

ACADEMIC PROGRAM REVIEW  
THE SCHOOL OF PHARMACY  
MEMORIAL UNIVERSITY OF NEWFOUNDLAND  
Report of the Review Panel

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## **ACKNOWLEDGMENTS**

The panel members of the Review Committee would like to acknowledge the tremendous work of the Dean, Associate Deans (Graduate and Undergraduate), faculty, staff, and students at the School of Pharmacy (SOP) in preparing for the Academic Program Review (APR) and for fully taking part in the process in such an open and professional manner. We thank them sincerely for their availability and willingness to answer our many questions. Without their co-operation we would not have been able to conduct the APR. We appreciate also the contributions of the external stakeholders, Regional Pharmacy Directors, and preceptors and their input in the process. We thank the Dean of Record, Dr. Grant Gardner, and the Dean of the School of Graduate Studies, Dr. Noreen Golfman, for their input. We appreciate their time. We also are very grateful to Ms. Kim Myrick from the Centre of Institutional Analysis and Planning (CIAP) for her work in overseeing arrangements for the review process and for her guidance and assistance throughout the process. We always knew that she was there if we had questions or needed further assistance. A special thanks to the SOP Senior Administrative Officer, Ms. Ann Marie O'Keefe-Penney and Ms. Denise Burke at the Tiffany Court site for their help with the many arrangements required.

## **INTRODUCTION**

The following is the Academic Program Review (APR) Report for the School of Pharmacy. The on-site assessment by the Review Committee occurred March 7-8, 2013. The Review Committee consisted of a panel of two external reviewers, Dr. Neil MacKinnon, Professor of Public Health, University of Arizona and Dr. Nancy Waite, Associate Professor and Associate Director, School of Pharmacy, University of Waterloo and two internal reviewers from cognate disciplines at Memorial University, Professor Janice Parsons, Assistant Professor and Associate Dean for Undergraduate Programs, School of Social Work, and Dr. Shirley Solberg, Professor and Associate Dean for Graduate Programs and Research, School of Nursing and Panel Chair.

## **BACKGROUND**

There are a number of very important contextual factors that are pertinent to briefly address before describing the Review Process and presenting the findings and recommendations that come from our review activities. Some of these are external factors such as recent changes affecting the pharmacy profession and others are internal to developments at Memorial University of Newfoundland. These are important to identify upfront as they not only influence some of the issues facing the SOP but a number of recommendations will be made in light of these important contextual factors.

### **External Factors**

1. Movement towards an Entry-Level PharmD (ELPD) Degree Program in Canada. In February 2010 the Association of Faculties of Pharmacy of Canada (AFPC) and the Association of Deans of Pharmacy of Canada (ADPC) accepted the position and passed a resolution that the ELPD would be the entry to practice degree for all professional

pharmacists in Canada with a mandate for all pharmacy school/faculties in Canada to have their curriculum for this degree in place by 2020. Given the developments and consultations that will need to take place this is not a long time to make that transition. The Canadian Pharmacists Association supports this resolution.<sup>1</sup> This will have a number of important implications for all Schools/Faculties of Pharmacy throughout the country. Four Schools/Faculties of Pharmacy in Ontario and Quebec have already implemented the ELPD. This move will make the SOP at Memorial less competitive for admissions.

2. The New Pharmacy Act of 2012 in Newfoundland and Labrador. The Act specifies expanded roles and scope of practice for Pharmacists as well as the planned regulation of Pharmacy Technicians in the province. Given the mandate of the undergraduate professional degree is to prepare graduate qualified to work under this Act it has important implications for the SOP.

### **Internal Factors**

There are a number of important developments that have taken place within Memorial University and these will have an impact on all academic units.

1. Memorial University Strategy and Frameworks. After broad consultation both inside the University Community and with stakeholders in the province three major frameworks have been developed and endorsed by the Senate of Memorial University in order to guide and support development of major university activities. These complementary frameworks, which are to be used as guides for faculty, staff, and student activities, have the potential for a number of changes within the university environment and how we engage with the broader community. These three frameworks are:

- i) Research Strategy* (Endorsed by Senate September 13, 2011) including strategic research themes.
- ii) Teaching Learning Framework* (Endorsed by Senate May 10, 2011) including a number of principles to guide the teaching learning process.
- iii) Public Engagement Framework 2012-2020* (Endorsed by Senate September 25, 2012) including goals and objectives.

