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Journal of General Medicine and Clinical Practice

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Review Article

A Provisional Conceptual Taxonomy of Prototypical Uncertainty Management Strategies in General Medicine

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Received date: December 19, 2024; **Accepted date:** February 03, 2025; **Published date:** February 14, 2025

Citation: Jose L. Turabian (2025), A Provisional Conceptual Taxonomy of Prototypical Uncertainty Management Strategies in General Medicine, *J. General Medicine and Clinical Practice*, 8(2); **DOI:10.31579/2639-4162/250**

Abstract

Cognitive decline is influenced by various factors, including diet, oral and gut microbiome health, vascular function, and systemic inflammation. This paper examines the contrasting effects of nitrate-rich diets and high sugar consumption on brain health. While nitrate-rich foods enhance nitric oxide (NO) production, supporting vascular and cognitive functions, excessive sugar intake disrupts glucose metabolism, damages the microbiome, and accelerates neurodegeneration. We review clinical studies, present relevant data through tables and graphs, and discuss strategies to optimize diet and microbiome health to prevent cognitive decline.

Kew Words: nitrate-rich diet; nitric oxide; cognitive decline; sugar; oral microbiome; gut-brain axis

Keywords; decision making, education, medical, morbidity, patient care, general practice

General practitioners (GPs) are often faced with complex problems, defined as those with two or more chronic conditions that together may have an adverse effect on health status, function or quality of life, and which require complex approaches to health care (1), but also patients with associated socioeconomic and medical problems, with mental and behavioural health problems, and frequently with multimorbidity that is associated with polypharmacy and the consequent adverse drug effects and drug interactions. Many decisions are made in fractions of a second, so that the process is so fast that we are not aware of it. But it is important to analyse what happens and how we can improve it because decisions are fundamental to our professional development and to achieving better patient outcomes. However, the methods GPs use to address these complexities are not yet understood, adequately conceptualised, or taught to junior doctors. ¿So how do expert GPs manage complex problems and adapt them to their community context? (2-5).

In addition to using evidence-based medicine (EBM), several, partly overlapping, approaches have been identified that are more frequently used than EBM as a sole tool by GPs to deal with complexities, and are specific to these specialists, and are not used (or very rarely) by hospitalists (6). Thus, we can cite the following:

1. Firstly, the "master problem" tool. This involves looking for the "master problems", as a qualitative method to facilitate the exit from this maze of complexity and multiple morbidity. These "master problems" generally remain hidden and can only "unravel" between the interstices of multiple morbidity, when the details of the system that defines the problem are explained. The GP looks for problems with "energy"/"master problem"; These are complex, multiple and dramatic or theatrical – everything in the clinical history history make us look into that particular question–. It is what gives us a blow to the stomach, which causes our hearts to beat faster, that moves us on many levels, which has a high "density of emotions", human elements, social symbols, and opens solutions in a patient (7).
2. Secondly, GPs treat patients with complex problems as a whole and address their problems in a multidirectional way (integrality, holism, contextualization) (8-10).
3. Thirdly, GPs use the combination of patient-centered care and the biopsychosocial approach for the effectiveness of medical intervention in the context of EBM (11).
4. Fourthly, GPs use a whole set of qualitative tools for decision making in individual patients: 1) Contextualization; 2) Continuity of Care; 3) Doctor-patient relationship; 4) Strategic planning; 5) Use of patient and doctor resources and strengths; 6) The self-esteem, self-capacity, and self-efficacy of patient and doctor; 7) The emotion; 8) The intuition; 9) Ethics; 10) Participation of patients and communities; 11) Ecological and network relationships; 12) Focus on the process instead of the result; 13) The clinical interview and the narrative; and 14) The family (12, 13).
5. Fifthly, GPs use specific tools for family and contextual care, such as the life cycle and the genogram (14-17).
6. Sixth, GPs build horizontal and trusting relationships with other

health professionals (nursing, social workers, specialist referrals and medical consultants), but the response of these professionals is contextualized by the GP into something meaningful for the patient in front of him (18).

7. Seventh, GPs build relationships with stakeholders (patients, families, carers) and thereby reduce the degree of complexity of problems, through the doctor-patient relationship and continuity of care (19-21).

8. Eighth, the GP makes decisions based on interactions between elements rather than isolated elements. The decision "emerges" from simple interactions; it is an inevitable result of interactions. The units of analysis of the consultation in family medicine/general medicine/primary care are the relationships/connections/links between actors (22).

9. Ninth, GPs use data from previous experiences with the patient and local data to improve their accuracy and precision (sensitivity and specificity) to facilitate rapid decision-making (23).

10. Tenthly, for the GP a clinical decision is good if it opens the way to a new decision (i.e. if it unblocks the path to the problem). What makes people sick? A deficit, an empty hole, a tunnel with no way out, a room with no doors or windows, a blockage. Illness arises from the deprivation of certain satisfactions - water, amino acids, calcium..., unsatisfied desires for security, commitment, identification, loving relationships, prestige, respect... But this tunnel has an exit. Health is the unblocking, the crossing of the bridge to the other side, the change of context. But the context, the exterior, changes according to perception, according to the interior. Health problems (biopsychosocial) can be conceived as a result of blockage in relational processes (structural, strategic, narrative and construction of the meaning of experience (6).

In summary, medical uncertainty is a widespread and important problem, but the strategies GPs use to manage it have not been systematically described. Exploring the uncertainty management strategies employed by GPs practising in community primary care settings, and organising these strategies within a conceptual taxonomy, is an important task that can guide efforts to understand and improve GPs' tolerance for clinical uncertainty. Providing a guiding framework for future research is essential to begin to understand how GPs undertake the task of managing uncertainty in the clinic; some way of imposing a useful order on the problem is needed. A conceptual taxonomy is presented here, and the prototypical uncertainty management strategies provide a provisional starting point. One of the obvious factors that make making decisions regarding human actions difficult is the complexity of life. Thus, we realise that to solve complex problems, the number of possible solutions is large and the simple choice between them is inadequate. to solve complex problems, the number of possible solutions is large and the simple choice between them is inadequate.

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DOI:10.31579/2639-4162/250