

Narrative Reasoning in Practice

A Case Study in Podiatry

Emily T. Bishop, MSc*

Background: Clinical reasoning and decision making within health care are as important as ever in a world where evidence-based health care and patient outcomes are highly valued. It is increasingly recognized that decisions are not made in isolation, and are influenced by many factors, both intrinsic and extrinsic. Expert and novice practitioners share reasoning techniques, and there are many interpretations of reasoning paradigms within the field of health care.

Methods: A reflective diary was kept for 3 months linking personal reflections on a particular clinical decision with theoretical learning on clinical reasoning. Several decision-making paradigms were looked at in relation to the decision, with a deeper focus on narrative reasoning. Narrative reasoning resonated particularly with the author's previous experience studying literature.

Results: The clinical decision was usefully analyzed using a narrative reasoning strategy. The decision made by the author was perhaps contrary to the evidence, and yet had a positive outcome. The positive outcome of the decision was looked at within the context of evidence-based practice and ethical practice.

Conclusions: Narrative reasoning comes from within the interpretive research model and puts the patient's experience at the heart of decision making. Narrative reasoning can be a valuable way of combining diagnostic, management, and ethical aspects of care. Further research—particularly in podiatry, where research is lacking—could identify helpful reasoning strategies for care of patients with long-term chronic conditions or complex conditions. (*J Am Podiatr Med Assoc* 109(1): 64-69, 2019)

Clinical reasoning, and in particular decision-making, has attracted considerable attention over the past 30 years.¹ All health professions are concerned with how practitioners gather and process clinical information to provide effective health care. Set against the background narratives of evidence-based practice, patient-centered care, and the growing health-care economy in which professions are vying for legitimacy, the importance of clinical reasoning remains prominent.

Drawing on an eclectic theoretical and empirical base from, for example, psychology,² social interaction,^{3,4} and education,⁵ health professionals have sought to describe, explain, and interpret the decisions made in clinical practice. Because of the diverse development of clinical reasoning, there are a number of often conflicting paradigms and models describing how health-care practitioners identify, interpret, and solve clinical problems.

Although health professions have been concerned

with clinical reasoning for some time, there is a dearth of academic literature within the field of podiatry.⁶ Where clinical reasoning has been addressed in podiatry, the focus has been on diagnostic reasoning, reflecting the dominant paradigm within medicine.^{7,8}

Models of clinical reasoning reflect the context from which they have developed. In medicine, a positivist model of reasoning is dominant. This model includes the following: hypothetico-deductive reasoning and pattern recognition with regard to problem solving,¹ and behavioral psychology and statistical interpretation with regard to decision-making.⁹ Much of the research in this area has been based on laboratory work, rather than investigating “real-life” clinical practice. It has been argued that these overtly cognitive interpretations of clinical reasoning fail to recognize the tacit and implicit nature of clinical practice.⁶ Research by Curran et al^{7,8} looked at the reasoning of podiatrists within a clinical setting, using think-aloud protocols to examine strategies used to diagnose conditions. One study⁷ found that the use of schemata and tacit

*London North West Healthcare NHS Trust, Mattock Lane Health Centre, 78 Mattock Lane, London W13 9NZ, United Kingdom. (E-mail: etbishop@btinternet.com)

knowledge was evident in both expert and novice podiatrists. In other professions (eg, nursing and occupational therapy), there has been significant research into the way schemata are used by expert clinicians and students to organize clinical knowledge and formulate diagnoses.^{10,11} Schemata provide frameworks of reference that develop with experience, allowing decisions to be made more quickly. They are similar to “illness scripts” that fit with the hypothetico-deductive model, albeit in a more unconscious way.¹²

Practitioners in nursing and allied health (occupational therapy and physiotherapy in particular) moved from this empiricist paradigm toward an interpretive research model based on clinical practice.⁶ Fleming¹³ describes a “three-track reasoning” model of procedural (defining the problem), interactive (understanding the patient as an individual), and conditional (thinking about the condition as it is and how it might change) reasoning, seen in the practice of occupational therapists. Tanner¹⁴ refers to the complexity and flexibility of reasoning used by nurses, moving between clinical knowledge of the pathophysiology of disease and the patient’s experience of illness encompassing physical, social, and emotional aspects. She also notes that the context of the decision-making and the nurse’s own values influence reasoning.

