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Storylines of family medicine VIII: clinical approaches

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ABSTRACT

Storylines of Family Medicine is a 12-part series of thematically linked mini-essays with accompanying illustrations that explore the many dimensions of family medicine as interpreted by individual family physicians and medical educators in the USA and elsewhere around the world. In 'VIII: clinical approaches', authors address the following themes: 'Evaluation, diagnosis and management I—toward a working diagnosis', 'Evaluation, diagnosis and management II—process steps', 'Interweaving integrative medicine and family medicine', 'Halfway—the art of clinical judgment', 'Seamless integration in family medicine—team-based care', 'Technology—uncovering stories from noise' and 'Caring for patients with multiple long-term conditions'. May readers recognise in these essays the uniqueness of a family medicine approach to care.

INTRODUCTION

Physicians in family medicine prioritise patient care in community-embedded ambulatory settings, embrace holistic and person-centred understandings of patient concerns and attend to patients on the margins of current society. Because of this, how family physicians approach the diagnosis of disease, treatment of illness and management of medical problems commonly differs from how their colleagues in other specialties approach the same issues. The essays contained within this article should help students and residents appreciate that expertise in family medicine requires more than simply applying specific clinical methods and attitudes of various subspecialties to primary care: family physicians are not super-mini-poly-sub-specialists, and family medicine brings notably distinct perspectives to the practice of primary care.

EVALUATION, DIAGNOSIS AND MANAGEMENT I—TOWARDS A WORKING DIAGNOSIS

Lauren Gibson-Oliver and Bill Ventres

Seasoned family physicians incorporate a combination of prior knowledge, practical experience, clinical intuition and in-the-moment analysis in their diagnostic decision-making.

Although all doctors evaluate, diagnose and manage medical problems, family physicians approach the evaluation, diagnosis and management (EDM) of patients' concerns differently. This difference arises from the factors considered by family doctors when attending to patients' presenting issues and from the methods they employ to prioritise and address these factors.

Family physicians commonly deal with patients who present in ambulatory settings with undifferentiated problems, often early in progression of disease.[1] Rather than working through a complete differential diagnosis, as typically taught both early in medical education and on hospital rotations, family physicians often use clinical hypotheses to form a working diagnosis.[2] With years of practice and experience, the process of attending to patients' concerns becomes an ingrained habit, almost instinctual in nature.

This process of generating a clinical hypothesis/working diagnosis aligns with the principles of family medicine, including continuity of care, systems thinking, collaborative care and a biopsychosocial orientation to understanding patient presentations.[3] Family physicians consider a variety of factors when formulating a working diagnosis, ensuring an in-the-moment evaluation that considers the patient's unique circumstances.

While not an exhaustive list, family physicians routinely consider the following factors when attending to the EDM of patients' problems; each factor is considered, as needed, in the order presented below (figure 1):

- **Patient medical history**—Relevant medical problems and status of each condition.
- **Symptom complex**—Patients' subjective concerns and how they relate to one another.

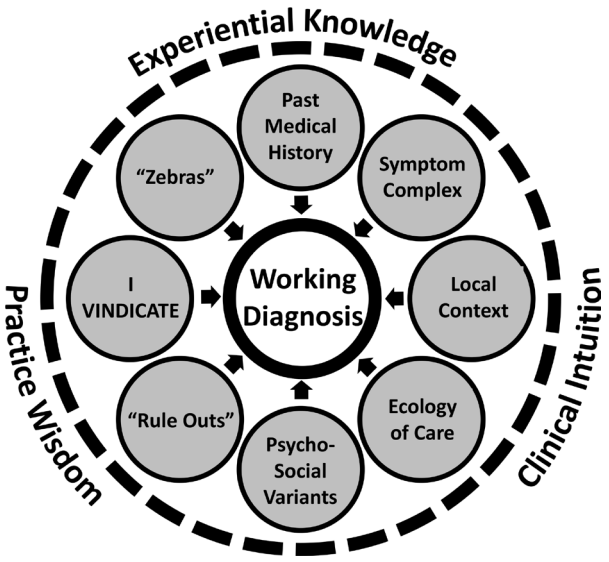

Figure 1 EDM I: factors for considerations in family medicine. EDM, evaluation, diagnosis and management.

- **Local context**—Consideration of specific characteristics, circumstances and conditions of the community (eg, social, cultural, economic and environmental factors).
- **Ecology of care**—Location of presentation reflecting situational and system factors.
- **Psychosocial variants**—Psychosocially mediated concerns, including medically unexplained symptoms.
- **'Rule outs'**—Potential diagnoses, often life threatening or serious, that are considered based on the symptomatology and severity of patient presentations.
- **I-VINDICATE**—One mnemonic for expanding differential diagnosis: iatrogenic, vascular, infection, neoplasm, drugs/degenerative, inflammatory/idiopathic, congenital, autoimmune, trauma and endocrine.
- **'Zebras'**—Rare or unusual diagnoses.