2. Changes to the Budgeting Process. The University is undergoing a process of change in how finances are disbursed to academic units, i.e., from a model of block-based funding to a position-based budgeting model.

3. Strategic Initiative Grants from Provincial Government to the SOP. These are requests to the Province for major changes in programs and infrastructure. In 2009, the SOP received provincial government funding under this initiative for the resources for an

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<sup>1</sup> See CPHA Position Statement on a Doctor of Pharmacy Degree as an Entry-Level to Practice available at <http://www.pharmacists.ca/cpha-ca/assets/File/cpha-on-the-issues/PPDoctorOfPharmacyEN.pdf>

expansion to the undergraduate program to increase the number of qualified pharmacists graduating each year.

### **REVIEW PROCESS**

The Process consisted of a review of a number of documents prepared by the Faculty and Staff of the SOP, a dinner meeting of the Panel members with the Dean of Record, Dr. Grant Gardner, Associate Vice-President (Academic), and Ms. Kim Myrick, Centre of Institutional Analysis and Planning to discuss the process and expectations, and a two-day schedule of meetings with faculty, staff, students, and external partners and stakeholders of the SOP, and the Dean of the School of Graduate Studies, including an exit meeting first with the Dean of the School, the Dean of Record, and second the Dean, faculty, staff, and students from the SOP for the panel to share preliminary findings and solicit additional input from those attending.

### **Documentary review:**

Prior to conducting the on-site assessment the Review Committee members were provided with and reviewed the following documents:

- 1) Self-study Report and the following Appendices:
  1. Strategic Plan 2009-2014;
  2. Self-Assessment Report submitted to Canadian Council for Accreditation of Pharmacy Programs August 2009;
  3. School of Pharmacy Annual Report 2011-2012;
  4. Program of Studies;
  5. Overview of Pharmacy Skills by Year;
  6. Structured Practice Experience (SPE) Preceptor and Site Criteria;
  7. Sample Student Feedback;
  8. Curriculum and Program Evaluation Plan;
  9. Graduate Application Process;
  10. Research Grant Revenue since 2002;
  11. Statement of Library Holdings;
  12. Organization Chart (Administration); and
  13. School of Pharmacy Constitution
  
- 2) Course Outlines – School of Pharmacy
  
- 3) Fact Book 2011 from the Centre for Institutional Analysis and Planning (CIAP)
  
- 4) Available on-site for review -Faculty Curriculum Vitae
  
- 5) Report of the Academic Program Review Panel (July 18, 2002), Action Plan by the SOP in response to the APR and Comments by the Planning and Budgeting Committee available at [http://www.mun.ca/vpacademic/academic\\_review\\_reports.php#Pharmacy](http://www.mun.ca/vpacademic/academic_review_reports.php#Pharmacy)

### Interviews:

One of the main activities of the Committee was a series of interviews. These interviews included the following groups and/or individuals:

#### Day 1

- 1) **Leadership Team** consisting of the Dean – Dr. L. Hensman, Associate Dean Undergraduate Studies – Dr. L. Phillips, and Associate Dean, Graduate Studies and Research – Dr. M. Daneshtalab.
2. **Structured Practice Experience (SPE) Program Co-ordinator** – Ms. Wanda Spurrell.
3. **Chair, Committee on Curriculum Planning and Development** –Dr. John Hawboldt, Associate Professor and **Curriculum Assessment Specialist and Post –doctoral fellow** – Dr. Bev FitzPatrick, Faculty of Education.
4. **Pharmacy Operations Specialist, Lawton's Drugs**, Ms. Barb Scaplen and **Registrar, Newfoundland and Labrador Pharmacy Board**, Ms. Margot Priddle.
5. **Regional Directors of Pharmacy in Newfoundland and Labrador**. Eastern Health-Mr. Gary Peckham, Central Health-Mr. Ted Dawe, Western Health- Mr. Ken Walsh, and Northern and Labrador Health, Mr. Bert Warr (the last three via teleconference).
6. **Pharmaceutical Sciences Faculty**- Dr. Dr. M. Daneshtalab, Associate Dean Graduate Programs and Research, Dr. H. Liu, Professor, Dr. L. Wang, Associate Professor, Dr. N. Daneshtalab, Assistant Professor (Cross appointee to Faculty of Medicine) and Dr. L. Alisaraie, Assistant Professor.
7. **School of Pharmacy Undergraduate Students**: Class of 2013 Robbie McCarthy and Melissa Jacobs; Class of 2014 Samantha Swain; Class of 2015 Janice Coleman and Katie O'Brien; and Class of 2016 Joshua Lane and Kara O'Keefe.

