



Development of an Electronic Student Management System (ESMS)

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The University of British Columbia (UBC) Family Nurse Practitioner (FNP) program opened in 2003. A mandate of the program is student and faculty tracking of clinical experiences in a detailed and systematic fashion. The traditional use of paper/pencil logs, and their lack of consistency as well as storage issues, created difficulty in retrieving and compiling the necessary data.

The UBC School of Nursing (SoN) offers a FNP program in a two year full time on campus format. The program leads to the academic degree of Master of Nursing - Nurse Practitioner (MN-NP) and also prepares graduates for eligibility to apply for licensure holding the protected title of "Nurse Practitioner" in BC. The program builds upon Registered Nurse Practice at the baccalaureate level and extends both clinically and theoretically in to a new form of practice that is based on the National Organization of

Nurse Practitioner Faculty (NONPF) and the Competencies Required for Nurse Practitioners in BC. The program is developed within a primary care context and the health services provided by Nurse Practitioners.

The curriculum consists of a combination of core theory courses, core FNP courses and focused clinical practice. The clinical training component of the FNP program consists of more than 700 hours over a two year period and detailed clinical logs must be submitted by the students on an ongoing basis. These detailed logs are required, and submitted for the three primary care clinical courses and the final consolidated practicum. The sheer volume and complexity of the data submitted by the students was very difficult for faculty and students to manage in the paper and pencil form. Thus discussion began between the FNP faculty and staff and the IT department to find a way to track and analyze clinical experience in a systematic fashion.

Communication with the IT team to develop a solution began, and after a year of multiple excel spread sheets and an intensive review of what needed to be tracked, the beginnings of an electronic student management system was introduced. This software was the result of an intensive collaboration between the school's IT team and the Family Nurse Practitioner team. The software allows users to input all necessary data into online forms and fields. It tracks type of client encounter, client demographics, specific interventions and procedures, and level of responsibility. It creates a database for a wide variety of uses for today and in the future. At present the software houses clinical placements and

creates a multitude of reports used to manage and enhance the clinical experience. It also allows students, instructors and preceptors to perform online evaluations.

The system has benefited both faculty and students. For the students the “new way” is extremely fast and much more user friendly; captures more data easily; is accessible without the need to carry it around, data is secure and protected against damage or loss; and a student can make a real time assessment because consistent, accurate and quick aggregations and reports are available.

For faculty the system has resulted in new reporting mechanisms that afford real-time analysis of a student’s progress in a course or the overall program at various levels of granularity. Data is available, accessible, accurate and up-to-date. Analysis of preceptor performance data makes it straightforward for administrators to ensure the continuance of high quality clinical experience and education for students. The review process by the student of the preceptor is simplified and site and preceptor data collection/evaluation provides ways to assess and distribute placements to students based on their prior experience and needs.

This is a beginning step in an overall plan to incorporate an electronic portfolio (ePortfolio) into the overall ESMS that will allow students to track their clinical experiences in ways that enhance their learning outcomes. The ESMS tracks data that is primarily quantitative in nature and the addition of the ePortfolio will track the achievement of specific competencies, integrating the necessary qualitative measure. The

ePortfolio will also provide the ability to create reports that will determine the effectiveness of the clinical placements in the achievement of clinical competencies over time. To date, the outcomes and possibilities have exceeded our expectations. As the database develops, time, energy and commitment continue to be required by all to ensure successful outcomes. Communication among the FNP team, the IT team and students continues.

One of the desired outcomes of this project is to create an integrated system which is capable of tracking qualitative and quantitative clinical practice experiences for the nursing undergraduate program as well as the NP program.

BIOGRAPHY

Barbara Boyle, RN, MSN is Program Associate, Family Nurse Practitioner Program (FNP) at the University of British Columbia School of Nursing. She holds a BSN from the University of Alberta and a MSN from the University of British Columbia. Throughout her career, she has been involved in nursing education, practice (both acute care and community) and administration. In addition, she has participated in a variety of professional activities related to practice standards and Quality Assurance. A member of the Xi Eta chapter of Sigma Theta Tau International, she is currently on the Board of Directors and serves as Research Committee Co-Chair 2006-2008.

In her unique role as Program Associate with UBC's Family Nurse Practitioner Program, she is primarily responsible for designing and implementing structures and processes that support the faculty and students of the program. A major part of that role is the development and maintenance of an Electronic Student Management System that tracks the students' clinical experiences.