Overtime time, often well after residency training when physicians have practiced for years, family physicians develop three additional essential skills, which help them become capable and confident practitioners with a broad awareness of patient care needs:

- **Practice wisdom**—The skillful ability to both choose wisely among available EDM options and guide patients as they consider and settle on such choices.[4]
- **Experiential knowledge**—Knowledge gained through primary experience, distinct from that produced by clinical research or evidence-based modelling.[5]
- **Clinical intuition**—Gut feelings, borne of clinical maturity, that influence the diagnostic process.[6]

Advanced technologies, computer-generated algorithms and artificial intelligence (AI) may soon be used by doctors to help make EDM decisions; although technology may increasingly aid in the EDM process, it can never fully replace the essential roles human presence and relational interactions play in the practice of family medicine. Mutual trust, the therapeutic element of time, a relational awareness of patients' lives, an understanding of when patients are seriously ill and when their physical concerns will improve spontaneously, and a recognition of patients' own agency to follow-up—these are all important considerations when evaluating, diagnosing and managing patients' problems in family medicine.

Readings

- Donner-Banzhoff N. Solving the diagnostic challenge: a patient-centered approach. *Ann Fam Med* 2018;16:353–8. doi: 10.1370/afm.2264
- McWhinney IR. Problem-solving & decision-making in family practice. *Can Fam Physician* 1979;25:1473–7.
- Woolever DR. The art and science of clinical decision making. *Fam Pract Manag* 2008;15:31–6.

EVALUATION, DIAGNOSIS AND MANAGEMENT II—PROCESS STEPS

Lauren Gibson-Oliver and Bill Ventres

Attending to patients is key to developing a cohesive and intuitive process. We present four clear steps that family medicine physicians can use to evaluate, diagnose and manage patients' presenting concerns.

Building on the factors that family physicians consider when creating a working diagnosis, what are the systematic steps they take to appropriately address patient's chief concerns? Experienced family physicians commonly integrate the following four steps into a cohesive and intuitive process of EDM (figure 2).

Step 1: Investigate the patient's presentation—Start by listening. Begin with the patient's *chief concern*, focusing on *history of the present illness*, as interpreted by the patient. Conduct a pertinent *physical exam*. Allow patients to elaborate, as appropriate, to explore information from the *review of systems* and other aspects of the illness history. Acknowledge that certain situations may arise when patients present with severe, potentially life-threatening emergencies. Be ready to handle unexpected emergencies when patients present *in extremis*. Patients can also present with conditions that, while not immediately life threatening, need immediate attention. Prepare for consultation, transport or admission.[7]

Step 2: Develop a working diagnosis—Employ a methodical method that incorporates multiple perspectives across a variety of analytical domains. Know what concerns are common and integrate those concerns into one's thinking of previous medical history, local context and the ecology of care. See if you can explain the constellation of signs and symptoms with one eatiologic diagnosis. Consider other contributory causes while valuing the reality that many problems are multifactorial in nature. Assess how psychosocial considerations contribute as causative or contributing factors. Use findings from the physical exam and knowledge of how symptoms and signs commonly present to both assess for probable diagnoses and rule out key

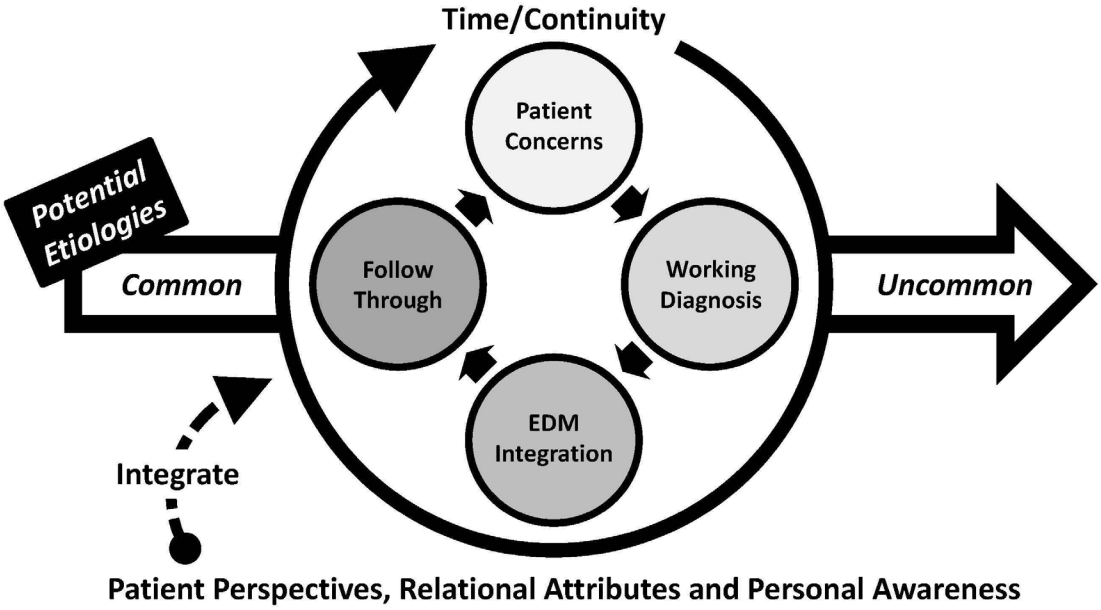

Figure 2 EDM II: process steps in family medicine. EDM, evaluation, diagnosis and management.

