

Quinary prevention: Defined and conceptualized

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Introduction

The objective of preventive medicine is to intercept or oppose the "cause" of disease and thereby arrest the disease process. Prevention of disease can be practiced at various levels, which are conventionally listed as primary, secondary and tertiary.^{1,2} These are depicted in Figure. Primary prevention also includes

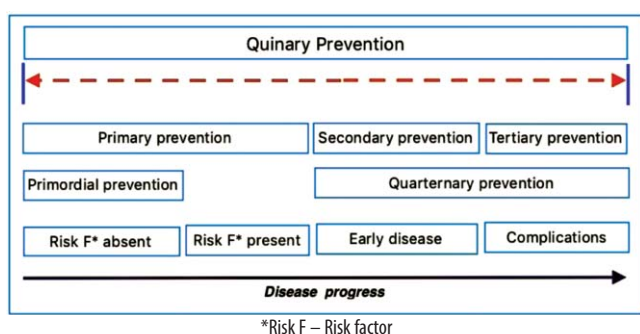


Figure: Schematic representation of the ambit of quinary prevention and the spectrum of various levels of prevention with respect to the progress in disease development.

the concept of primordial prevention. A novel term, quaternary prevention, is also used to articulate the need to avoid over medicalization of physiological changes.^{1,2}

While all three conventional levels of prevention aim to achieve the best possible health levels, under given circumstances, they relate to different phases in the natural history of disease. Quaternary prevention aims to influence the course of secondary and tertiary prevention, by making them less wasteful and more efficient. All these types of prevention aim to meet the various challenges to global health, in a proactive manner.^{1,2}

(MIS) Communication and (ILL)-Health

Thanks to developments and advances in technology, our means of communication have improved markedly over the last few decades. This has allowed faster transmission of information and knowledge, helping health care become more efficient.

Paradoxically however, the same technological systems also facilitate spread of false information, which may or may not

have deleterious effects on health. Examples include social message exhorting people not to take vaccinations or modern medication, due to purported side effects or disadvantages. The phenomenon of e-hearsay has become more prevalent and disturbing in recent years.

The impact of hearsay and misinformation extends across all levels of prevention. A message encouraging sleeping for 12 hours a day, or avoidance of outdoor exercise will negatively influence all efforts to encourage a healthy lifestyle in the general public, and in persons at risk of metabolic ailments. A post criticizing modern medication such as insulin or statins discourages patients from seeking timely treatment. Tweets that disparage cardiac and renal interventions, meant to improve health, and support irrational, untested complementary/alternative medicine, prevent readers from reaping the benefits of tertiary prevention. Quaternary prevention, too, is undermined, when unscrupulous medical advertisement is camouflaged as a message of public interest.

Novel Facet of Prevention

Prevention of spread or effects of wrong health and/or health measures related information thus becomes important in today's high technology environment, which allows rapid and wide dispersal of (mis) information.

For accurate scientific communication of this idea, an appropriate term needs to be coined, along with precise conceptualization and definition. This concept and definition should be applicable to all health care settings, and all health care professionals. Therefore, efforts have been made to coin a new term for this type of prevention, and to formulate a simple, yet comprehensive definition of the concept.

Methodology and Results

The authors looked up words in various standard English dictionaries to create a new suitable term for this level of prevention.³⁻⁵ Various levels or types of prevention already defined in dictionaries and textbooks of epidemiology and public health, were reviewed.^{1,2,6,7} These are used by many subject experts and professional associations in scientific communications.

The terms primary through quaternary prevention, already in vogue, created a framework for coining the new phrase. As these four levels / types were already defined,^{1,2,6,7} the current type of prevention of interest happened to be the fifth type.

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Hence, words or word links related to number “five” and “prevention” were looked up in the dictionaries.³⁻⁵ Two lexical elements “Prevention” and “Quinary” were retained while others were excluded. The word quinary is an adjective which conveys a relationship to the number five. Derived from the Latin word *quinarius*, it describes the fifth object in a series, or an arrangement of five. Hence, these two terms have been combined, and a new scientific term “quinary prevention” created, to describe this type or level of prevention. While defining and conceptualizing the new term, efforts were made to meet the prescribed international standards.⁸

Definition and Conceptualization

A comprehensive definition of quinary prevention is as follows: “Policies, conditions, actions and measures, that inhibit the emergence and establishment of processes and factors, that increase the risk of communication of inappropriate information, related to health, disease prevention or management, and/or that minimize the risks of communicating any such inappropriate information, hence minimizing the effect of such misinformation on the progression or development of disease at any stage during its natural history”. Factors or actions that hinder the developments or advancements in modern technologies will not be considered as examples of quinary prevention because they at the same time inhibit dissemination of useful information.

A simpler definition of quinary prevention is as follows: “Means of preventing health-related hearsay or misinformation, or its ill effects on the health of individuals.” Quinary prevention thus overlaps, and includes, all other levels of prevention. Effective primary, secondary or tertiary prevention will not be possible if attention is not paid to quinary prevention.

Responsibility

Policy Makers: The responsibility for quinary prevention lies with a wide variety of stakeholders. The government should bring in legislation to discourage and prevent spread of ‘wrong’ health related information. This legislation should extend to all social media (including Facebook, Twitter and WhatsApp) as well as mass media (print radio television). Concurrently, the health ministry should campaign to spread salutogenic messages in the society. Administrators of social platforms should also take on the responsibility of curating, and if necessary, censoring, health-related posts which are false, and may harm public or individual health. Both legislators and administrators should work in close collaboration with specialized health care professionals and information technology experts to ensure mass quinary prevention.

Moreover, it is important that clear-cut, updated and accurate

information including discussion on uncertainties, must be made available and accessible through reliable sources, preferably involving two-way communications. In addition, while planning health interventions, the importance of including quinary prevention measures must be underscored. To plan and institute such measures would require new skills and attitudes on part of the public health community and other stakeholders.

Professionals: The health care profession must shoulder the major responsibility of quinary prevention. By constantly updating themselves in their chosen discipline, the science of information dissemination, and the arts of motivation and behaviour change, health care professionals should aim to spread health literacy across civil society. Professionals should also refrain from voicing or airing comments about subjects with which they are not familiar, or are not qualified to speak on.

In certain circumstances when a risk of resistance from the community to the disease prevention and control measures is anticipated, people that the community trusts must be identified and relationships built with them. They may also be involved in decision-making at various levels to ensure that interventions are collaborative, contextually appropriate and that communication is community-owned. Further interventions may be planned for skill development of individuals on how to use health information and ensuring authenticity of health information, similar to trade mark or marks of excellence.

Public: Achieving optimal health is a shared responsibility, of both the public and health care professionals. Just as in other spheres of prophylaxis and prevention, quinary prevention is the duty of the public at large. By sustained information campaigns, the public must be made aware of how to differentiate between ‘true’ advice and ‘e-hearsay’, and to refrain from spreading false propaganda. This calls for techno social competency in members of the public at large.

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