

Quaternary prevention: *First, do not harm.*

M. Jamoulle, family doctor

**The terror deepened.
Nobody knew who was sane, and who was crazy.
Joachim Maria Machado de Assis (1839-1908)
O Alienista**

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Abstract

Clinical prevention has been organised in a chronological manner since the middle of the 20th century. A paradigmatic shift from a *chronological* to a *relationship*-based prevention organisation offers new insights into the work and, specifically, into the preventive activities of doctors, and brings to light the concept of *quaternary prevention*, a critical look at medical activity with an emphasis on the need *not to harm*.

Examining a doctor's job in GP/FM: How to *not harm*?

A good doctor is, according to one of my colleagues, a good actor. Nevertheless a strong commitment to equity, a scientific background, and good relationships are the main qualities required by a professional in the field of medicine¹. Ethical standards and good relationships are not difficult to understand or to define, but the same cannot be said for 'scientific background' when it comes to health care.

Good medicine

During the past thirty years of my professional practice, technology has greatly improved care when it comes to certain disease categories. Hodgkin's no longer means certain death and smokers can continue to smoke with a coronary stent. While it is unclear whether doctors have a responsibility for health status resulting from social disadvantage², they can certainly improve ill health and make a profit doing it. Drug addicts are not a doctor's best friend until they have hepatitis C, and medical ethics requires us to save more and more sick people from life-threatening diseases and to deal with elderly patients who are abandoned by their families and crowded into homes owned by investment funds³. It is clear that at least in high-cost countries, we have reached the limits of good medicine. But nobody knows what the alternative is.

Bad medicine

Healthcare has become polluted by market-driven forces⁴, and the focus of scientific knowledge has shifted from *care* to *risk assessment*. Virtually all human beings run the risk of becoming sick when approaching doctors⁵. The doctor is omnipresent, from cradle to grave, and our entire existence is medicalised^{6,7,8}. Disease classifications have been adapted to the needs of the industry⁹, while conflicts of interest are undermining patients' confidence in health agencies¹⁰ and in so-called medical or mental health 'experts'^{11,12}. The traditional distinction between *illness* and *disease*, although deeply embedded in western culture, is disappearing. A person who is ill without a having a disease has no place in our society, whereas a person who has a disease without being sick is seen as someone attempting to avoid medicine. The distinction between *normal* and *pathological*¹³ fades, as companies and psychiatrists prey on human emotions and sell sickness by medicalising behaviour like shyness¹⁴. Healthcare expenditure continues to grow, driven by over-treatment¹⁵ and defensive medicine. And everywhere, 'human needs' are being transformed into 'user profiles'.¹⁶

The good path

In this atmosphere of economic pressure, one could reasonably ask how one can still *listen* to a patient, and care for him in a scientific way and within acceptable limits set by medical ethics. One of the main arguments of disease makers is the ever-growing importance attributed to risk, and the usual confusion that exists between risk and disease in a doctor's daily work. How many hypertensive patients are not treated for their 'disease', although non-complicated hypertension is only a symptom? What should we think about hypercholesterolemia and other biomedical markers, whose role in preventing specific diseases and chasing pre-disease markers is questioned¹⁷? Moving from *disease management* to *risk management*¹⁸ in the name of prevention, means that nearly all human beings are candidates for medicine. According to Dr Knock in Jules Romains's¹⁹ magisterial play, any healthy man is a patient without knowing it (*'Tout homme bien portant est un malade qui s'ignore'*). We know that preventive activities are the basis of the marketing of medicine²⁰ and it becomes more and more difficult to separate *good medicine* from *bad medicine*.

Let us examine how a basic GP could deal with all of these contradictions and ethical gaps.

