

Discourse

Informatics and Interprofessionalism

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Informatics and Interprofessionalism: Is Nursing Caught in the Middle?

In Canada, as in many parts of the world, electronic health records (EHRs) are being developed and implemented as a means of managing data in support of clients' health. We have developed a field of health informatics — the application of information technologies to facilitate the creation and use of health-related data and knowledge. According to Canada's Health Informatics Association, the goal of health informatics is simply to use information technology to help Canadians achieve better health (Canada's Health Informatics Association [COACH], 2013). Nursing informatics is considered a subfield of health informatics drawing on nursing science and knowledge (COACH, 2009; Shortliffe & Cimino, 2006). It provides nurses with tools for data capture, storage, and retrieval for the purpose of delivering and evaluating nursing care. The most recent definition provided by the International Medical Informatics Association (2009) reflects this emphasis: "Nursing Informatics science and practice integrates nursing, its information and knowledge and their management with information and communication technologies to promote the health of people, families and communities world wide." As we move towards increasingly technologically enabled work environments and the digital documentation of our work, we nurses are in a position to use our knowledge and our analytic abilities to identify nursing's phenomena of concern, document when nursing is needed, and track the probable outcomes of nursing care. With the appropriate technologies in place, nursing will be better able than ever before to articulate its unique disciplinary contributions to client care.

In some ways, nursing could not be in a better position to use technologies and information to document what we already know — that professional nursing contributes to the health, healing, and recovery of the clients we serve. Further, technologies and documentation can be used to increase our knowledge about when and why nursing fulfils this role.

However, concurrent with the launching of our EHRs and our digital recording of health-care practices, we are moving away from a disciplinary perspective and towards a practice that is interprofessional in nature. Interprofessional practice demands that we collaborate on the delivery of patient-centred care across disciplines (D'Amour & Oandasan, 2005). Both informatics and interprofessionalism have positive contributions to make to client safety and quality care. Nonetheless, they can cause tension for nurses, pulling us in two directions. Can we as nurses develop our own discipline and at the same time break down disciplinary boundaries? The purpose of this discussion is to articulate what the discipline of nursing needs to do to fully participate in interprofessional practice, what nursing needs for its own development, and to suggest ways in which the two perspectives can be integrated into our EHRs without compromising either nursing or our ability to collaborate with other professions.

Interprofessionalism and Nursing

In 2005 our attention was drawn to the fact that care was fragmented, usually across disciplinary lines, leaving clients without a coherent approach to care management (D'Amour & Oandasan, 2005). Though the word “interprofessional” had been used previously, D'Amour and Oandasan presented it as a new concept — one that would bring health professionals beyond the interdisciplinary perspective, which merely acknowledges that several disciplines contribute to a client's care. D'Amour and Oandasan define “interprofessionalism” as “the development of a cohesive practice between professionals from different disciplines” (p. 9).

Interprofessionalism was thought to require a paradigm shift, as health professionals would need to engage in thoughtful interaction and ongoing dialogue with one another and with their clients. Together, the team of health professionals and clients would be able to design care practices such that client needs could be met in a holistic manner.

Almost immediately there were discussions about the need for interprofessional education in order to achieve interprofessional practice. D'Amour and Oandasan (2005) presented their Interprofessional Education for Collaborative Patient-Centred Practice model describing the factors by which professionals become collaborative practitioners. Their model separated learner outcomes from practice outcomes, acknowledged the interdependence of education and practice, and called for major changes in professional training to bring different perspectives together.

Since 2005, specific teaching approaches have also been suggested. For example, Deutschlander, Suter, and Lait (2012) report on the benefits of having students from different disciplines share clinical practice sites while participating in mentoring, workshops, and discussions (in addition to their regular course work). This model illustrates the benefits of having students in the health field learn together, not just about patient needs but also about how the perspective of each profession enriches the knowledge of the entire health-care team and the quality of the team's decisions. Other authors have developed competency frameworks for curricula and offer guidance on the knowledge, skills, and attitudes that professionals need in order to engage in collaborative practice (Wood, Flavell, Vanstolk, Bainbridge, & Nasmith, 2009). In 2007 the Accreditation of Interprofessional Health Education Initiative was founded, funded by Health Canada (<http://www.afmc.ca/projects-aiphe-e.php>), and Canadian schools in the health field began to incorporate interprofessional preparation into their approval and recognition standards. The competency frameworks provide a structure for the health professions to form true collaborations. Nonetheless, the interprofessional literature has not fully addressed the role of each discipline or profession in relation to its own scope of practice, overlapping scopes of practice, or the need for each discipline to develop and research its own knowledge and tools. Practitioners and institutions are left to navigate the newly created boundaries on their own.

The movement towards interprofessional education and practice is now well established. A review of the literature indicates that our body of knowledge on interprofessionalism is still being developed. But while further research on the outcome and impact of interprofessional practice is needed, interprofessional practice has been shown to have a number of benefits, including enhanced communication across disciplines — which may in turn lead to improved dialogue and increased use of evidence in practice (Zwarenstein & Reeves, 2006). On many occasions the interprofessional movement has demanded that professionals abandon their practice silos. For nursing this means that we must work with colleagues in other health professions on the assessment, planning, and delivery of care. It does not mean that nurses need to abandon their knowledge and practice base in order to participate, but nursing must find a way to contribute its knowledge and practice base to the interprofessional team. Ultimately, this means that nurses must be able to function in two domains: the part of nursing practice that ensures that decisions made by the interprofessional team are acted upon in a manner that is truly supportive of patients' needs and contexts; and the part that requires an independent nursing assessment, judgement, and nursing action, and that uses practice data to evaluate and track nursing outcomes and effectiveness.

