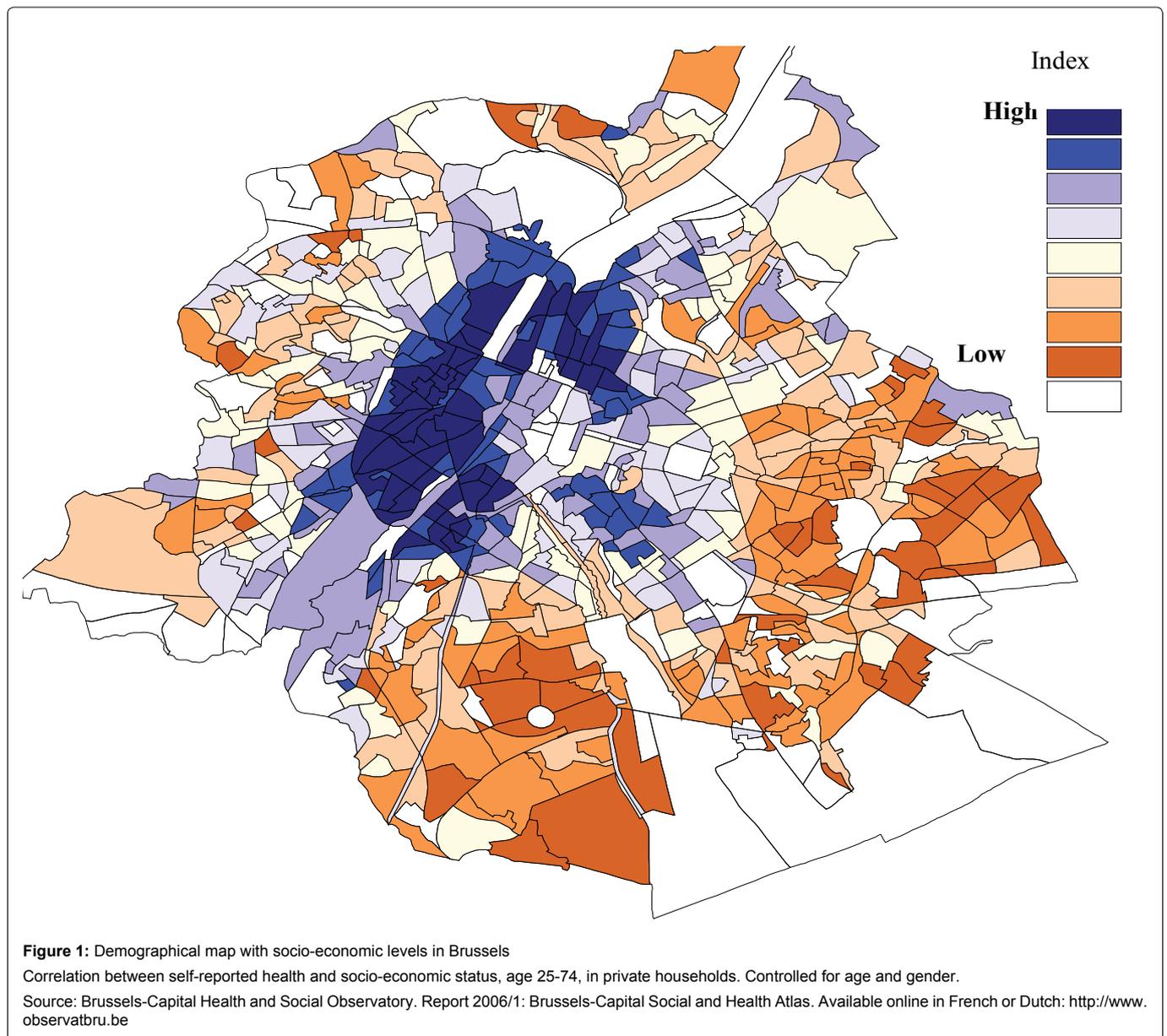
### The tools

What tools are available to help the GP to handle medical-social problems?