Dealing with clinical prevention, from communicable diseases to managed care, the mainstream of GP/FM

When searching for the right path, with persisting doubts about the scientific approach, to know how to do the right thing at the right moment is a daily challenge for the genuine General Practitioner. Continuity of care, which lies at the heart of General Practice/ Family Medicine (GP/FM), is based on, among other things, good relationships and the availability of personal data about the patient. Continuity also depends on *time* and on *how well the doctor knows the patient*. By accumulating personal information on a particular patient, and by following him or her throughout the years, a general practitioner can become the organiser of preventive activities. Indeed, clinical prevention implies managing a certain process over time in a patient's life. The overemphasising of clinical prevention is only a recent phenomenon. The over-development of the *prevention concept* is a result of the extensive usage of the *diagnosis concept*²¹.

The idea of *prevention* is rather recent in the history of medicine. Although preventive quarantine first saw the light in Croatia during the 14th century, a deep medicalisation of quarantine measures

only occurred sometime during the first 30 years of the twentieth century. In 1903, the term 'lazaretto' (used especially for the plague) was substituted by the term 'health station', when in Europe—particularly in France and in Italy—the distinction between 'sick', 'suspected sick' and 'healthy' began to gain importance in medicine²². Until the beginning of the 20th century, prevention was an activity purely related to public health, and dealt with the understanding and control of communicable diseases²³.

Timeline and disease-centred care.

The term *primary prevention* was coined in the late 1940s by Leavell & Clark²⁴ and was used to describe 'measures applicable to a particular disease or group of diseases in order to intercept the causes of disease before they involve man'. *Secondary prevention* consists of a set of measures used for early detection and prompt intervention to control a problem or disease and minimise the consequences, while *tertiary prevention* focuses on the reduction of further complications of an existing disease or problem, through treatment and rehabilitation²⁵.

While these concepts have been widely used and taught all over the world to generations of medical students, some authors have argued that the definitions of the different prevention levels are not specific enough to be used by all in the appropriate manner²⁶. Indeed, whereas the majority agrees on the definition of *primary prevention*—dealing with the process and health promotion before any problem can arise—the term *secondary prevention* varies, depending on the medical context. It is used mainly in its chronological sense—to mean 'after'—by cardiologists and in the pharmaceutical industry, while to clinicians and epidemiologists, it means 'before' a suspected dramatic event occurs' in the screening for diseases.

The concept of *tertiary prevention*, which naturally includes curative care, addresses rehabilitation processes as well as the prevention of complications, but is not widely used. In the MESH data base, *tertiary prevention* is defined as 'measures aimed at providing appropriate supportive and rehabilitative services to minimise morbidity and maximise quality of life after a long-term disease or injury is present'. When searched for alone in *Pubmed*, it appears only 5 times, yet it constitutes an important part of the literature on managed care.

This purely doctor-defined and disease-centred chronological view prompted a proposal by Bury in 1988 to use quaternary prevention in its chronological sense, to define palliative care^{27, 28, 29}. Figure 1 illustrates a chronological overview of a doctor's activities. The health issue that is to be prevented could be positioned anywhere along the entire timeline, from alpha to omega, from cradle to grave.

Timeline and patient-centred care.

Mc Whinney and the patient-centred care approach³⁰ proposed a new perspective on a doctor's activities. When the concepts are positioned in a different way, making a cross between illness and disease results in an interesting figure. In 1986, the author has proposed crossing science and conscience to delimit four nebulas³¹. The term 'nebula' is used due to the fact that the limits between *health* and *illness* and between *health* and *disease* are not clearly defined. However, in day-to-day practice, the distinction is commonly used. Science will determine whether or not a disease is present; patients will make the distinction between *sick* and *well*. It should be noted that in 1994, Hellström also crossed the concepts *illness* and *disease* in the same manner. In a slightly different presentation, he described four kinds of perceptions between patient and doctor and between *what is sick* and *what is not*³².