Nursing's Disciplinary Needs and Nursing Terminologies

For the development of nursing as an applied and practice discipline, nurses need documentation that includes data that will not only record nursing judgements and actions, but also permit retrieval of nursing data for quality purposes and the development of practice-based evidence for nurses and interprofessional teams. To accomplish this, nursing must draw on its history, its use of theory, its knowledge, its research, and its substantial work in developing client-centred approaches to care.

Nursing, through its many successive versions of the nursing care plan, has provided guidelines for the identification, treatment (or intervention), and probable outcomes of care that partners with patients and focuses on human responses to health conditions and treatments. In a span of 40 years, nursing has developed no fewer than 15 standardized terminologies for describing, guiding, and documenting discipline-specific practices and outcomes. These terminologies allow for the recording (in shorthand) of the judgements, priorities, and activities of professional nursing. Some relate to specialty practice (the Perioperative Nursing Data Set or the Omaha System — originally developed for home and community care), while others encompass the scope of nursing practice (the International Classification of Nursing Practice [ICNP] or the NANDA-NIC-NOC documentation of nursing diagnoses, interventions, and outcomes). The terminologies provide a name for a nursing concern (usually called the “nursing diagnosis”) that is computer-codable as well as a means to record nursing actions and to document and evaluate nurse-sensitive outcomes. In most implementations of these terminologies, nurses also provide narrative descriptions of the contexts of the care decisions, their interactions with patients, and the outcomes of the nursing care. These terminologies are the most effective way to document nursing in modern, digital records and, when they are part of the EHR, provide volumes of practice data on which to build the discipline (Jones, Lunney, Keenan, & Moorhead, 2010; Thoroddsen, Ehnfors, & Ehrenberg, 2010).

The Canadian Nurses Association endorsed the ICNP as an appropriate standard for use in Canada in 2008 (Canadian Nurses Association & Canada Health Infoway, 2008), yet there is still no fully operating system implemented in an EHR anywhere in the country. The Health Outcomes for Better Information and Care initiative is an important first step in documenting nursing assessments and outcomes, but its implementation has been limited. Many nurses see e-health implementations as purporting to serve interprofessionalism yet built to include the International Classification of Diseases (ICD) medical terms and lists of tasks and/or activities needed to accomplish the work of the health-care team. The result, especially for nursing, is that important elements of

practice are not being recorded and the data required to build knowledge and enhance quality of care are unavailable.

Integrating Nursing and Interprofessionality Into the EHR

The EHR may provide a way to address tensions between nursing and interprofessional practice. Modern health care demands that we employ disciplinary-specific knowledge bases while at the same time supporting interprofessionalism. The EHR is a tool that can serve both, as long as it is designed, developed, and implemented to support the individual work of health professionals in addition to the collaborative work of interprofessional teams. Technology designers, as well as members of nursing and allied health disciplines, need to appreciate and articulate the value of encouraging health professionals to draw on their disciplinary knowledge while also collaborating with members of other health professions to resolve complex client problems. This involves, in some cases, the use of disciplinary terminology.

In several countries EHRs have been developed to support terminologies from many disciplines (Häyrinen, Saranto, & Nykänen, 2008). These EHRs “can carry out the tasks for which they were designed using data and information taken from” another EHR “as seamlessly as using its own data and information” (Ceusters, n.d., p. 1). Such EHRs are considered to have a high degree of semantic interoperability (Ceusters, n.d.; Häyrinen et al., 2008). As a result they can support different disciplinary and interprofessional information-seeking, decision-making, and workflows. Semantic interoperability allows health professionals to view data from other disciplines (e.g., a physician can view nursing data using a medical lens; a nurse can view social work data using a nursing/home care lens). To find out if a patient is responding to a new medication, a physician can view information on the medication and on the patient’s response — for example, how easy it is for the patient to take his medication (e.g., the capsule is difficult to swallow) and the patient’s opinion on the medication regime (e.g., four times per day is difficult to work into his daily pattern). A nurse viewing data gathered by the social work service could learn more about a patient’s home supports. This might include the presence of a caregiver who is available each morning, but not at night, to support medication adherence. A physician viewing social work data may learn that the prescribed medication is far too expensive for the patient to purchase without drawing financial resources away from the family. An interprofessional plan of care would certainly be feasible in settings where each professional obtains information from others and the plan of care is informed by all perspectives. For nurses in Canada, use of such an

EHR will require changes to our record system and will involve the procurement, selection, customization, and implementation of systems to support team or interprofessional work. Our technology must advance beyond providing a single view of the patient record that does not take into account all of the disciplines involved in the patient's care.

We call on nurses, particularly those interested in informatics, to take the lead and advocate for EHRs that support nursing and interprofessional practice. We submit that there is nothing in interprofessional practice prohibiting any discipline from using its disciplinary tools to contribute to client care. In fact, the opposite is true. Interprofessionalism at its best encourages each profession to consider the perspectives, judgements, and activities of other professions as well as its own. Knowledge gained from robust EHRs can only improve the quality of care and serve the advancement of health. The representation of nursing in interprofessional EHRs will necessarily include standard nursing terminology, a nursing care plan (or an interprofessional care plan that tracks care provided by each profession), and the ability to link client outcomes with nursing judgements and actions. And it will necessarily require input from other professionals and incorporation of their disciplinary perspectives.

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