



## REFLEXIONES EN MEDICINA DE FAMILIA

### Prevention and clinical complexity

### Prevención y complejidad clínica

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Prevention is a medical and social aspiration with a long history, as has been shown, for example in the customary norms regarding leprosy and lepers. Great advances that have had a huge impact on the health of the population are due to prevention, such as the provision of clean water and vaccination against smallpox. However, prevention is also an activity in which the definition has changed over the years from being largely confined to the field of public health to becoming an important area in daily medical practice, especially since the introduction of the concept of a “risk factor” by the mid XX century<sup>1</sup>.

Despite this change, the basic idea of prevention as an activity which avoids future harm is still valid. In other words, clinical prevention is all the preventative activities which can be carried out by doctors with their patients during the clinical interview, with the aim of avoiding major harm in the future thanks to the detection of signs and symptoms of different degrees of relevance. Generally, prevention activity is provided to the patient as a

complementary activity to clinical care and this also brings specific ethical problems with it, which should not be ignored<sup>2</sup>. While some activities are well accepted by the public and scientific community, such as the vaccination against poliomyelitis, others are controversial, such as the PSA determination for early prostate cancer diagnosis<sup>3</sup>.

Some aspects of clinical prevention are seen as a basic activity which almost obviates the need to develop clinical judgment. For example, if we accept the decision to carry out a mammogram screening on all women from the ages of 50 to 65 every two years, in the medical office there is just one requirement to be included in the criteria, which is that the woman should fulfill the criteria of age and the time elapsed since the last mammogram. This apparent simplicity is strengthened by the use of tables and computers, even in fields with high complexity such as cardiovascular risk. But this on its own, does not eliminate the need for decision making which has to take into account the complexity of a particular patient<sup>4,5</sup>.

In this article the opposing forces that exist within the patient encounter between the apparent simplicity of the prevention activities and the complexity of clinical decision making are addressed, from the point of view of the doctor.

### Prudence in decision making when faced with uncertainty

Being a medical doctor implies carrying out rapid and appropriate clinical decisions under circumstances of

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uncertainty, and this intrinsic uncertainty applies more to Family Medicine doctors/General Practitioners than to specialists<sup>6-9</sup>. Obviously, this uncertainty needs to be limited and the scope of the unavoidable estimated, as rapid decision making in conditions of uncertainty results in professional and personal angst, as both the patient's health and the doctor's reputation are at stake. For this reason it is essential to give the right response. However, despite making the best possible decision, undesirable results are not always avoided, including the death of the patient, which adds to the feeling of failure and anxiety. Unfortunately, no matter how unavoidable uncertainty is in clinical practice, students and doctors are not generally taught how to control feelings of failure and anxiety in their training, or how to deal with them.

There are two false solutions for artificially reducing uncertainty, either by increasing the number of diagnostic tests (and the generation of 'hard data' in which the interpretation generates a vicious circle of yet more uncertainty) or by increasing the preventive component in the medical encounters. All medical encounters offer opportunities for preventive actions<sup>10</sup>, but the artificial filling of the encounter with preventative actions merely makes a considered decision in the face of uncertainty more difficult when dealing with patient suffering. Instead of holding the balance between being a 'healer' and a 'scientist', the medical profession is slowly moving towards the illusory safety of the latter, reinforced mainly by a biological interpretation of medicine based on biometric tests and on excessive prevention without any proper debate on the topic<sup>11</sup>.

Given that the agency relationship exists, and will always exist, in which the doctor makes decisions as a patient's agent<sup>12</sup>, it is essential that the doctor sees the case as unique, and should take into account the circumstances and values of the patient, which may be different in each medical encounter, and should make appropriate and individualised decisions. However, habits should not be prescribed, especially as a result of ignorance on the part of the professional regarding the patient's real motivations. For example, the source of pleasure and the reasons for living can be very different for each patient and for each doctor, either because of personal circumstances, or because of social class differences. It is necessary to try to understand people and their decisions, a very different approach from the deterministic one in which only 'evidence' (tests) is considered, and not the ambivalence and complexity of the human being.

The simplified linear reasoning of cause and effect that underpins prevention postpones anxiety, but does not solve the problems which are created by decision making in processes involving uncertainty. In the face of anxiety and failure one possible, practical and rational answer exists based on a responsible decision made after debate which eliminates irrational and destructive feelings of guilt. When dealing with uncertainty there is no perfect answer; what is needed is a considered one, adapted to the circumstances and to the specific case and shared with the patient. The aim is to do things well, to make thoughtful decisions based on clinical judgment and on common sense. The clinical reaction should be based on rational choice<sup>13</sup>, not on random preventative actions. Rationality and sensitivity

bring with them responsibility, not anxiety or guilt, and can be used to justify one's actions in judgment of bad praxis.