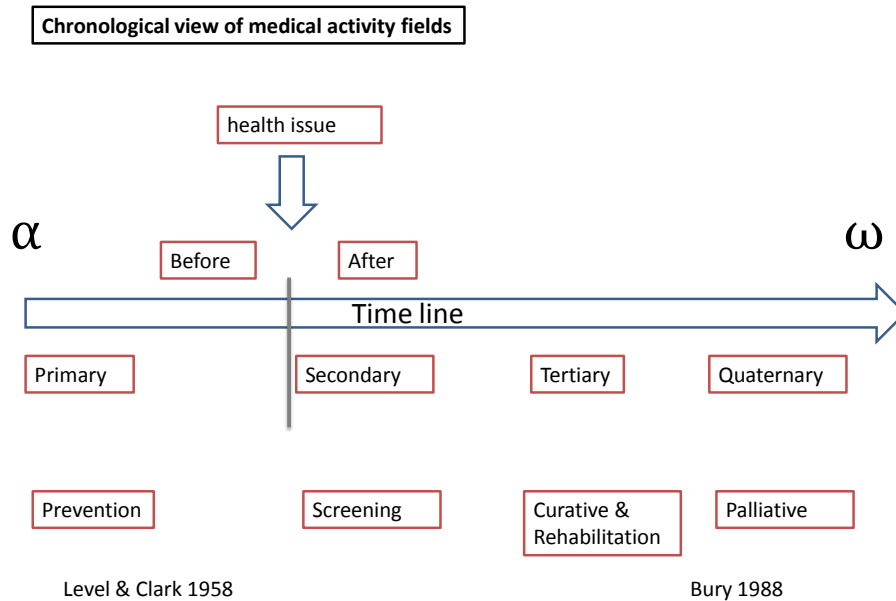


Figure 1: The chronological distribution of doctors' activities. In this example, the health issue occurs before the patient feels sick and therefore, screening (secondary prevention) is applicable. Here, the term quaternary prevention is used in the chronological sense.

When creating our boxes based on the relationship between *provider* and *patient*, one immediately notices that the disease development timeline is now obliquely oriented from left to right. Anyone can become sick and die, doctors as well as patients (Figure 2)!

Indeed, if the patient is in good health, or feels healthy, and his doctor cannot find anything wrong with him, it is the ideal context for employing a *primary preventive attitude* (I) such as immunisation or health education.

The doctor, however, uses everything in his power to discover an illness for the individual who feels healthy. This is the objective of screenings and other secondary preventive (II) examinations such as Scoliosis, STD and cancer screening

In Figure 2, four fields of GP/FM activity correspond to four types of (prevention) activities. The patient is not sick and the doctor starts a health promotion process or an immunisation campaign; the patient is not sick and the doctor screens for diseases; unfortunately, the doctor finds a disease, and now the patient knows that he is sick (but will sometimes refuse to accept it). In this phase, the doctor cares for the patient, tries to avoid complications and commences rehabilitation.

If both patient and doctor agree to accept the reality of the problem, we find ourselves in the curative field. Diabetes, high blood pressure, Lyme disease and cardiopathy must, of course, be treated. A critical eye will then have to be cast on the medical activity itself, and complications need to be avoided. Moreover, these long-term illnesses will lead to a new phase in which the doctor will propose rehabilitation. A reduction of complications in addition to rehabilitation, by definition implies *tertiary prevention* (III).

The fourth field is not the easiest. The patient feels sick and the doctor cannot find anything wrong, finds the wrong cause, or finds no cause when there is one. Health promotion, screening and medical activities could throw the patient into the fourth field.