alternatives. When stuck, consider alternative diagnoses by using mnemonics or checklists.[8] Finally, and only finally, consider 'zebras'.[9]

Step 3: Practice EDM integration—Having evaluated the patient's status and developed a working diagnosis/clinical hypothesis in those patients whose presentations are not emergent in nature, begin managing the problems at hand prior to achieving diagnostic certainty. Decide what investigative studies are warranted and begin treatment plans. Iteratively gather more information, explore alternative diagnostic and therapeutic considerations and plan for the next steps. Appreciate patients' ability to understand their situations and agency for participation in therapeutic self-care.

Step 4: Follow through—Re-evaluate, consult, educate and follow-up as appropriate. Reconsider when things do not seem clear or when the clinical path forward is in question or not going as expected. Share uncertainty, give hope, and express a commitment to care. Go back to the patient—and family if applicable—and gather a more thorough, extensive history. Seek the advice of others, including lay and professional caretakers, family medicine colleagues and clinical subspecialists. Use person-focused and relationship-centred skills to involve stakeholders. Send patients on their way with a plan for timely follow-up and continued care.

Keep in mind that not all presentations end up with definitive answers to guide next steps in the EDM process.[10] Don't worry! Accept that a family medicine EDM process may come to a specific endpoint, have multiple endpoints or be an infinite cycle.

Remember that in each step of the process, and attending to patients as people is the key element along the EDM path.

Readings

- Biehn J. Managing uncertainty in family practice. *Can Med Assoc J* 1982;126:915–7.
- Stange KC. The generalist approach. *Ann Fam Med* 2009;7:198–203. doi: 10.1370/afm.1003
- Summerton N. Making a diagnosis in primary care: symptoms and context. *Br J Gen Pract* 2004;54:570–1.

INTERWEAVING INTEGRATIVE MEDICINE AND FAMILY MEDICINE

Kyle Meehan and Mari Ricker

Family and integrative medicine both focus attention on the whole patient; they are specialties that have been shifting the approach to patient care for decades.

In 1969, the American Board of Medical Specialties approved family medicine as a new specialty, birthed from a commitment to social responsibility during the social justice movements of the 1960s.[11] At that time, two US commissions (the Millis Commission and The National Commission of Community Health Services) recognised the need for 'a physician who focuses not on individual organs and systems but on the whole (person) who lives in a complex setting' and a physician who 'knows that diagnosis or treatment of a part often overlooks major causative factors and therapeutic opportunities.'[12]

The specialty of family medicine centres around the importance of a personal physician; it emphasises the importance of providing continuity of care and prioritising whole-person care while also recognising the influence of social, emotional and environmental factors on the health of the individual patient and their family. Additionally, from its inception, family medicine has been committed to the importance of preventative health as a major pillar of care within the specialty and as the most profound way to influence and maintain health for

patients. Family medicine adopts a comprehensive and continuous approach to patient care, emphasising strong doctor–patient relationships, preventive measures and management of chronic conditions.

Much like family medicine, integrative medicine addresses gaps in care delivery caused by the reductionistic mindset that has dominated modern medicine. This mindset often leads to fragmented, impersonal and disease-oriented care where symptoms are treated in isolation without considering the broader context of a patient's life. As defined by the Andrew Weil Center for Integrative Medicine, 'integrative medicine is healing-oriented medicine that takes account of the whole person, including all aspects of lifestyle. It emphasises the therapeutic relationship between practitioner and patient, is informed by evidence and makes use of all appropriate therapies.'[13]

In its roots, integrative medicine represents a radical shift from modern medicine's reactionary approach to disease-based care to a proactive promotion of health and wellness that honours the body's innate healing systems. Integrative medicine incorporates diverse healing modalities, such as conventional Western medicine, nutrition and lifestyle medicine, mind–body practices, complementary therapies, and whole traditional medical systems, such as Traditional Chinese Medicine and Ayurveda.

Practitioners of integrative medicine and family medicine embrace the power of evidence-based medicine. A core tenet for integrative medicine is weighing the balance of safety and efficacy for patients. Integrative medicine uses services from an array of evidence-based complementary therapies, such as acupuncture, massage and herbal remedies, to address the precise needs of specific populations while remaining sensitive to their cultural backgrounds. Family and integrative medicine both apply evidence-based guidelines to preventative care and screening as well as chronic disease management over a lifetime.

