

POSITION PAPER

The Role of Reflective Practice in Pharmacy

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ABSTRACT **Context:** *There has been a considerable paradigm shift from a product-centred focus towards a patient-centered focus in pharmacy. Pharmaceutical care practice (Cipolle et al., 1998) can be seen as the latest proposal to transform the profession as mandated by most major professional associations in pharmacy. Pharmaceutical care is an innovative way of practicing pharmacy that has the potential to make drug-therapy safer, more effective, and more convenient for the patient. Even though pharmacists' time spent on customer communication has increased over time (Savage, 1999), this alone will not be sufficient to bring about a paradigm shift in view of what the pharmacist actually does to provide quality patient care. It appears equally important to reflect on how pharmacists practice pharmacy.*

Methods/Objectives: *It is the aim of this discussion paper to argue for the importance of linking education and practice as a core part of the teaching of pharmaceutical care.*

Conclusions: *In order for pharmacists to partake in truly interdisciplinary health care teams and the profession of pharmacy to demonstrate its unique and indispensable contribution to quality health care, pharmacy curricula would teach toward reflective practice, be problem-based, be positioned in collaborative teams, and have an outside (authentic) focus.*

KEYWORDS *Practice, reflectivity, problem-based learning, pharmacy, pharmaceutical care.*

Introduction

Only recently, pharmacists have begun to provide direct patient care under the accepted rules and standards of the health care system. Over the last 10 years and specifically after pharmaceutical care had been mandated as patient-centred practice model for pharmacy, many pharmacists have found themselves

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challenged by a paradigm shift in their daily practices from the product to the patient.

Pharmaceutical care addresses the patient's drug-related needs comprehensively through a scheduled outline of tasks, in which the practitioner makes sure that the drug therapy is appropriately indicated, effective, safe, and convenient. The concepts of pharmaceutical care are distinctively different from the responsibilities of dispensing pharmacists and in accordance with the standards of practice of other professionals in the health care system. A practice model such as pharmaceutical care practice (Cipolle *et al.*, 1998) that is based on reflective actions appears to allow practitioners to overcome the outlined challenge. It provides practitioners with the necessary tools to develop practices that are consistent with other health care professionals and possess external validity in view of patient care outcomes. A purposeful, coherent approach will considerably decrease the professional ambiguity that many pharmacists are facing. However, discussing the concept of reflective¹ practice in the context of pharmaceutical care translates into an act of integrating categories of knowledge rather than talking about a subject focus. The following discussion of the conceptualization of the meaning of reflectivity for a health care professional and consequently for the practice of pharmaceutical care corresponds to an investigation of the nature, sources, limitations, and validity of knowledge – an epistemological approach.

Origin

In an attempt to articulate human knowledge through language, Polanyi suggests that because we can know more than we can tell it follows that what has been made articulate and formalized is in some degree underdetermined by that of which we know tacitly. Language alone appears not to be enough for making knowledge explicit (Polanyi, 1967). Polanyi, who invented the term 'tacit knowledge', concluded, based on a number of theses, that all knowledge is either tacit or rooted in tacit knowledge.

Inspired by Gestalt Psychology, Polanyi regards the process of knowing as fragmentary clues, senso-motoric or from memory, which are integrated under categories. We make sense of reality by categorizing it. The patterns of categories contain theories, methods, feelings, values and skills, which can be used in a fashion that the tradition judges as valid. We attend from the particulars to the focus upon which they bear. This act of integration is an informal act of the mind and cannot be replaced by a formal operation. This integration of knowledge is a personal skill in itself and cannot be disposed of. A special kind of meta-knowledge is required for integration; knowledge about how knowledge is integrated. It is possible to have this meta-knowledge without knowing its details. For example, every surgeon will know how to perform an appendectomy, but it requires a lot of effort to

have that same person explain the task in detail that she just performed intuitively.

Another author, Donald Schön, in keeping with Polanyi's theses and linking them to professional knowledge, states that competent practitioners also usually know more than they can say and that a large amount of this knowledge is tacit in nature. In fact, practitioners themselves often appear to reveal a capacity for reflection on their intuitive knowing in the midst of action and sometimes use this capacity to cope with the unique, uncertain, and conflicted situations of practice (Schön, 1983). Schön's aim is to show how the patient/practitioner interaction may be transformed, within a framework of accountability when the professional is able to function as a reflective practitioner. In his view, reflectivity can serve as a 'corrective to over-learning'. Reflectivity will allow the practitioner to criticize the tacit understandings generated by the repetitive experiences of a practice. This process enables practitioners to make new sense of the situations of uncertainty or uniqueness.

The professional roles where practitioners apply the concepts of reflection-in-action are as varied as the possible objects of reflection. Professionals may reflect on the tacit norms and appreciations, which underlie a judgement, or on the strategies and theories implicit to a pattern of behaviour. This process helps to establish a culture of professionalism, where practitioners' actions can be recognized by individuals unfamiliar with the specific norms and standards of the profession, i.e. society.