### Community oriented primary care or community medicine

Community medicine aims to solve health problems with larger groups of people than families (otherwise we speak of family medicine!). Community medicine is common in developing countries because many communities organize themselves to provide the services (sewers, schools, etc.) that the state and municipalities do not provide. These associations are interesting resources for the GPs who work there.

Let us look at some illustrations from developing countries that may inspire the practice of community medicine in industrialized countries where communities still exist - e.g. in migrant neighbourhoods. A GP in the city of Quevedo in Ecuador mobilized neighbourhood committees to organize a youth centre that promoted



school retention (by means of recovery) and prevented violence (by means of team sports and extreme hiking) and addictions (by means of substitute medication, amongst others). Ugandan high school teachers have learnt to organize speech groups with AIDS orphans to improve their self-esteem [15]. Also in Uganda, doctors have organized shelters for battered women in the houses of women with sufficient social status to prevent abusive husbands from fetching their fugitive wives [16]. Kenyan nurses have promoted granaries where farmers store grain that will be consumed by the family until the next harvest, in order to prevent malnutrition. And in Senegal, in order to increase the daily food intake of children, nurses have organized community nurseries kept by some peasant women while others work in the fields. Even in Europe, there are numerous social organizations likely to implement such initiatives. These potential partners of GPs are present in disadvantaged neighbourhoods. However, they often lack concrete avenues for action for want of dialogue with interested professionals. In Belgium, there are also such organizations and neighbourhood projects that aim to solve social problems. These range from those focused on the integration of migrants to adult literacy campaigns and from language courses to prevention of school dropout and improvement of housing conditions. GPs should receive a list with the contact addresses and telephone numbers of these organizations, classified geographically and by the type of problem they aim to solve. Finally, therapeutic groups (of diabetics, HIV-positive or other chronically ill people) represent a particular modality of community medicine. These patients share their experience and offer a framework for training by peers.

### Prevention/treatment of common problems in high risk groups

In the field of curative care, written guidelines teach the sequence for clinical decisions (depending on the outcome of examinations, amongst others). In order to promote the delegation of tasks by the specialist to the generalist ('task shifting'), and to avoid functioning in a restrictive manner, these guidelines should not be too numerous. They can be designed to tackle social suffering and should be adapted to the epidemiology of the relevant area, which has a clear geographic distribution, even within a relatively small city such as Brussels (Figure 1). Recently, public services have disseminated these guidelines, for instance by means of links inserted in electronic medical files. Groups of GPs could participate more actively, in dialogue with an academic centre, to develop diagnostic treatment strategies. Their active role

in the adaptation of know-how to the local context increases the likelihood that they will internalize and use these algorithms. The Center of Clinical Decisions at the University of Southern Denmark (in Odense) operates by means of this model.

In Brussels, the rationalization of decisions has begun to focus on problems common to disadvantaged social classes (confer supra) such as tobacco dependence (in 2004, 26.8% of those who had finished lower secondary school were heavy smokers, compared with 7.7% of those who had obtained degrees in higher education [17]), obesity and diabetes (which in Belgium are 3 to 3.5 times more common in women who have only a lower high school diploma than among those with higher degrees), mental diseases (with respect to which it is known that benzodiazepine consumption depends on a social gradient, see Figure 2), and cardiovascular disease. In the case of smoking, for instance, the government has increased the price of tobacco, limited publicity, imposed an audiovisual world without tobacco, recognized the importance of training doctors as smoking cessation specialists, by means of training them in motivational consultation techniques (trans-theoretical model of behavioural change), and has recognized the importance of reimbursement of certain drugs intended to alleviate symptoms related to stopping smoking. Moreover, the mechanisms of continuing education should also help strengthen the role of GPs in improving access to care in underprivileged social classes. In that respect, Figure 3 shows the distribution of places of death according to social class in Belgium.

### Systemic therapy or family therapy

Among the many psychotherapies, systemic or family therapy occupies a special place due to its focus on the relationship between a patient, his family, his friends, and other therapists, and its capacity to deal with psychopathology, which overlaps with social issues. This type of therapy is particularly well suited to first and second generation migrants because of their family structure. Notice that learning the basics of systemic therapy is within the reach of anyone, but requires a minimum of prior interest from the GP [18].