Both disciplines strive to bridge the gaps left by medical specialisation and recognise the importance of treating the individual as a whole and in their broader context of family, community and environment rather than only attending to isolated organ systems. Family medicine and integrative medicine believe that the patient and practitioner are partners in the healing process and recognise the complex interplay between physical, mental, spiritual and emotional health. By offering a diverse range of services and prioritising patient–provider trust, both disciplines create a more inclusive and equitable healthcare system. Their shared mission to provide comprehensive, patient-centred care embodies the essence of good medicine (figure 3).[14]

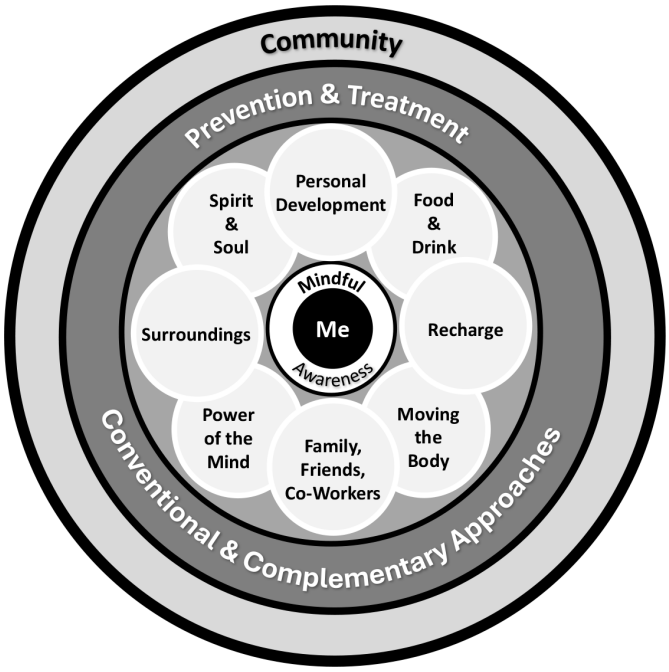

Figure 3 Connecting for whole health. Adapted with permission.[14]

Readings

- Rakel D. The salutogenesis-oriented session: creating space and time for healing in primary care. *Explore (NY)* 2008;4:42–7. doi: 10.1016/j.explore.2007.10.016
- Maizes V, Rakel D, Niemiec C. Integrative medicine and patient-centered care. *Explore (NY)* 2009;5:277–89. doi: 10.1016/j.explore.2009.06.008
- Locke AB, Gordon A, Guerrera MP, Gardiner P, Lebensohn P. Recommended integrative medicine competencies for family medicine residents. *Explore (NY)* 2013;9:308–13. doi: 10.1016/j.explore.2013.06.005

HALFWAY—THE ART OF CLINICAL JUDGEMENT

David Loxterkamp

Halfway is the hunting ground of medicine. Seasoned clinicians learn to position themselves halfway between intuition and evidence, listening and lecturing, patience and action, and the art and science of our craft.

I am reminded of a conversation I had with a third-year resident. He was presenting the case of a robust 70-year-old man who had recently lost his wife to cancer. The man had made the appointment to discuss his insomnia, loss of appetite and uncontrollable crying spells…and to make a request of the young doctor: "Could I have something for my depression?" The resident, responding to the sadness in the man's face, suggested an antidepressant. The patient was grateful and agreed to return in three weeks.

'Why did you prescribe a medication?' I nudged.

'To meet him halfway,' the resident replied. 'Isn't that what you always recommend?'

'Ah, halfway,' I echoed. 'If he had asked for a benzodiazepine or opioid, would you have met him halfway? Halfway should not require doctors to compromise their standards.'

The resident stiffened. 'Well, if he is not better in a month, then we can talk about it.'

'He will likely be better and attribute his improvement to the medication. This is how grief normally goes.' Then I wondered aloud, 'What if he asks you to increase the dose?'

Now the resident was rattled. 'Why are you picking on me? If the medication works as a placebo, is that so bad? Isn't that an element of every prescription?'

'Of course, it is,' I agreed. Then paused and softened my tone. 'You're a thoughtful man. There are any number of ways to approach patients who are grieving. I am only asking that you think about what you are doing. Treatment binds you to a patient in unexpected ways—to a *course* of treatment, including its side effects and an uncertain outcome. This patient likely came to you for more than a prescription. So, give him more than a prescription.'

'What are you suggesting I do?'

'Care for the patient, don't simply treat him. As Kafka wrote, "To write a prescription is easy; to come to an understanding of people is hard." Be aware of your biases and motivations, your personal need to act and to be the one in charge. Whenever possible, let the patient be the one in charge.'

People come to the doctor for many reasons. Sometimes they hope we will prescribe the one drug they feel they need. Sometimes they are looking for a lightning rod to discharge their anger. Sometimes they need a safe place to cry. Sometimes they are simply looking for companionship. Our obligation is to try to help them. To do so faithfully we must read between the lines (figure 4).

Meeting patients halfway is not a fixed coordinate. There are patients who need our decisiveness, the rules and authority. There are situations in which we must work harder than the patient does—going beyond what is required or outside our comfort zone. It is our privilege and duty to decide what kind of help they need and whether we are the ones to provide it.

Figure 4 Meeting patients halfway: relational considerations.