The use of narrative reasoning to understand the patient’s experience describes more than interaction or collaboration (although including both)—it puts the patient’s story at the heart of treatment.¹⁵ This concept of client-centered reasoning is at the heart of ethical practice, as decisions affecting the patient that are not made in collaboration with them, or without knowledge or understanding of their circumstances, cannot be said to be ethical decisions.⁶

Narrative reasoning describes the way that clinicians seek to understand the presenting problem as it is experienced by the patient: the impact of the problem on aspects of their lives, health beliefs, and behaviors that may affect interventions.¹⁶ It is through stories or narratives that experiences gain meaning and coherence, both for the narrator and for the listener.¹⁷ The act of storytelling is a fundamental part of human communication—at an unconscious neurologic level, the human brain connects with another’s story as a participant, not just as an observer.¹⁸ This connection promotes empathy; the clinician can gain an understanding of what the problem means for the patient beyond the pathologic “facts.”¹⁹ Charon¹⁹ writes that the physician’s ability “to bear witness” to the patient’s

story is key to effective care that engages the patient. Although the sources I have used here are from medicine, philosophy, literature, and physiotherapy, the principles apply to any situation in which people share aspects of their lives through storytelling.

A narrative is a story—with characters, a setting, an action that may result in a problem, an intervention hoping to resolve the problem, and a subsequent ending. From a biomedical perspective, the main “character” is the pathology; however, from a narrative perspective, it is the person with the pathology.²⁰ Narrative reasoning as a way of effecting positive outcomes is not perhaps something that is obvious at first glance. This article intends to show that narrative can be a useful tool in understanding a patient’s view of their problem and making clinical decisions that reflect this view.

I qualified with BSc(Hons) in podiatric medicine in 2007. Since qualification, I have worked in all aspects of podiatric practice, including extensive experience in biomechanics and podopediatrics and regard myself as an “expert” rather than a “novice.”⁷ As part of an MSc module on clinical reasoning within podiatry, I kept a diary for 3 months, in which I made regular entries concerning a particular clinical decision that I made early in February 2016. I wrote about different aspects of the decision and my decision-making process, linking them to theories of reasoning, ethics, and values that formed my learning through the module. The tacit knowledge that lay beneath the decision that was apparently counter to the biomedical “evidence” was examined. “The act of noticing” the details of practice²¹ is the start of a deeper reflection on practice and knowledge in order to develop them both. All names, and some details, have been changed to maintain confidentiality.

Narrative Reasoning in Action: The Story

In February, I saw in the clinic a 10-year-old boy, Dan, referred to podiatry by a pediatric physiotherapist, Rebecca, whom I have never met, but who has referred many children to us. The standard referral form was accompanied by a letter from Rebecca that implied that she had done all she could to no avail, and that Dan was not doing the exercises she had advised. She had diagnosed “flat feet,” and wondered whether insoles might help. Dan is a very articulate, open, and chatty boy who enjoys sport of all kinds, especially tennis, football, and cricket. Dan was with his mother, who said the tennis coach had also suggested “flat feet,” and said that Dan had

a “funny” running style and other children laughed at him. Dan complained of pain—in his knees, thighs, and feet—and said that at times it was so bad (eg, after playing tennis) that he could hardly walk up the stairs to his flat. He also talked about a bad fall approximately 18 months before where he hurt his left leg.

I looked at Dan standing, walking, and running, and I did not see anything outside what I consider normal parameters for a 10-year-old. Dan did not seem to be in pain when active, although testing range of motion did elicit some discomfort, especially hamstring stretches, which the physiotherapist had also mentioned. The opinion of the physiotherapist and the tennis coach influenced my assessment enough to ask Dan to run and walk up and down the corridor several times while I looked from different aspects. I still could not see what they apparently saw.

Nevertheless, in the end, I issued a pair of off-the-shelf children's insoles designed to provide arch support and control pronation. Even at the time, I inwardly questioned what I was doing and why I was doing it. I did not think that Dan really needed those insoles; I felt that stretching and possibly strengthening exercises were more likely to be beneficial in the long term. I did advise that he continue with the exercises that Rebecca had suggested, but somehow mere “advice” did not seem to be enough of an intervention at this particular time, for this particular boy. Dan (and significantly perhaps, his mother) seemed to expect more, *need* more. I was not really expecting him to wear the insoles, as from Rebecca's letter it seemed he was not very compliant. Thus, at the review appointment, I was quite surprised to hear that he had been wearing them, and that the pain was significantly less. The decision to give Dan insoles had a positive outcome, but at the time I made it, I was not sure that this would be the case or that I had made the right decision at all.

