Original Research Paper

Volume - 12 | Issue - 11 | November - 2022 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Public Health

QUATERNARY PREVENTION DURING COVID-19 OUTBREAK

Dr. Phani Krishna Telluri MBBS., Junior Resident, ESIC Medical college & Hospital, Sanath Nagar, Hyderabad-500038

KEYWORDS :

Quaternary Prevention(QP) : evolution of QP and present status

Quaternary prevention concept introduces a new strategy, combining patient and doctor's views and elaborating on a prevention concept based on this relationship. Its new way of dealing with the prevention concept breaks away from the former chronological way.

The main idea is to avoid patient overdiagnosis and overtreatment 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.(10)

Some Examples of quaternary prevention:

The provision of iodized salt to prevent iodine deficiency and related thyroid dysfunction, at a mass level, has been a major success story of modern endocrinology.

Another well-known example is the use of hormone replacement therapy that not only failed to reduce cardiovascular mortality, but increased the number of cases of breast cancers, stroke, and thromboembolic events .

Challenge to QP

We are dealing with two new situations. First, the patients are over informed about healthcare and influenced by the media, but the quality of this information is doubtful at best. Second, there are safety issues with medical research, frequently developed in a way that inhibits independent analysis.(24)

Why Quaternary Prevention Is Important / What Will Happen If Qp Is Not There

Quaternary prevention aims to:(25)

A] Reducing exposure to the system,to avoid unnecessary tests, ineffective treatments.

b] Do in general: Translating exposure to the level where the healthcare system is less harmful (eg, primary versus specialized care). A clear example is the monitoring of heart failure.

c] Do in particular: Broadly quaternary prevention would actively intervene to prevent collateraldamage of health interventions, for example, unnecessary preoperative tests which start diagnosis and therapeutic "cascades" when something is wrong at random.(25)

Need of Quaternary Prevention In Covid 19 Pandemic

Steroids like dexamethasone are widely used to fight against inflammation, one of the effects of the coronavirus disease. However, most doctors label steroids as "double edged swords" in Covid-19 treatment if they are not used judiciously. Overuse of steroids in covid19 positive patients who are mild, asymptomatic, Starting patients on steroids early is harmful for them, Steroids lower the body's immunity and can also cause viral replication. Their unindicated and early use worsen the outcome of patients. The right time to use steroids is when the oxygen saturation is low.

Both azithromycin and doxycycline have been used for treating COVID-19 in the community even in the absence of suspected bacterial pneumonia, so this practice should now be re-considered – particularly because overuse of antibiotics in the community can fuel the emergence of antimicrobial resistance."

Prescription of drug Ivermectin under compulsion, peer pressure or on patient's demand, resulting in overuse at hospitals. Some state governments have advocated the use of Ivermectin for COVID-19 treatment and as a prophylaxis. Disclaimer: The drug does not prevent a COVID-19 infection. It "helps in reducing the severity of the disease".

When we put the patient and the community first in our medical practice, it is clear that quaternary prevention is a path to good practice and the development of good care that increases the quality of life of both the patients and the healthcare team. We have a population that has access to a large amount of information, and it is our role to organize all that knowledge in a way that we may reach shared decisions together.

Goals and Objectives

1. Define the concept of Quaternary Prevention in medical practice.
2. Describe how overmedicalization affects the well-being of our patients.
3. Raise awareness about the concept of health and disease.
4. Identify areas to avoid overdiagnosis, excess preventive interventions and cancer screening tests.
5. Discuss the effectiveness and safety of vaccination.
6. Identify those pseudo diseases in which inappropriate marketing is carried out.
7. Identify medical conditions that may result in overmedicalization (polypharmacy, non-rational use of medications).
8. Study the factors that affect the diagnosis and treatment of diseases such as evidence-based medicine and the role played by research in the development of Quaternary Prevention applied to primary medicine.
9. Develop and implement Quaternary Prevention based on the safety of patients, residents or medical students.

Evaluation

The evaluation of the result of the education in Quaternary Prevention is based on the appropriate care to the patient taking into account the following skills and competences:

Patient Care: clinical and professional skills of the doctor.

Interpersonal and Communication Skills: How effective is the doctor in relating to the message of Quaternary Prevention.

Professionalism and Ethics: Sensitivity to the diversity of the patient and their needs in knowledge of Quaternary Prevention.

Medical knowledge: As it promotes knowledge of Quaternary Prevention and applies it to different health conditions.