How do we know when we have gone too far? Judgement is that ill-defined, indispensable gift that comes with experience and through sharing it with others

Readings

- Elwyn G, Price A, Franco JVA, Gulbrandsen P. The limits of shared decision making. *BMJ Evid Based Med* 2022;28:218–21. doi: 10.1136/bmjebm-2022–112089
- Ferrer RL, Gill JM. Shared decision making, contextualized. *Ann Fam Med* 2013;11:303–5. doi: 10.1370/afm.1551
- McNutt RA. Shared medical decision making: problems, process, progress. *JAMA* 2004:292:2516–8. doi:10.1001/jama.292.20.2516

SEAMLESS INTEGRATION IN FAMILY MEDICINE—TEAM-BASED CARE

Stacy Ogbeide and Frank deGruy

Integrated team-based care, though hard work, is worth it!

The biopsychosocial model of health takes into account traditional biomedical health factors while also considering the psychological and social domains of patients' lives.[15] Using the biopsychosocial model yields a robust platform from which to practice family medicine, particularly for patients in historically excluded groups for which psychosocial factors are of paramount importance—ethnoracial and gender trauma profoundly affect the overall health of people in these groups, and this effect on health persists across generations.[16 17]

Building on the strength of this systems-based model of health, one of the foundational principles of family medicine is to take care of whole people in the context of their families and communities.[18] The fundamental work in family medicine is to formulate, together with patients, comprehensive personal care plans that address diseases and disorders, all the while paying attention to concerns, including previous experiences, fears, goals, support systems and finances. Such comprehensive care is what people in family medicine settings commonly want and usually need. Focusing on one problem at a time, to the exclusion of other considerations, typically results in inferior overall care and poorer health outcomes.[18]

Given that patients often present to family physicians with problems that are simultaneously physical, psychological and social in nature, one key component of comprehensive care in family medicine is attending to behavioural concerns and considerations. In many cases, addressing these concerns and considerations is too much for any family physician or other primary care practitioner to handle alone. Instead, physicians can adopt one of the core principles of the patient-centered medical Home: integrated team-based care.[18]

Team-based care is different from the traditional and frequent use of consultants, which tends to fragment care. Team-based care involves developing an integrated team of clinicians who share the same mental model towards

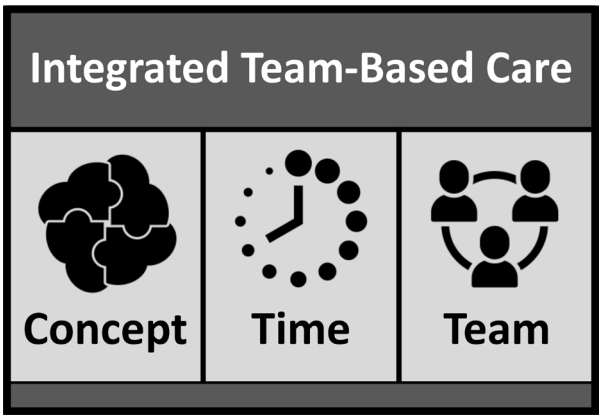

Figure 5 Integrated team-based care: commitments for success.

providing primary care. This colocated team of clinicians works together to provide whole-person care.

Core members of this team typically include family physicians or other primary care practitioners behavioural clinicians (often psychologists or social workers, though others from the behavioural or social sciences can serve in this role) and care managers.[17] Although each team member brings individual areas of expertise to patient care, they all share leadership duties with overlapping responsibilities when formulating care plans for patients and families.

When providing integrated team-based care, behavioural clinicians, along with their family physician colleagues, are considered primary care clinicians. These individuals have dual professional identities. For instance, they may serve as psychologists or social workers and as primary care clinicians who know office-based and community-based workflows can address a wide range of problems and are comfortable working flexibly in complex adaptive systems.[19]

Integrated team-based care is hard work. It takes commitment: commitment to a concept, to an investment of time and to the members of the team (figure 5). All that said, integrated team-based care is essential to family medicine. Patients enjoy better health and get better, less expensive care.[18] Clinicians find this a more rewarding kind of practice.[20] The benefits of integrated team-based care in family medicine easily outweigh the difficulties. It is worth it!

Readings

- Hall J, Cohen DJ, Davis M, *et al*. Preparing the workforce for behavioral health and primary care integration. *J Am Board Fam Med* 2015;28:S41-51. doi:10.3122/jabfm.2015.S1.150054
- Poleshuck E, Possemato K, Johnson EM, Cohen AJ, Fogarty CT, Funderburk JS. Leveraging integrated primary care to address patients' and families' unmet social needs: aligning practice with National Academy of Sciences, Engineering and Medicine recommendations. *J Am Board Fam Med* 2022;35:185–9. doi:10.3122/jabfm.2022.01.210287
- Schrager S. Integrating behavioral health into primary care. *Fam Pract Manag* 2021;28:3–4.

TECHNOLOGY—UNCOVERING STORIES FROM NOISE

Megan Mahoney and Steve Lin

Family physicians attend to copious quantities of data. Their challenge is to do this without sacrificing the deep listening that is at the core of their healing work with patients. Technology can help.