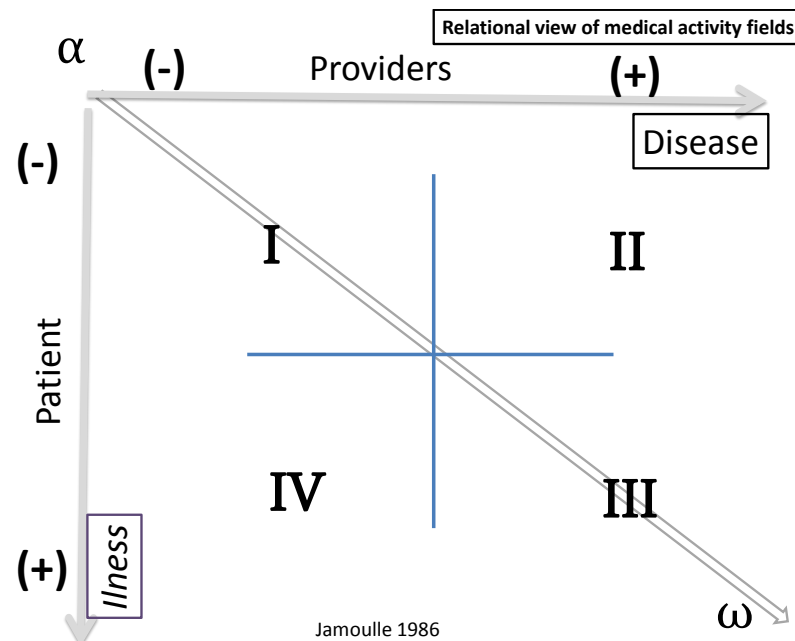


Figure 2: Four fields for the patient-doctor encounter based on relationships

And so the fourth field remains. The patient is scared and suffers, but science is of no help. It is the field of disbelief and often of scorn, where ancestral fears appear. It is often the result of fears being medicalised. It is why we have Monday-morning invasions of people complaining about their heart because they came across a website or watched a television programme on cardio pathologies the previous evening, women who have cancerphobia as a result of all of the messages they hear on breast cancer, and 'normal' patients pathologising everything that deviates from 'normality'. It is clear that the medical practice itself can be the cause of serious issues, whatever the sector: primary, secondary or tertiary.

This relational view fits perfectly within the WONCA definition of prevention

The first three forms of prevention were defined and published in 1995 by the WONCA International Classification Committee in the General Practice and Family Medicine Glossary³³. The first three definitions are perfectly adapted to the field they occupy. The existence of a fourth, i.e. quaternary prevention, seems to be a matter of course. Using the other definitions as a model, the author has proposed the following definition at a meeting of the WONCA International Classification Committee in Hong Kong in 1995³⁴:

Action taken to identify a patient or a population at risk of overmedicalisation, to protect them from invasive medical interventions and provide for them care procedures which are scientifically and medically acceptable.

This definition was adopted by the WONCA International Classification Committee during its Durham meeting in 1999 and has been published in the WONCA Dictionary for General/Family Practice³⁵. When placed in the four-fold table, the definitions, including the fourth one, fit perfectly (Figure 3).

	Scientific or doctor knowledge, disease natural evolution Absent -----> Present	
Conscience or patient feeling	I Primary (prevention) Action taken to avoid or remove the cause of a health problem in an individual or a population before it arises. Includes health promotion and specific protection (e.g. immunisation).	II Secondary (prevention) Action taken to detect a health problem at an early stage in an individual or a population, thereby facilitating cure, or reducing or preventing it spreading or its long-term effects (e.g. methods, screening, case finding and early diagnosis).
healthy feeling		
sick feeling	IV Quaternary (prevention) Quaternary Prevention: Action taken to identify patient at risk of overmedicalisation, to protect him from new medical invasion, and to suggest to him interventions, which are ethically acceptable.	III Tertiary (prevention) Action taken to reduce the chronic effects of a health problem in an individual or a population by minimising the functional impairment consequent to the acute or chronic health problem (e.g. prevent complications of diabetes). Includes rehabilitation.

Figure 3 Four prevention domains for the clinical practice. In this table, quaternary prevention is used as a result of a relationship.

This table is particularly efficient when teaching prevention to students. They never forget the content of the boxes.

One could actually read the boxes without the term ‘prevention’ and consider the four fields to be the doctor’s activities, whereby the third one is curative with a focus on complications and on the rehabilitation process. The table perfectly reflects the duties of the General Practitioner throughout a patient’s entire life. This is the basis of *integrated care*, which recommends mixing curative care with preventive care. It is normal practice for a GP to care for the angina (field III), to ask about the patient’s smoking habits (field I), to measure the sugar level because the patient is diabetic (field III), to inquire if she had a Pap smear this year (field II), and, at the same time, help her overcome her anxieties by listening to her attentively (field IV).