Why is Reflective Practice Important to Pharmaceutical Care?

Applied to pharmaceutical care, the concept of the reflective practitioner appears to represent a central concept. One could argue, that this is a rather obvious statement, especially if this person had a background in the health sciences and had been trained as a health care professional. Despite the fact that pharmacists have contact with the patient at the time a drug product is purchased, very few pharmacists are involved in drug therapy decisions. The focus of their professional activities is routinely on the distribution of the drug product and not on patient care.

Given the humanistic and economic dimensions of unresolved drug therapy problems, it seems obvious that pharmacists' intervention could not only save thousands of patients lives but also billions of health care dollars (Ernst & Grizzle, 2001, Johnson & Bootman, 1997, Institute of Medicine, 1999). The practice of pharmaceutical care has been developed in an attempt to address the patient's need for rational drug therapy comprehensively and in a way that is consistent with existing practices in the health care system (Cipolle *et al.*, 1998, Hepler & Strand, 1990). In addition to the central components of pharmaceutical care that relate to the more technical aspects of this new practice, namely the philosophy of practice, the patient care process, and the

practice management system, the professional characteristics of the individual pharmaceutical care practitioner have been described as being of fundamental importance. For the first time in modern history, pharmacists provide direct patient care to their patients with the sole purpose of identifying and resolving drug therapy problems. In order to accomplish this task, these practitioners need to function as health care professionals and therefore reflect on their experiences in practice in order to allow them to establish and enforce the rules and responsibilities that come with the paradigm shift in their professional lives. Through reflection-in-action, practitioners will regain confidence in their expertise, whilst utilizing evidence when appropriate. They cannot allow their decision-making to be paralyzed when evidence is lacking. However, pharmacists need to be prepared for these new responsibilities related to direct patient care in order to serve and communicate as competent members in truly interdisciplinary health care teams.

Teaching the Reflective Practitioner

Educating reflective practitioners requires a different approach to teaching in that rather than a subject focus, it features a model based on a teacher who happens to also specialize in the teaching of a particular subject. Many important clinical skills will not be effectively learned by the lecture method. The intellectual skills involved in clinical reasoning (problem-solving) will best be acquired through a problem-based approach that emphasizes not only what knowledge is acquired, but also how it is acquired (Barrows, 1986). Problem-based learning (PBL) approaches to teaching have been successfully implemented in many curricula in medical schools and a small number of pharmacy curricula. In a recent review article, Cisneros *et al.* (2002) reviewed problem-based learning approaches in pharmacy and outlined the potential benefits along with suggestions for future research. The problem-based model facilitates the integration of knowledge from separate disciplines useful for solving clinical problems, which is expected of professionals (Barrows, 1983, Strand & Morley, 1987). Whenever professionals in nursing, medicine, and pharmacy can overcome the challenges of ambiguity by activating prior knowledge to facilitate the subsequent processing of new information, they will be able to transfer what they have learned in one context to a problem on hand.

The most effective learning will occur when learners use knowledge to perform meaningful tasks. For example, students might initially learn about the pharmacological properties of a drug by attending classes in a college of pharmacy. Students *really* learn about them, however, only after they have worked with a patient taking this drug: Trying to decide what dosage works best or how to resolve a drug therapy problem related to this drug in the context of real world constraints. Making sure that students have the opportunity to use knowledge meaningfully is one of the most important parts of designing units of

instruction for the reflective practitioner. Effective teaching will help the learners to develop powerful habits of mind that enable them to think critically, think creatively, and regulate their behaviour.

All learning takes place against the backdrop of learners' attitudes and perceptions and their use of productive habits of mind. If students are taught to critically reflect on their knowledge and constantly evaluate the effectiveness of their actions, they will not only learn more and learning will be easier for them, but they will also be able to effectively dedicate their actions to the responsibilities of the patient care process. One rather obvious way to accomplish this would be an increase of the time that pharmacy students spent providing direct patient care. Unlike medical students and nurses, pharmacy students can still graduate from colleges of pharmacy with hardly any patient contact throughout their studies.

Accordingly, the teacher will provide an individual, experience-based professional learning and developmental process for the students within the conceptual framework of the reflective practitioner. These teachers will also understand and teach to the same practice, representing role models for future generations of practitioners. Through reflection, these practitioners will incorporate the art of transformative learning into their repertoire of skills.