Ruby, an 86-year-old Black woman from Ohio, is one of my (MM) favourite patients. I knew she had been a victim of insidious racism in the past, leaving clinics feeling dismissed. On our first visit, I casually said, 'Ruby is my mother's birthstone' and she laughed. At her next appointment and each visit thereafter, she always said, 'Here I am—Mother Birthstone.' I cherished that I had earned her trust.

That trust was tested during the COVID-19 pandemic. When the shelter-in-place orders began, our healthcare system moved to telehealth visits. Ruby had limited medical literacy and practically no internet skills. Ruby and I were both worried about how to manage her heart condition and regulate her blood pressure online, and her initial response was one of fear and resistance.

Through self-reliance, resourcefulness and trust in me, Ruby became my poster child for digital adaptation. I was able to get her an iPad and teach her how to reach me. She learnt with remarkable speed how to keep track of her medications, monitor her blood pressure and stay in consistent communication. She successfully accepted her new digital reality with patience and tenacity.

Family doctors listen to a symphony of cues. Often their task is to sift through data, cut through noise and understand the 'story' of their patients. Luckily, the deep listening skills that family physicians use to build long-standing and trusting relationships make family medicine uniquely suited to embrace and lead the big data revolution.

We are at the pioneering stage of technology-enhanced care,[21] and instead of technology creating distance between doctors and patients, the opposite can occur. For example, virtual visits offer doctors a glimpse into their patients' worlds and increase patient comfort. Thus, virtual visits can reveal useful information and augment person-centred care when used appropriately.[18]

Also, healthcare systems have begun to pair remote patient-monitoring devices with 'health coaches' that are powered by AI, thus helping patients self-manage some of the costliest chronic diseases—diabetes, obesity, hypertension and depression among others—with outcomes that are comparable or superior to standard care.[22]

Yet while AI-powered healthcare technology is an example of human adaptation and ingenuity, it is not a substitute for the human interactions that lie at the heart of healing. AI simply presents another tool for family physicians to use to address patient concerns, provide access to medical care and continue building connections with

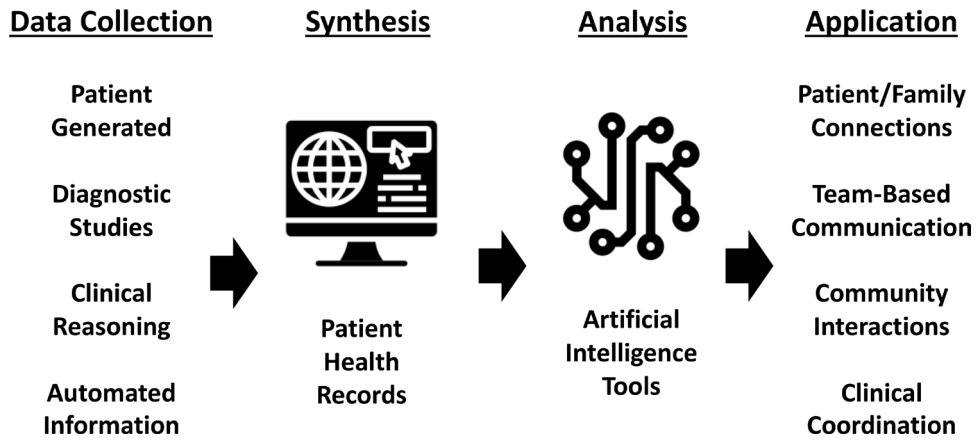

Figure 6 Technologically enhanced patient care.

patients. Adding data on social determinants of health—including neighbourhood, environment, language, transportation, income, social support and education—can also help family physicians incorporate information on rates of hospitalisation, risks of death and costs of care into practice, all while promoting health equity, a fundamental part of family medicine's DNA.[21]

Integrating technology into the daily practice of family medicine takes training, awareness and commitment. The process starts with family physicians saying little more than, 'I am here to help, and here are the tools I use to do that.' Then the work—translating data into stories, stories into connections and connections into care—begins (figure 6).

Readings

- Liaw W, Kakadiaris IA. Artificial intelligence and family medicine: better together. *Fam Med* 2020;52:8–10. https://doi.org/10.22454/FamMed.2020.881454
- Liaw W, Kueper JK, Lin S, Bazemore A, Kakadiaris I. Competencies for the use of artificial intelligence in primary care. *Ann Fam Med* 2022;20:559–63. doi: 10.1370/afm.2887
- Lin SY, Mahoney MR, Sinsky CA. Ten ways artificial intelligence will transform primary care. *J Gen Intern Med* 2019;34:1626–30. 10.1007/s11606-019-05035-1

CARING FOR PATIENTS WITH MULTIPLE LONG-TERM CONDITIONS

Clare MacRae and Stewart Mercer

How our healthcare systems fail to fit the needs of patients with multimorbidity and why the generalist approach of family medicine is a crucial antidote.

