



# ICPCM Newsletter

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## What is Quaternary Prevention?

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### Introduction

In the last half century, three main categories of prevention have been considered: primary, secondary, and tertiary [1,2]. According to the definition by Wonca, the three different types of prevention can be person oriented or oriented at the macro level of society [3].

In addition to the classical three levels of prevention, a fourth category of quaternary prevention was proposed by Marc Jamouille in 1986 to target patients with illness but with no disease and who are at risk of harmful medical interventions (4). The overall concern is that patients who may feel ill without having a disease are at an increased risk of being harmed by over testing and overmedicalization. The typical example would be a patient with bio-medically or psychiatrically unexplained symptoms. Quaternary prevention would caution that the physician should refrain from doing potentially harmful invasive testing in such patients.

### The Concept of Quaternary Prevention

Following Jamouille's contribution to the academic and scientific debate about the role of prevention and possible harm of medical activities implemented with preventive intention, the quaternary prevention concept was integrated in the Wonca International Dictionary for General/Family Practice. Wonca defined quaternary definition as: 'Action taken to identify patient at risk of overmedicalization, to protect him from new medical invasion, and to suggest to him interventions, which are ethically acceptable' [3]. More recently researchers have proposed a revision of the WONCA definition and provided a new definition of quaternary prevention as 'Action taken to protect individuals (persons/patients) from medical interventions that are likely to cause more harm than good' [5, 6]. The goal of quaternary prevention is to reduce overmedicalization (overdiagnosis and overtreatment) and iatrogenic or medical harm. Thus, quaternary prevention involves refraining from providing therapy that has not been adequately assessed in a randomized controlled trial with low risk of bias.

Widespread disease campaigns and lowering the normal thresholds in some common diseases, for example diabetes and hypertension, suddenly transforms thousands of healthy persons into patients. This contributes to an epidemic of multimorbidity, polypharmacy, overtreatment, and a greater exposition to the medication's side effects and harms [6]. These factors contribute to a medical model that is more interventionist and more invasive than ever, exposing patients to greater chances of harm. And this makes quaternary prevention more needed than ever.

More frequently, labels like 'medically unexplained symptoms,' 'functional disorders' or 'bodily distress syndrome' are associated with patients who have illness but without disease. And these

labels have limitations and may stigmatize patients and be at risk of overtreatment and harm. Since there is also an element of risk of overmedicalization, overtreatment and harm in the other three levels of primary, secondary and tertiary prevention, quaternary prevention should be present in physicians' minds for every intervention they suggest to a patient [5].

In contemporary medicine, the human being may suffer harm from medical interventions throughout the life course beginning at conception, during childhood, during the entire healthy lifetime as well as during a self-limited disease, a chronic disease, or a terminal disease [5]. The quaternary prevention concept aims to make this reality recognized by health professionals and patients. It goes beyond preventing overdiagnosis or preventing overtreatment; it includes preventing all types of harm associated with well intentioned medical interventions. In short Quaternary prevention aims to protect patients from medical harm

There is a growing consensus among different authors about the close relation among the concept of quaternary prevention and the non-maleficence principle of medical ethics usually mentioned as first, do no harm. Wagner H states 'The concept of quaternary prevention is nothing more than the systematization of the concept of "*primum non nocere*" in our modern medical practice, an ethical approach to practice better clinical care and to protect people of excess of medicine'[7]. In the new definition of quaternary prevention, the focus on avoiding harm to patients is more noticeable. Another aspect that favours this new definition is the language that is used. This new definition is simpler and easier to understand, both for patients and health professionals. In a world where health literacy is still a frequent problem, this is a highly relevant issue.

## Conclusion

Some researchers and authors caution that quaternary prevention should not be seen as a panacea, nor should it be seen as a risk-free medical activity. With the zealous intention of minimizing harms, there is the risk of refusal to perform some medical interventions that would indeed benefit some patients [5,6]. However, this is always an inherent characteristic of the uncertainty of medical practice, especially general practice.

## References

1. Clark D, MacMahon B.. *Preventive medicine*. Boston (MA): Little, Brown & Co; 1967. [[Google Scholar](#)]
2. Nightengale E, Cureton M, Kalmar V.. *Perspectives on health promotion and disease prevention in the United States*. Washington (DC): Institute of Medicine, National Academy of Sciences; 1978. [[Google Scholar](#)]
3. Bentzen N. *Wonca dictionary of general/family practice*. Copenhagen: Manedsskrift for Praktisk Laegergerning; 2003. [[Google Scholar](#)]
4. Jamouille M. *Information et informatisation en médecine générale. Inf.-G-Iciens*. Namur (Belgium): Presses Universitaires de Namur; 1986. p. 193–209. [[Google Scholar](#)]
5. [Martins C](#), [Godycki-Cwirko M](#), [Heleno B](#), and [Brodersen J](#). [Eur J Gen Pract](#). 2018; 24(1): 106–111.
6. Brodersen J, Schwartz LM, Woloshin S.. Overdiagnosis: how cancer screening can turn indolent pathology into illness. *APMIS Acta Pathol Microbiol Immunol Scand*. 2014;122:683–689.)
7. Wagner H. Quaternary prevention and the challenges to develop a good practice comment on 'Quaternary prevention, an answer of family doctors to overmedicalization'. *Int J Health Policy Manag*. 2015;4:557–558. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)].