Reasoning in Context

Through reflection on this decision, I will explore some of the paradigms that frame reasoning and decision making, with a main focus on narrative reasoning, which seems most congruent with both the case and my own practice. Making a diagnosis, initially I became aware that I was going through a step-by-step problem-solving process, as what I had expected to see failed to appear. I asked more questions, performed more assessments, and repeated observations in an attempt to make what I

saw “fit” the diagnosis that had been made by another professional whose expertise I valued.

Several interpretations can be made about my thinking here. First, it matches a traditional, biomedical view of diagnostic reasoning, where a hypothesis is tested against the evidence—where I was looking for cues that supported patterns that I recognized from previous experience.²² My thinking could also be matched with Johns' development of Schön's reflection-in-action idea, where I was reframing possibilities, listening to my “internal supervisor,” and asking myself what empirical knowledge I had that matched this situation.²³

Another interpretation of this approach might be termed *procedural reasoning*.¹³ In an ethnographic study of occupational therapists, Fleming¹³ described the three-track reasoning approach used to define a problem, and to manage the problem, both subsequently and concurrently. Procedural reasoning is aligned with more traditional diagnostic reasoning—identification of cues that lead to hypothesis generation and testing. This approach matches the findings of Curran et al,⁷ who found that expert and novice podiatrists use pattern-matching and “illness scripts” to diagnose conditions.

However, this step-by-step approach did not result in the expected outcome (which might be not issuing insoles because there was no “problem”). Cognitive psychologists could argue that this is because my course of action was decided before Dan entered the room, using my “system 1” (the automatic, involuntary mode of thinking), as opposed to “system 2” (a reasoned methodical mode, much like the conscious hypothetico-deductive reasoning).⁹ Perhaps I had already decided, albeit subconsciously, that insoles were the answer just from looking at the referral.

The emphasis on evidence-based medicine in modern health care may lead to a belief that decisions for treatment are based on objective “true” evidence. In fact, this is not the case. First, the research evidence itself may not relate to the patient in front of us—trials are usually carried out on certain patients, in certain conditions that may be very different from those in everyday practice.²⁴ The evidence for insole therapy is contradictory in podiatry generally, and with regard to pediatrics, it is lacking, so there is no definitive or easy answer. Second, clinicians are prone to cognitive biases and heuristics (eg, a bias in favor of affirmative diagnostic evidence and ignoring negative evidence, or “confirmation bias”²²). I was perhaps guilty of “anchoring bias” and “diagnosis momentum,” as

Dan's referral already stated a "diagnosis" of flat feet, so that is what I was looking for.²⁵

However, although the referral is important, the initial assessment and history is the true starting point for decision-making. The interpretation of the evidence in the context of the patient's personal perspective determines the clinical action taken.

The Personal Nature of Narrative Reasoning

The type of reasoning that I feel most closely reflected my thinking is narrative reasoning. Mattingly²⁶ has written about narrative reasoning of occupational therapists but believes that it occurs with many health professionals. I feel I use narrative reasoning frequently, as advice and long-term treatment plans for individual patients are dependent on their unique circumstances and needs: there are differences in terms of expectations (and possible etiologies) between a 12-year-old with foot pain who likes athletics, and a retired sedentary person with similar foot pain. I also found myself drawn to this interpretative paradigm through a sense of familiarity; a previous degree in English literature prepared me for looking at structure and components of narrative.

The characters in this narrative center on Dan, whose story is one of happy activity and social participation in sports until pain limits this, and he becomes unhappy, no longer able to take part in the activities that he enjoys. Along the way, he encounters the tennis coach and the physiotherapist, who suggest that there is something wrong with his feet that is causing the pain in his knee. His encounter with the physiotherapist develops Dan's role by making him a "patient." By seeing me, this role is strengthened and further legitimized. The clinical encounter between health professional and patient is highly structured in terms of social and behavioral expectations, where the "text" is a story about the person as ill or, in this case, in pain.²⁷ My decision to give a pair of insoles as the intervention can be seen as confirming Dan's role, and the diagnosis of the physiotherapist.