Multimorbidity occurs when a person has multiple long-term conditions (LTCs). It is commonly defined as two or more LTCs in one individual. LTCs in multimorbidity are of long duration and include physical non-communicable, physical communicable, and mental health diseases.[23]

Multimorbidity is common; over a quarter of US adults had two or more LTCs in 2018.[24] It is becoming more common because of population ageing (the global population aged 65 years or older is projected to double between 2025 and 2050), improved survival from diseases such as myocardial infarction and changing patterns of mental health in younger people. This is important because people with multimorbidity are three times more likely to be admitted to the hospital, to be frail and to have reduced quality of life and functional health status.[25]

Multimorbidity and comorbidity are different concepts; they should not be used interchangeably. Comorbidity refers to an index condition that is of key concern and other associated conditions. This is largely the domain of specialist care, where, for example, diabetes would be the index condition for a diabetologist—any other LTCs would be comorbidities.[26] In family medicine, where clinicians are responsible for caring for the whole person, the concept of comorbidity is less relevant. The concept of multimorbidity, where two or more LTCS exist without any one being labelled as the index condition, is more appropriate. By age 65, most people experience multimorbidity; in absolute terms, however, most people with multimorbidity are younger.[23]

Multimorbidity is strongly socially patterned: in patients of lower socioeconomic status, multimorbidity is more common and occurs at a younger age. Combined mental–physical multimorbidity is especially common in areas of economic and social deprivation.[27] Multimorbidity is also a global health challenge; it is increasingly prevalent in low-income and middle-income countries, particularly among lower socioeconomic groups.[28]

Patients often suffer from the 'treatment burden' of fragmented specialist approaches to comorbid diseases: patients with multiple LTCs often attend numerous appointments, receive multiple prescriptions and at times hear conflicting advice.[29] Unfortunately, evidence for management of LTCs comes from studies of patients who have only one LTC and take fewer prescribed medications. Family physicians attending to patients with multimorbidity must consider all these factors and discuss them with patients and families, carefully weighing risks,

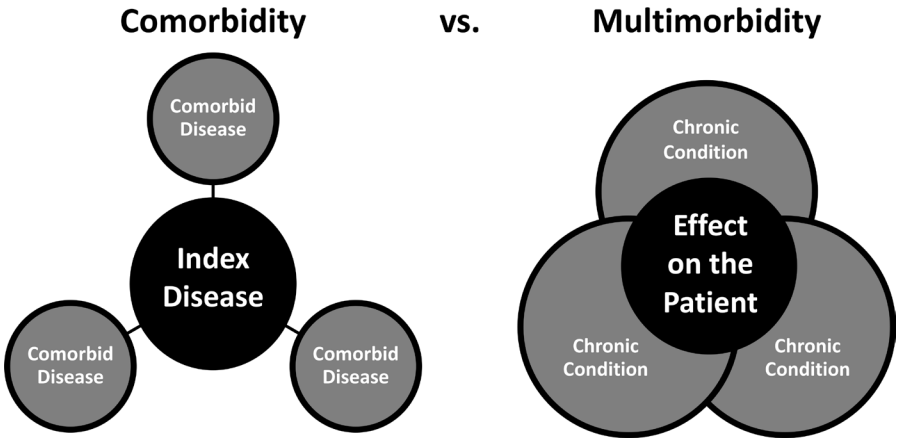

Figure 7 Comorbidity and multimorbidity: differing perspectives on care.

benefits, overall treatment goals and preferences for management.[30]

The role of family physicians in the management of multimorbidity is to focus on how LTCs affect the quality of life of patients and how their quality of life can be improved. They must also prioritise the individual health and lifestyle priorities of each patient, reduce the need for unplanned care and frequency of adverse events and improve coordination across services. Management of multimorbidity requires a holistic, person-centred approach that involves shared decision-making (figure 7).

Given how the global distribution of health and disease is changing, family physicians and other generalists require support to deliver individualised management plans. Continued investment in research and policy is needed to develop an understanding of how to better manage coexistent physical and mental LTCs. Further investment in appropriate training and in provision of adequate time and resources is needed to ensure family physicians can provide exceptional care. With this support, family physicians can be the 'jewel in the crown' of healthcare for patients with multimorbidity, solidifying their position as expert medical generalists.

Readings

- Aramrat C, Choksomngam Y, Jiraproncharoen W, *et al*. Advancing multimorbidity management in primary care: a narrative review. *Prim Health Care Res Dev* 2022;23:E36. doi: 1017/S1463423622000238
- Boast J. Making more of multimorbidity: an emerging priority. *Lancet* 2018;391:1637. doi: 10.1016/S0140-6736(18)30941-3
- Moffat K, Mercer SW. Challenges of managing people with multimorbidity in today's healthcare systems. *BMC Fam Pract* 2015;16:129. doi: 10.1186/s12875-015-0344-4

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REFERENCES

1 Rosser WW. Approach to diagnosis by primary care clinicians and specialists: is there a difference? *J Fam Pract* 1996;42:139–44.