REFERENCES

1. Martins C, Godycki-Cwirko M, Heleno B, Brodersen J. Quaternary prevention: reviewing the concept. European Journal of General Practice. 2018 Jan 1;24(1):106–11.
2. Norman AH, Tesser CD. Quaternary prevention: a balanced approach to demedicalisation. Br J Gen Pract. 2019 Jan 1;69(678):28–9.
3. Leavell HR, Clark EG, Al E. Preventive Medicine for the Doctor in his Community. An Epidemiologic Approach. Preventive Medicine for the Doctor in his Community An Epidemiologic Approach [Internet]. 1958 [cited 2021 May 6]; Available from: https://www.cabdirect.org/cabdirect/abstract/19582702179
4. Nightingale EO. Perspectives on health promotion and disease prevention in the United States. IOM publication; 78-001 - Institute of Medicine (USA) [Internet]. 1978 [cited 2021 May 6]; Available from: https://agris.fao.org/agris-search/search. do?recordID=US8051448
5. Strasser T. Reflections on Cardiovascular Diseases. Interdisciplinary Science Reviews. 1978 Sep 1;3(3):225–30.
6. Primordial Prevention | Cadi [Internet]. [cited 2021 May 21]. Available from: https://cadiresearch.org/topic/prevention-and-control/primordial-prevention
7. Jamoulle M. Quaternary prevention: first, do not harm. Rev Bras Med Fam Comunidade. 2015 Jun 24;10(35):1–3.
8. Depallens MA, Guimarães JM de M, Filho NA. Quaternary Prevention: Is this Concept Relevant to Public Health? A Bibliometric and Descriptive Content Analysis [Internet]. Public and Global Health; 2019 Oct [cited 2021 Feb 15]. Available from:

http://medrxiv.org/lookup/doi/10.1101/19007526
9. Juncosa S. Author: Maria Llargués Pou. :20.
10. Jamoulle DM. INFORMATION ET INFORMATISATION EN MEDECINE GENERALE. :17.
11. Kuehlein T. Quaternary prevention: a task of the general practitioner. :12.
12. Almenas M, Hidalgo EC, Pineda CA, Muñoz E, Armadillo M de LR, Salvatierra E, et al. Prevención cuaternaria: como hacer, como ensiñar. Rev Bras Med Fam Comunidade. 2018 Sep 18;13:69–83.
13. Martins C, Brodersen J, Bülow J, Haase C. Quaternary prevention as a tool to prevent overdiagnosis in the clinical practice. BMJ Evidence-Based Medicine. 2019 Dec 1;24(Suppl 2):A3–A3.
14. Starfield B, Hyde J, Gervas J, Heath I. The concept of prevention: a good idea gone astray? Journal of Epidemiology & Community Health. 2008 Jul 1;62(7):580–3.
15. Chan DNY. EDITORIAL BOARD MEMBERS. :2.
16. Global Family Doctor - WONCA Online [Internet]. [cited 2021 May 15]. Available from: https://www. globalfamilydoctor.com/groups/specialinterestgroups/quaternaryprevention.aspx
17. Martins C, Godycki-Cwirko M, Heleno B, Brodersen J. Quaternary prevention: reviewing the concept. Eur J Gen Pract. 2018 Jan 31;24(1):106–11.
18. Mossi NO. Importance of Quaternary Prevention in the Frail Elderly. BJSTR. 2019 Aug 5;20(2):14920–3.
19. Echt DS, Liebson PR, Mitchell LB, Peters RW, Obias-Manno D, Barker AH, et al. Mortality and morbidity in patients receiving encainide, flecainide, or placebo. The Cardiac Arrhythmia Suppression Trial. N Engl J Med. 1991 Mar 21;324(12):781–8.
20. Kalra S, Baruah MP, Sahay R. Quaternary prevention in thyroidology. Thyroid Research and Practice. 2014 May 1;11(2):43.
21. Boardman HMP, Hartley L, Eisinga A, Main C, Roqué i Figuls M, Bonfill Cosp X, et al. Hormone therapy for preventing cardiovascular disease in post-menopausal women. Cochrane Database Syst Rev. 2015 Mar 10;(3):CD002229.
22. Baruah MP, Kalra B, Kalra S. Quaternary prevention in medical nutrition therapy. Journal of Medical Nutrition and Nutraceuticals. 2014 Jul 1;3(2):53.
23. Kalra S, Gupta Y, Kalra B. Quaternary prevention and gestational diabetes mellitus. Indian J Endocrinol Metab. 2017;21(1):1–3.
24. 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 May 15;4(8):557–8.
25. Quaternary prevention: a summary | equipocesca [Internet]. [cited 2021 May 23]. Available from: http://equipocesca.org/en/5903652/
26. Why is quaternary prevention important in prevention? [Internet]. figshare. SciELO journals; 2017 [cited 2021 May 15]. Available from:/articles/figure/Why_is_quaternary_prevention_important_in_prevention_/5668015/1
27. Martínez González C, Riaño Galán I, Sánchez Jacob M, González de Dios J. [Quaternary prevention: containment as an ethical necessity]. An Pediatr (Barc). 2014 Dec;81(6):396.e1-8.
28. CDC. Coronavirus Disease 2019 (COVID-19) – Symptoms [Internet]. Centers for Disease Control and Prevention. 2021 [cited 2021 May 15]. Available from: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html
29. Kherad O, Moret Bochatay M, Fumeaux T. [Computed tomography (CT) utility for diagnosis and triage during COVID-19 pandemic]. Rev Med Suisse. 2020 May 6;16(692):955–7.