Quaternary prevention, a by-product of relationships

Even when one is persuaded that a ‘check-up’ for a healthy person is nonsense from a medical point of view³⁶, how does one deal with the persistent patient or doctor who attributes a lot of value to the detection of insidious diseases, in the absence of proof of the effectiveness of such activity³⁷? How can one avoid repeat prescriptions of a new and expensive me-too drug by a specialist? How can one avoid falling into the traps of defensive medicine or of the pharmaceutical industry which needs us³⁸? How is one to know whether a particular process, whatever the field (primary, secondary or tertiary), is based on scientific knowledge? All of the answers to these questions form the basis of quaternary prevention, which encompasses many domains. Quaternary prevention is a way of continuously questioning and understanding the limits of our job.

The consultation is a meeting between two human beings, where one is the patient, playing the part of the sick, while the other plays the therapeutic role. It is also a meeting between *knowledge* and *feeling*. The doctor's knowledge (true or false) influences the thoughts (true or false) of the patient, in a dialectical relationship. In a way, the patient-doctor encounter is a meeting between *science* and *conscience*. The term *science*, as it is used here, encompasses the knowledge of the biological, the mental and the social being, as well as the observation of what is going on here and now, a cybernetic observation of the consultation itself, in a manner of speaking. Through his or her training, the doctor inevitably confronts the patient with the disease. It is his or her job to reveal it. He or she will be gratified to have, at least, found the evil, by always pushing the limits of diagnostic exploration. This could partly explain the importance and the high cost of defensive medicine.

Patients, on the other hand, although mentally fit, are ineluctably and instinctively drawn towards the uncertain territories of illness and death. They are unable to resist the anxiety brought about by the fact that, at least in our north-western civilization, disease means social exclusion, and *the body* and *the healthy body* are sacred values.

It is natural for patients to be able to create their own state of illness. A feeling of illness without a somatic background is, like the laughter, typical of humans. This phenomenon, in serious cases, has always been known as hypochondria or hysteria. The current term for it is *somatoform disorder*. The limits of this classification, however, remain unclear. Its prevalence seems to be proportional to the number of therapists available.

Whether it is the doctor or the medicine which misleads by creating a sick person out of a healthy one, there is no name or definition for the 'medical error in excess'. It is a scene fit for a Woody Allen character, or where Jules Romains meets Molière and Dr Knock makes The Imaginary Invalid^a happy. In Jules Romains's play, Dr Knock, a charlatan, takes the place of the old GP of the village. He quickly manages to persuade everyone that they are all ill. But, instead of resenting him, they end up loving their new physician, who, in turn, makes a fortune and brings prosperity to the village by turning it into a big hospital³⁹.

Quaternary prevention, a field of intervention

Quaternary prevention (field IV) based on relationships includes all of the continuous interventions doctors make to control their patients' as well as their own anxiety and lack of knowledge.

In this sense, applying EBM guidelines belongs in field IV. The quaternary field is where patients and doctors are lost. To avoid being trapped in this field, measures are needed.

Medical students have to be taught how to deal with a patient's worries and how to control their own doubts. Doctors have to implement quality assurance measures, learn how to apply EBM guidelines, and identify disease mongering. Doctors have to learn that sometimes, even though it may be difficult, it is better to do nothing and to stop useless investigations trying to find a rare disease undetected in Primary Care.