2 McWhinney IR. Problem-solving & decision-making in family practice. *Can Fam Physician* 1979;25:1473–7.
3 van Weel C. The extraordinary diagnostic sensitivity of family physicians. *Fam Pract* 2020;37:431–3.
4 Kaldjian LC. Teaching practical wisdom in medicine through clinical judgement, goals of care, and ethical reasoning. *J Med Ethics* 2010;36:558–62.
5 Tonelli MR, Shapiro D. Experiential knowledge in clinical medicine: use and justification. *Theor Med Bioeth* 2020;41:67–82.
6 Stolper E, Van de Wiel M, Van Royen P, *et al*. Gut feelings as a third track in general practitioners' diagnostic reasoning. *J Gen Intern Med* 2011;26:197–203.
7 Ramanayake RPJC, Ranasingha S, Lakmini S. Management of emergencies in general practice: role of general practitioners. *J Family Med Prim Care* 2014;3:305–8.
8 Ely JW, Graber ML, Croskerry P. Checklists to reduce diagnostic errors. *Acad Med* 2011;86:307–13.
9 Evans WR, Rafi I. Rare diseases in general practice: recognising the zebras among the horses. *Br J Gen Pract* 2016;66:550–1.
10 Jones R, Barraclough K, Dowrick C. When no diagnostic label is applied. *BMJ* 2010;340:c2683.
11 Gutierrez C, Scheid P. The history of family medicine and its impact in US health care delivery. AAFP Foundation, 2002. Available: https://www.aafpfoundation.org/content/dam/foundation/documents/who-we-are/cfhm/FMImpactGutierrezScheid.pdf [Accessed Jan 2024].
12 Citizens Commission on Graduate Medical Education. *The Graduate Education of Physicians*. American Medical Association, 1966.
13 What is IM/IH? Andrew Weil Center for Integrative Medicine, Available: https://integrativemedicine.arizona.edu/about/definition.html [Accessed 31 Jan 2024].
14 Whole health: information for veterans. VA Whole Health Program, Available: https://www.va.gov/WHOLEHEALTH/Veteran-Handouts/docs/IntroFamFriendsCoworkers-508Final-08-29-2018.pdf [Accessed 31 Jan 2024].
15 Engel GL. The need for a new medical model: a challenge for biomedicine. *Science* 1977;196:129–36.
16 Butkus R, Rapp K, Cooney TG, *et al*. Envisioning a better U.S. health care system for all: reducing barriers to care and addressing social determinants of health. *Ann Intern Med* 2020;172(2 Suppl):S50–9.
17 Mosley-Johnson E, Campbell JA, Garacci E, *et al*. Stress that endures: influence of adverse childhood experiences on daily life stress and physical health in adulthood. *J Affect Disord* 2021;284:38–43.
18 National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Care Services; Committee on Implementing High-Quality Primary Care. Implementing high-quality primary care. In: Robinson SK, Meisnere M, Phillips RJ, eds. *Rebuilding the Foundation of Health Care*. Washington (DC): National Academies Press (US), May 4, 2021.
19 Pype P, Mertens F, Helewaut F, *et al*. Healthcare teams as complex adaptive systems: understanding team behavior through team members' perception of interpersonal interaction. *BMC Health Serv Res* 2018;18:570.
20 AHRQ Publication No.13-IP001-EF. Agency for Healthcare Research and Quality. Peek CJ and the National Integration Academy Council. Lexicon for behavioral health and primary care integration: concepts and definitions developed by expert consensus, 2013. Available: https://integrationacademy.ahrq.gov/sites/default/files/2020-06/Lexicon.pdf [Accessed 31 Jan 2024].
21 Segal JB, Davis S, Dukhanin V. Working framework for appropriate use of virtual care in primary care. *J Am Board Fam Med* 2022;35:629–33.
22 Lin S. A clinician's guide to artificial intelligence (AI): why and how primary care should lead the health care AI revolution. *J Am Board Fam Med* 2022;35:175–84.
23 Multimorbidity: clinical assessment and management. NICE/National Institute for health and care excellence. Available: https://www.nice.org.uk/guidance/ng56/chapter/Recommendations [Accessed 31 Jan 2024].
24 Boersma P, Black LI, Ward BW. Prevalence of multiple chronic conditions among US adults, 2018. *Prev Chronic Dis* 2020;17:200130.
25 Williams JS, Egede LE. The association between multimorbidity and quality of life, health status and functional disability. *Am J Med Sci* 2016;352:45–52.
26 Feinstein AR. The pre-therapeutic classification of co-morbidity in chronic disease. *J Chronic Dis* 1970;23:455–68.
27 Barnett K, Mercer SW, Norbury M, *et al*. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet* 2012;380:37–43.
28 MacRae C, Mercer SW, Henderson D, *et al*. Age, sex, and socioeconomic differences in multimorbidity measured in four ways: UK primary care cross-sectional analysis. *Br J Gen Pract* 2023;73:e249–56.
29 Morris JE, Roderick PJ, Harris S, *et al*. Treatment burden for patients with multimorbidity: cross-sectional study with exploration of a single-item measure. *Br J Gen Pract* 2021;71:e381–90.
30 Mercer SW, Salisbury C, Fortin M, eds. *The ABC of Multimorbidity*. Wiley-Blackwell, 2014.