#### Day 2

1. **Community Pharmacy Preceptors**: Ms. Kelda Ghaney, Ms. Christine Tulk, and Ms. Jillian Croke. Hospital Pharmacy Preceptors: Mr. Darryl Burke.
2. **Dean of the School of Graduate Studies** – Dr. Noreen Golfman
3. **Grants Facilitator, School of Pharmacy** – Ms. Kristine Day
4. **Pharmacy Practice Faculty**. Dr. Erin Davis, Assistant Professor (Cross-Appointment to Faculty of Medicine, Discipline of Medicine), Dr. Deborah Kelly, Associate Professor and Clinical Pharmacotherapy Specialist, Provincial HIV Program, Eastern Health, Dr. Rebecca Law, Associate Professor (via teleconference), Dr. Leslie Phillips, Professor (Cross-Appointment to Faculty of Medicine, Department of Psychiatry and to Eastern Health), Dr. Jason Keiley, Assistant Professor and Scott Edwards, Clinician with Eastern Health (80%) and with School (20%) and Social Administrative Faculty-Dr. John-Michael (J-M) Gamble, Assistant Professor (Cross-Appointment to Faculty of Medicine, Discipline of Family Medicine)
5. **Graduate Students**: Mr. Lokesh Kumar and Ms. Shwetha Kalidindi, both second year students in Master of Science in Pharmacy in the M.Sc. (Pharm.)
6. **Manager of Academic Programs** – Ms. Csöp Glew and Associate Dean, Undergraduate Studies- Dr. Leslie Phillips
7. **Administrative Support and Budgeting: Administrative Staff Specialist**- Ms. Sharon Tucker and SAO- Ms. Ann Marie O'Keefe-Penney

8. **Exit Meeting with Dean**, Dr. Linda Hensman, Dean School of Pharmacy
9. **Exit meeting with Dean of Record** – Dr. Grant Gardner, Associate Vice-President (Academic)
10. **Exit Meeting with Dean, Faculty, Students, and Staff** of the School of Pharmacy

#### **ASSESSMENTS AND FINDINGS:**

##### **Alignment with University Strategic Plans and Frameworks**

The academic, research, professional, and service activities of the faculty and staff of the SOP are well aligned with the broader University Strategic Plan and the frameworks for the research strategy and the teaching learning and engagement frameworks. Just to cite a few examples: 1) In the admission process for the Undergraduate program there is a clear commitment to the needs of the province to produce well qualified professional pharmacists in that the SOP ensures that 75% of applicants are from the province of Newfoundland and Labrador (NL); 2) Many of the research initiatives, particularly those within the new social-administrative stream in the SOP, are well aligned with the needs of the province; and 3) There is also alignment with the Teaching-Learning Framework through the work in the undergraduate curriculum in conducting the curriculum-mapping exercise.

***Recommendation 1: Explore other ways by which the SOP is able to align with the strategic plans and frameworks of the University (research, teaching-learning and engagement).***

##### **School of Pharmacy Planning**

The SOP has a Strategic Plan (2009-2014) and a Strategic Planning Committee that is a standing Committee of the Academic Council within the School. The structure of the Strategic Planning Committee allows for equal representation from the Pharmaceutical Sciences Faculty and the Pharmacy Practice Faculty or the sub-disciplines of the School and that composition is definitely positive as it would bring together the representatives of these faculty groupings for interaction and discussion. However, in examining some of the actions of the Strategic Plan, we question if they would be more appropriately placed in other standing Committees or Sub-Committees of the Academic Council. For example, one action in the Strategic Plan (under Objective 4.1.1) addresses further development of skills sessions. It would seem that this would be more appropriately placed in the Curriculum Planning and Development Committee (CPDC) as we noted in the Self-study document that "ongoing development of the academic program, curriculum strategies is the purview of the CPDC." We also noticed that while a number of the actions have been completed, many have not had an update since 2009. Since a Strategic Plan is critical to the ongoing development of an academic unit we were concerned that we did not see more recent updates and the inclusion of some of the developments that are taking place in legislation and pharmacy education, as well as more specific actions targeted towards addressing some of the strategic initiatives and issues within the SOP, i.e., change in basic pharmacy education, legislative changes for pharmacists and building research capacity.