### Working on self-esteem

25.9% of the Brussels population lives below the poverty threshold (Table 3). Discourses that blame the poor and consider them responsible for their economic situation have the obvious political function of justifying early loss of access to unemployment funds. Furthermore, their internalization by the unemployed or the temporary worker has devastating psychological effects. General

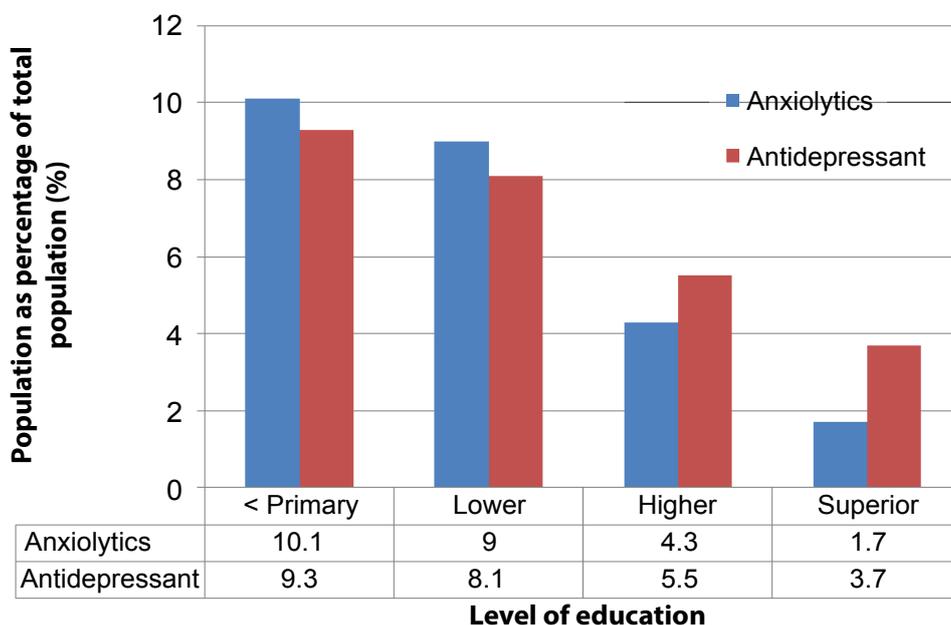
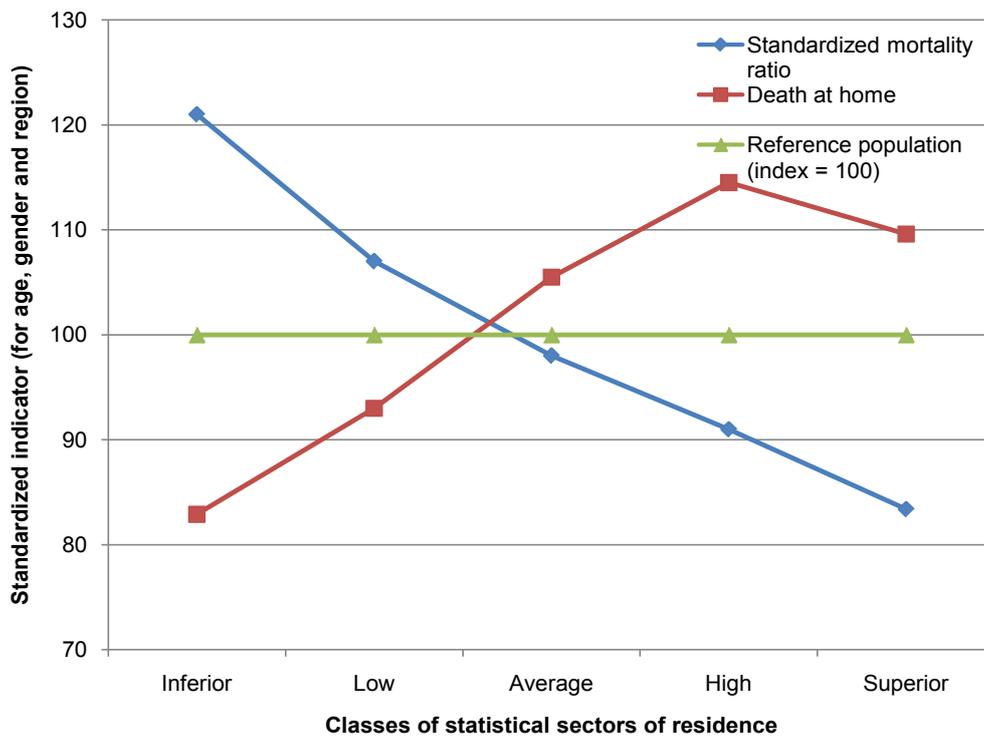
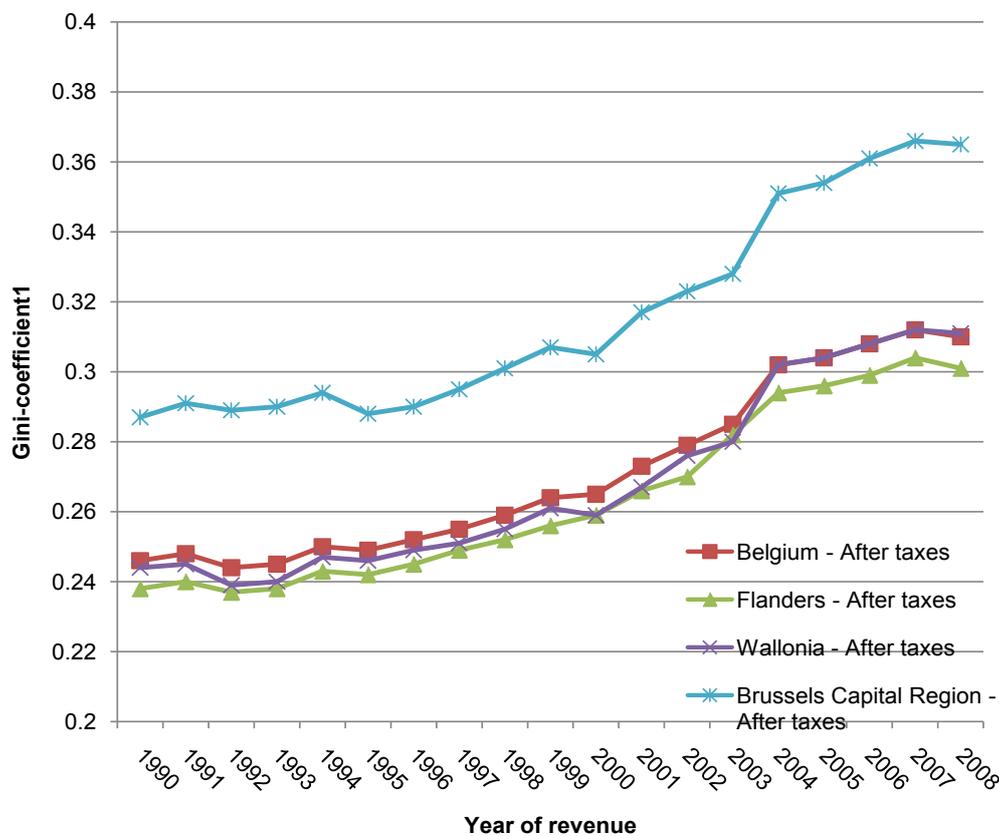