The Curriculum for Reflective Practitioners

If practicing pharmaceutical care requires a shift in focus from drug product to patient, so does teaching future practitioners. The curriculum would have to address issues that go beyond didactic and experiential courses; it would also have to include environmental, cultural, and social components that can help to build a new conceptual framework of a professional practice. The primary objectives of such a programme is 'the preparation of a health care practitioner who can contribute to society in a meaningful, measurable manner' (Cipolle *et al.*, 1998). Teaching toward reflective practice means that students as well as faculty must understand the specific standards, rules, and responsibilities that must be the focus and not another topic of the teaching efforts. This might well prove to be the most difficult part toward teaching reflective practice since many pharmacists and those in education believe they share a common understanding of this term when, in fact, pharmacy educators have been teaching to many different 'practices', usually defined by a list of activities, drug categories, or disease states (Cipolle *et al.*, 1998). This is not only confusing to the student; it is also not consistent with what is meant by a practice as defined by other health care practitioners. The meaning of reflective practice must be understood by educators on an intellectually sophisticated level and in the broad context of the educational experience, the health care system, and society. Teaching toward reflective practice will then be problem-based, namely in the context of collaborative teams, and have an outside (authentic) focus.

Conclusion

Good care depends on effective collaboration between many people. How these people work together is a crucial determinant of the quality of care. Distinguishing between the higher order abstractions of theories, diagnoses, and explanations, and the lower order abstractions of the individual practitioner and his patients' observations and descriptions allows practitioners to work effectively with their patients even when the exact causes remain speculative. Decisions, particularly in areas of high uncertainty such as general health care practices (pharmaceutical care), need to be made in the light of a reflective practice, especially since knowledge has other dimensions such as its reliability and its volatility over time.

Ways of learning change over time, in that novices, lacking expertise and experience, need to rely more on proposition knowledge and rules of thumb. The focus of education in pharmacy, at all stages, has tended to be on proposition (written) knowledge, on memorizing facts rather than taking responsibility for one's own learning and the realities of patient care. However, models such as Schön's reflection-in-action embrace an integrated model of acquiring knowledge and can be seen as an important way for pharmaceutical care practitioners to make the best use of their knowledge and advance their skills.

It has been argued that in order for pharmacists to apply their knowledge in the context of direct patient care, the curriculum will have to reflect exactly that, patient care, and allow students to interact with numerous patients to become reflective practitioners. A closer look at the fundamental principles of pharmaceutical care practice revealed that PBL approaches appear to be a good match with teaching toward reflective practice. All of these conditions are relevant to the PBL tutorial group experience and to the whole atmosphere surrounding a PBL curriculum. Since PBL is also thought to be consistent with conditions believed to facilitate learning in collaborative health care teams, this approach to teaching could allow pharmacists to partake in truly interdisciplinary health care teams and the profession of pharmacy to demonstrate its unique and indispensable contribution to quality health care. Therefore, teaching toward reflective practice in preparing pharmaceutical care practitioners, will not only take a lot of confusion out of the educational experience for the student, it will serve the interests of all stakeholders in health care.

Note

1. The spelling 'reflective' was chosen to be consistent with the work of Schön and Polanyi.

Acknowledgements

The author wishes to thank Dr. Peter Morley for his profoundly insightful comments on this manuscript and many invigorating discussions.

References

- BARROWS, H.S. (1983). Problem-based, self-directed learning. *Journal of the American Medical Association*, 250(22), 3077–3080.
- BARROWS, H.S. (1986). A taxonomy of problem-based learning methods. *Medical Education*, 20, 481–486.
- CIPOLLE, R.J., STRAND, L.M. & MORLEY, P.C. (1998). *Pharmaceutical Care Practice*. New York: McGraw-Hill Health Professions Division.
- CISNEROS, R.M., SALISBURY-GLENNON, J.D. & ANDERSON-HARPER, H.M. (2002). Status of problem-based learning research in pharmacy education: A call for future research. *American Journal of Pharmaceutical Education*, 66(Spring), 19–26.
- ERNST, F.R. & GRIZZLE, A.J. (2001). Drug-related morbidity and mortality: updating the cost of illness model. *Journal of the American Pharmaceutical Association*, 41(2), 192–199.
- HEPLER, C. & STRAND, L. (1990). Opportunities and responsibilities in pharmaceutical care. *American Journal of Hospital Pharmacy*, 47, 533–543.
- INSTITUTE OF MEDICINE. (1999). *Report. Medical Errors Cause up to 98,000 Deaths a Year*: Washington Post.
- JOHNSON, J.A. & BOOTMAN, J.L. (1997). Drug-related morbidity and mortality and the economic impact of pharmaceutical care. *American Journal of Health-System Pharmacy*, 54(5), 554–558.
- POLANYI, M. (1967). *The Tacit Dimension*. New York, NY: Doubleday and Co.
- SAVAGE, I. (1999). The changing face of pharmacy practice – evidence from 20 years of work sampling studies. *International Journal of Pharmacy Practice*, 7, 209–219.
- SCHÖN, D. (1983). *The Reflective Practitioner*: Basic Books.
- STRAND, L.M. & MORLEY, P.C. (1987). Evolving health care systems: academic implications for teaching methodologies with emphasis on administration and practice. *American Journal of Pharmaceutical Education*, 51(Winter 1987), 402–406.