For the other three fields, measures need to be taken in order to avoid patients slipping into the fourth one. Bad information obtained from the Internet (field I), is a source of anxiety and unjustified demand for care. Screening for prostate or breast cancer (field II) can throw the patient into the fourth field if he or she becomes cancerophobic. An unclear text in an RX protocol, something which

^a Molière, "The Imaginary Invalid", Wikipedia, <http://en.wikipedia.org/wiki/The_Imaginary_Invalid>. French speakers can enjoy Louis Jouvet playing Dr Knock on <<http://www.youtube.com/watch?v=gMqEkyNnjbE&feature=related>>.

is not explained clearly enough, can also trigger patient anxiety. Therefore, permanent control on a doctor's behaviour, communication and proposals would be needed in order to avoid any damage. The shift from a time-based prevention organisation towards a relationship-based organisation opens new insights into a doctor's work. He or she observes him- or herself, and questions the ethical limits of his or her activities. In this sense, field IV is aimed more at the doctor than at the patient.

Two clinical cases

We can fill the fourth field with dozens of so-called diagnoses. From functional somatic symptoms⁴⁰ to non-disease diseases⁴¹, from unexplained symptoms⁴² to somatisation⁴³, medical literature features countless cases where doctors are faced with the alarming question all doctors have to confront at one point or another: 'what can I do here?'

To illustrate these difficult situations—where *listening* should replace *doing*—I have summarised two cases I came across in my daily work. The cases each describe a healthy person who became very concerned about her health. The first instance is related to the cultural background of the patient and the second to a laboratory mistake. Both of them are a typical illustration of field IV.

<p>Fadma, 30 – Maghrebi</p> <p>A dark patch on the nipple is worrying her. She is preoccupied and stressed, she talks fast.</p> <p>Yesterday, she found out that 10 years earlier, a man committed suicide in the house she just bought. She was possessed once and was exorcised by a well-known Iman. She is now afraid that evil spirits are going to make her ill and kill her. Her last mammography, taken only two months earlier, was negative. However, she wants to make sure that the dark patch is nothing serious. She sits down and uncovers her breast. After being listened to, palpated and reassured, she leaves with her mind at rest.</p>	<p>Elisabeth, 72 – Belgian</p> <p>The situation is worrying. This patient has been followed for a long time for breast cancer. The first error that occurred was ticking the CEA division instead of the CA 15-3 one. The CEA mark is very high and the patient, whose husband died of colon cancer, immediately understands that the situation is serious. The colon by injection is negative and the control blood test shows normal results. It was a false positive. She has already survived breast cancer and has nursed her husband, so she knows the amount of suffering involved. She doesn't believe me, she thinks I have tampered with the figures and requests another check. It will take several consultations and a lot of patience and listening to take away her doubts and regain her trust.</p>
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Tableau MJ, Family practice, Belgium, Sept 2002 . CEA and CA-15-3 are biological markers aimed at following of cancer (CEA for Ccolic cancer and CA-15-3 for breast cancer)

International impact of the *quaternary prevention* concept

Quaternary prevention is a new term for an old concept: *First, do not harm*. The limits are, of course, not new, but the concept of quaternary prevention puts a cap on a set of disciplines and attitudes

such as evidence-based medicine, quality assurance, defensive medicine, abusive nosographic proposals and ethical issues linked to the heartsink patient.

Quaternary prevention, initially a joke-like proposal, has slowly gained more importance among family physicians. The term first appeared in English on a poster at a WONCA conference³⁴. Since then, it has been admitted into the Wonca Dictionary of General Practice³⁵, it has been published in French⁴⁴, and has been picked up by several American⁴⁵, Spanish^{46,47,48}, Portuguese⁴⁹ and Brazilian⁵⁰ authors. It has been endorsed by UEMO⁵¹ and incorporated into the recommendations for primary healthcare regulations in Brazil⁵².

In 2010, it was the subject of a special Wonca workshop, as well as of a collective text⁵³ published in seven languages. There is also a website that attempts to list the publications referring to the term^b. The Brazilian Society of Family and Community Medicine honors it during their 11th Congress, and the Equipo Cesca^d will devote a seminar to it in Barcelona in 2011, supported by online discussions.

Operational limits of knowledge and related ethical issues are addressed through the prism of the patient-doctor relationship. For the future of general practice/family medicine, implementing quaternary prevention means opening new areas of research.

Notes

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