## Complexity in preventive decision making

The apparent consistency of some of the instruments used in preventive activities, such as protocols, clinical guidelines and risk tables, can result in the complexity of their use in practice being forgotten. For example, risk tables are used for decision making, despite the fact there are no studies available that evaluate the impact of the leap from the knowledge of the population of origin from which the table is derived, to the particular patient to whom the data are applied, the so called "clinical-statistical tragedy"<sup>14,15</sup>. Thus, the preventive guides come to be applied routinely and indiscriminately without taking into account the particular individual context.

Nevertheless, even the supporters of risk tables acknowledge the complexity of the obvious. Thus, it can be read: 'It is an unquestionable fact that most of the tables are restricted to just a few risk factors (there are other risk factors such as obesity, family history and other emerging factors which the tables do not take into account), and have a sensitivity which does not surpass 50%, and therefore have a low predictive power to identify individuals who will go on to have a fatal cardiovascular event. Unfortunately, any existing table is far from being an instrument of high precision, and so should be considered as a useful tool in primary prevention in cardiovascular diseases but only if it does not replace clinical judgment, and all exceptions and precautions are considered at the moment of implementation<sup>4</sup>.

Despite this call for prudence, in the daily clinical practice a reductionist and linear view of cause and effect has been imposed, which aspires to modify the unpredictable future with simple preventive measures. Improvements in health have been attributed to health care activities carried out previously, with little scientific basis. In fact, the benefits of preventive activities on the risk factors can only be evaluated by their impact on the population, not the individual. This population aspect in the prevention of risk factors is frequently forgotten<sup>14,16,17</sup> and could lead from the "imposition of health and of things healthy"<sup>18,19</sup> to the "sacrifice" of the patient for the good of the community instead of a healthy option for "sustainable personal health"<sup>20</sup>. Thus the doctor should act as the patient's agent and not be blinded by norms and measures, which while true within the population, result in a oversimplification of the individual preventive and curative clinical decision<sup>21</sup>, in such a way that the patient could see himself simply as an anonymous being, characterised by age and gender, and little else, to whom standards, such as cardiovascular risk tables, are applied. Furthermore, prevention often lacks negative feedback (as has been demonstrated by screening of PSA of prostate cancer, where everything is seen as good: "if the test results are normal, relief follows, if the PSA is high a biopsy and prostatectomy will be carried out, and so avoid one death by cancer") which complicates the situation further<sup>22</sup>.

Even in the case of extremely simple preventive decisions, such as the carrying out of mammogram screening

every two years among women between the ages of 50 and 65, the situation becomes less simple in the clinical practice. In this particular case, the complexity stems from the difficulties in transferring sufficient and relevant information to the woman so that she can make her own informed and reasoned decision. Thus false expectations and errors in the appreciation of risks, benefits and harm due to the mammogram screening are considered to be a public health problem<sup>23,24</sup> which is not consistent with the simple and routine recommendation that “the mammogram saves lives”. How does it save lives and how can women be adequately informed about the need to participate in a preventive activity which speeds up the diagnosis of silent cancers in one in seven cases, and delays the diagnosis of aggressive cancer in one in nine cases?<sup>25</sup>

Prevention, due to its complexity, cannot be simply prescribed without serious justification. Prevention also brings uncertainty<sup>26,27</sup>. For example, when prevention is offered to the elderly, all that may be achieved is a change in the cause of death<sup>28</sup>. How is one informed and who decides? Two questions which are also relevant in the other previously mentioned case, and the determination of PSA for prostate cancer screening<sup>3,26</sup>.

## Conclusion

Decision making in the face of uncertainty is consubstantial with the medical encounter. In the face of anxiety and feelings of failure which arise from medical decision making there is no place for false solutions of an aggressive-defensive medicine, or for irrational prevention. The first feeds a vicious circle of information which is difficult to interpret and the second is based on the illusory simplicity of the preventive endeavour. A more rational response would involve calm reflective decision making and the constant evaluation of the implicit uncertainty in all preventive activity.

## Conflict of interests

This text springs from the debate at the first Seminar of Innovation in Primary Care in 2008. The Seminar focused on innovation in clinical prevention and health systems. It took place on 7th March in Madrid. Iona Heath was the keynote speaker and Antonio Duran and Joan Gené played the role of commentators. The Innovation Seminars were started in 2005 by the Foundation of Health Sciences (Fundación de Ciencias de la Salud) and the Foundation for Training of the Medical College Organization (Fundación para la Formación de la Organización Médica Colegial); in 2008 the Research Institute in Primary Care Jordi Gol also contributed. The Seminars also have the sponsorship of the Ministry of Health and GSK.

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