Figure 2: Consumption of psychotropic medication according to level of education (HIS 2008)



**Figure 3:** Mortality and place of death in relation to social status, 2008.

Source: Statistiek Mutueliteiten christelijke (Christian Mutualities statistics). Available at [http://www.mc.be/cm-tridion/fr/135/Resourcen/Inegalites%20de%20sante%20res\\_tcm183-51631.pdf](http://www.mc.be/cm-tridion/fr/135/Resourcen/Inegalites%20de%20sante%20res_tcm183-51631.pdf)



**Figure 4:** Evolution of GINI index in Flanders, Wallonia and Brussels regions between 1990 and 2008.

<sup>1</sup>This coefficient is a number varying between 0 and 1, where 0 represents perfect equality (everybody has the same income) and 1 signifies total inequality (one person has the whole income, the others have none).

Source: Statistics Belgium, available on [http://statbel.fgov.be/nl/statistiek/cijfers/arbeid\\_leven/fisc/](http://statbel.fgov.be/nl/statistiek/cijfers/arbeid_leven/fisc/)

practitioners should help their patients out of a vicious cycle that involves the patient's belief that he or she is incapable of being

anything other than what he/she is – i.e. unemployed and/or poor. Such an intervention may not be strictly psychological: GPs must at

**Table 3:** Poverty risk level in Belgium.

	Belgium	Flemish region	Walloon region	Brussels region	Europe
Women	15.6%	12.3%	17.7%		17.0%
Men	13.7%	10.5%	16.2%		15.0%
Total	14.7%	11.4%	17.1%	25.9%	16.0%

Poverty risk level in % = percentage of people living in households that have an income less than 60.0% of the median national equivalent revenue, according to gender, comparing Belgium and regions, and European Union (UE-25, 2008)

**Table 4:** Average monthly expenditure for health care (Enquête de Santé 2004).

Revenues (EUR)	Absolute (EUR)	Relative (%)
< 750 €	92.3	14.4
750-1,000 €	95.6	10.5
1,000-1,500 €	112.7	8.7
1,500-2,500 €	133.0	6.8
> 2,500 €	113.2	3.5

**Table 5:** Transfer in health care for financial reasons (%) (Enquête de Santé 2004).

	Belgium	Brussels
Single	10.9	15.5
Single parent households	28.6	30.0
Couples without children	6.0	12.6
Couples with children	10.7	22.7
< 750 €	18.7	31.6
750-1,000 €	19.7	25.4
1,000-1,500 €	11.5	17.8
1,500-2,500 €	11.3	13.9
> 2,500 €	2.7	8.7

least expose that more than 30 per cent of the population of Brussels lives below the poverty threshold and that socio-political analysis is needed to understand it.

### The contribution of the GP to the development of a local health system

The management of many chronic illnesses whose prevalence follows a social gradient requires close collaboration between generalists and specialists. These channels are likely to malfunction, for example due to late or incomplete communications. The local health system is a service organization designed to detect and correct these malfunctions [10]. In practice, GPs and specialists who share the same patients meet regularly to analyse patient records or organizational problems and, after agreeing on a managerial diagnosis, entrust its improvement to a small group, who will then give technical assistance in clinical and managerial coordination; health services organization; rationalization of clinical decision making; teamwork; continuous medical education; professionals' coaching; evaluation, etc. [12].

### Steps to take

We propose two axes of action to improve the performance of GPs in the medical-social field. Firstly, basic training and continuous medical education can improve GPs' knowledge of the health system, of social protection and of the resources they offer. In a context of growing social discrepancy [17] (Figure 4), GPs often try - to varying degrees - to compensate for the natural effects of social stratification on health and on the use of health services (Table 4 and Table 5), despite being unable to neutralize these significantly (Table 5). Nevertheless, the consequences of reduced access to care are numerous. Consider, among other things, suffering and preventable deaths due to late diagnosis and limited continuity of care. While dialogue, negotiation and patient information can eliminate some of these obstacles to access to care, the effective use of this information depends on the knowledge that the physician has of the health system and of social protection.

Secondly, we recommend standardizing the management of patients' social problems by means of a population approach. For each risk group (unemployed, temporary workers, etc), a "checklist"

of likely social problems should be developed, each of which justifies the mobilization of a particular combination of tools, of which we have seen the typology above.

Ultimately, since care provided by GPs must be bio-psychosocial in essence, the health care system should contribute to improving their performance in the psycho-social domain. Preventive care, tailor-made or designed by national programs, should be incorporated into daily curative consultations.

Professional organizations should uphold policies designed to rationalize management of these issues that have been initiated by public powers.

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### Authors' contributions

Michel Roland was responsible for the study design and preparation and writing of the first draft article. All authors participated in the review and fine-tuning of the final version of the article. All authors have seen and approved the final version and they have no conflict of interest in connection with this paper. The authors alone are responsible for the content of this paper.

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