***Recommendation 2: Review the Strategic Planning Process including the roles of the Strategic Planning Committee and the CPDC.***

***Recommendation 3: Update the Plan that is currently in place and consider developing more specific activities to focus on some of the major changes taking place with legislative changes in the province, pharmacy education in Canada, and the need to build capacity in research.***

## **UNDERGRADUATE PROGRAM**

In the review of the undergraduate program, we would like to preface our comments and recommendations by acknowledging that we do recognize the particular challenges that professional programs mandated to prepare practitioners for a practice discipline face, as they are required to meet academic and professional standards, as well as licensing requirements, and bridge some of the challenges that naturally occur between the demands of the academic setting and the realities of the practice settings.

The undergraduate program is a very strong and solid program that produces graduates consistently referred to by preceptors and other stakeholders interviewed as “excellent.” This reflects a significant effort made by faculty, staff, and administration to review, develop, implement, and assess various approaches to teaching, move to a more clinically focused program, make good use of pharmacy professional learning outcomes, and respond to the specific suggestions and concerns raised by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) and other Program Reviews. In addition, they have brought the program on par or above par with other Canadian programs in areas such as professional skill development, interprofessional initiatives and curricular mapping. Faculty, staff, and senior leadership are to be commended for the results.

### **Admission to Undergraduate Program**

The Admissions process is thorough and very well managed by staff with input from a Faculty Committee. The incorporation of interviews as a second stage in the process and inclusion of pharmacists in the interviewing process is an excellent idea. The SOP is considering other approaches in terms of weighting of the various components. The students who are admitted are strong academically and are viewed as excellent representatives of the profession. There is little attrition from the program ensuring teaching resources are well used and a good cohort of students graduate each year. While provincial needs are considered by ensuring that 75% of the seats are for residents of NL, there is no special effort within that provincial allocation to recruit Aboriginal students.

***Recommendation 4: Explore the Aboriginal designated seats program to recruit undergraduate students from this group.***



### **Curricular Mapping and Planning**

This activity is mainly being carried out by the Curriculum Planning and Development Committee with heavy involvement by and buy-in from faculty members in re-working individual courses. The Committee has actively used the new AFPC entry to practice outcomes to guide this exercise in both individual courses and the curriculum as a whole. The involvement of a curricular assessment specialist has greatly assisted efforts to create a mature, reflective approach to curricular planning that: 1) Allows for faculty development and improvement of existing courses; 2) Helps to identify gaps and areas of overlap; and 3) By using it as a quality improvement tool will result in a strong, cohesive curriculum. Many Schools of Pharmacy struggle to move curricular mapping forward in a meaningful way and the SOP faculty should be proud of their accomplishments. Additional effort should be placed in the next phase of curricular mapping and on how current course assessments could inform the curricular reform/mapping process.

***Recommendation 5: Create a permanent position or at least a term appointment sufficient to ensure that the curriculum mapping work can continue and create the foundation for a solid ELPD degree program.***

### **Program and Courses**

The overall course content, organization, and delivery of this program is very good. Strengths noted are the skills courses that are extremely well developed and identified as such by both faculty and students. They provide the “glue” that connects the didactic and the experiential curriculum, and include good use of Objective Structured Clinical Examinations (OSCEs) and standardized patients. The process by which professionalism was measured in the skills lab was identified by students as a positive approach.

Meaningful, interprofessional activities are a challenge for many health care programs and the University is recognized for the Interprofessional Centre and the resulting interprofessional curriculum that has been developed. With the move to ELPD degree being inevitable, this is a good time to revisit what more can be done to enhance interprofessional teaching through common course delivery in areas such as professionalism, ethics, and health care systems.