The insoles themselves play a part in the narrative. A tangible object is frequently featured in traditional stories (the glass slipper in Cinderella comes to mind). Podiatry is associated with insoles or orthotics—for some, they may come to represent an expectation of practice. Referrals to podiatry from doctors, nurses, and physiotherapists frequently refer to insoles or orthotics. Within the wider community of health care, each profession has its

own community of practice, with sets of rules, shared meanings, and mutual understanding.²⁸ Wenger²⁸ suggests that a way of negotiating the boundaries between these communities is by referring to a mutually understood object or practice. In this case, the reification of insoles can be a useful way of brokering the boundaries between communities—they are artifacts understood by everyone (albeit in different ways). Giving the insoles is an event that signals agreement of a problem; the agreement is between all characters in the story at this point—Dan, his mother, me, the physiotherapist, and the tennis coach.

Things "happen" within narratives, and the clinical encounter might be seen as a chapter in the whole story. Within the encounter are smaller events—dialogue to establish a relationship and find out information, giving advice, issuing insoles; these can be termed therapeutic emplotment.²⁰ Mattingly's description of an account of an occupational therapist's encounter with a child using narrative play appears very different from my work with children, but the opportunities for therapeutic emplotment are still present.²⁰

In the sense that interactive and conditional reasoning are ways of creating a shared understanding of the present "problem" and possible future outcomes, therapeutic emplotment is an opportunity for patient and clinician to coauthor the plot and explore alternative possibilities.^{13,29} This can be a more direct and concrete experience in occupational therapy than in podiatry, but dialogue is a constituent of narrative as much as activity. The transformative nature of the narrative is shaped by patients themselves creating and making sense of their own story and defining their place within it collaboratively with the clinician.^{19,30} In my dialogue with Dan and his mother, I attempted to find out what he felt about the problem, and two key themes emerged: pain and potential embarrassment from children laughing at him (this latter appeared to be more of a concern for his mother). I asked Dan what he would like to be able to do if pain-free, and he said that cricket was most important to him. We discussed wearing the insoles in the shoes he wears for playing cricket once he was used to them; this could be seen as creating an alternative, "pain-free" trajectory for the story.

When seeing children, I am also in dialogue with at least one other—a parent, aunt, uncle, or grandparent. This raises the question of whose story is being told? Whose voice is being heard? The child's point of view is sometimes masked by the

anxieties of the parent (who brings their own set of issues to the narrative). Although sometimes it is difficult to disentangle the child's meaning of the story from the parent, in this case, Dan was articulate and confident, and through careful questioning and listening I was able to understand his sense of the story, and his mother's concerns.

Narrative Reasoning as Ethical Reasoning

A narrative approach to reasoning is an ethical approach; it recognizes the diversity of meanings depending on whose story is being told, in what setting, and at what time. In this paradigm, there can be no one truth or reality.³¹ The values of the patient, the values of the clinician, and the professional "codes" of behavior interact in a particular context. The clinician needs reflective skills to reconcile these aspects to make an ethical decision. My decision to issue insoles, which were of questionable value from a biomedical perspective, could be considered as the right decision ethically given the circumstances of the particular moment in Dan's story. Johns' model of reflection asks, "What were the consequences of my actions on the patient, others and myself?" Also, what might the consequences of alternative actions have been?²³ Previous experience led me to believe that the insoles could do no harm (maleficence), and might be helpful (beneficence), which in fact they turned out to be.

Conclusions

To conclude, I have looked at different approaches to clinical reasoning through the examination of one clinical decision. It is simplistic to think that in making a diagnosis or planning treatments only one approach is used. Research in medicine, nursing, and allied health professions has consistently shown that multiple approaches are used, by both expert and novice practitioners. The dominant paradigm may be determined by the culture of the profession (eg, biomedical in medicine; interactive in occupational therapy) or by the context of the decision. The most effective reasoning strategies in terms of identifying a problem and formulating a treatment plan are those that engage the patient; this requires the clinician to be actively reflective both "in action" and "on action," as reflection enables a deeper understanding of the elements that make up both the problem and the solution. In the

field of podiatry, where patients with complex, sometimes chronic, conditions are seen for perhaps many years, there is scope for further research into the types of reasoning and reflection that are most effective in formulating treatments adapted and tailored to patients' individual narratives.

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