***Recommendation 6: In the planning that will be required for the new ELPD program explore the inclusion of greater interprofessional education for areas of the curriculum such as professionalism, ethics, and health care systems.***

There were many positive aspects of the experiential program identified. Preceptors were uniformly complimentary on the high quality of the students they worked with, both in the early and later experiential rotations. They felt well supported by the School and particularly through the role of the SPE Coordinator. Preceptors overall experience with the students on rotation was positive in that they enjoyed having them and felt they brought welcome enthusiasm and energy to their practice settings. The preceptors

did feel that having further preceptor training particularly in areas such as conflict resolution and giving feedback would be beneficial.

***Recommendation 7: Revisit preparation for preceptors and their identified needs and how to assist them in meeting these needs, e.g., conflict resolution and giving feedback to students.***

Student feedback on this program was also very positive. They greatly valued the experiential learning experience and felt that it helped connect what they were learning in the classroom with the reality of practice. Their biggest struggles were logistical (late notification of where they were going to be placed which resulted in changes to living arrangements and increased costs and variability in the clinical experience because of preceptors not understanding expectations). They also questioned some of the basic science courses and the relevancy of the material to their practice. The latter could be addressed through the curriculum mapping and planning exercise through examining how courses in the more basic sciences could be made more relevant to the students and pharmacy practice.

A new challenge will be to engage in the same type of curricular renewal process to accomplish: 1) Training of students as graduates to meet the new scope of pharmacy practice that is occurring in the province (e.g., pharmacists as immunizers, minor ailment programs, refill authorization, and pharmacists as prescribers) and 2) Implementation of the ELPD degree. Both require some urgency. Graduates must be prepared for the new roles as designated in the Pharmacy Act approved in December 2012 and the sooner the ELPD degree is implemented, the less significant the impact will be on application and admission numbers. Movement to ELPD degree programs in the rest of Canada will make the current program at Memorial less attractive to potential applicants.

The ELPD degree will require increased prerequisite courses and students will require adequate lead time to comply with this change. Addressing these issues is a more pressing need than the proposed increase in enrollment. The Strategic Initiatives Fund would be ideally suited for these initiatives and the ready availability of this funding would put Memorial on par or ahead of other programs for putting this new curriculum and degree in place. It was evident that both students and practitioners interviewed were concerned they would fall, or already were, behind with respect to the training they would need. A key opportunity exists for the School and University that should be quickly capitalized.

The two biggest challenges with the ELPD degree will be: 1) How to increase experiential placements when there is clearly at present a dissonance between the hospital/health system pharmacy resources and ability for practice supervision and the current and future institutional experiential needs of the School for student experiential learning and 2) How to expand the quality and quantity of experiential sites for the ELPD degree

program. While daunting, preceptors and the Regional Directors of Pharmacy in the province interviewed appeared to be open to exploring ways to accomplish these goals. However, the latter group also identified a number of strains in the health system around pharmacy services, e.g., a number of positions vacant in all regions with difficulty in recruiting qualified personnel, inability to accommodate student experiential learning from time to time, and seemingly lack of government and institutional support for their priorities. Regional Directors also identified student specific placement issues such as cost to students for placement in northern regions, need to accommodate all students for relatively short periods of time, and adequate number of pharmacists to act as preceptors. Nevertheless, there needs to be some further discussion with health system administrators and Regional Directors of Pharmacy across the province to further explore options and models of obtaining further experiential learning for students.

***Recommendation 8:*** Prepare an academic and resource plan to ensure that recent and proposed scope of practice changes are included in the current undergraduate curriculum and involve the necessary stakeholders both within and outside the University in this planning.

***Recommendation 9:*** Prepare an academic and resource plan to convert the current BScPhm to an ELPD degree program, including a transition plan for some of the existing classes of students.

***Recommendation 10:*** Within the academic planning in recommendations 8 and 9 consider on-line learning approaches and increased use of technology as a means of enhancing student self-directed learning and more optimal use of resources (space and faculty).

***Recommendation 11:*** In particular explore a variety of means of obtaining experiential learning experiences for students that will meet academic and professional standards as well as licensing requirements and engage stakeholders, in particular Regional Directors of Pharmacy, in this exploration so that concerns of this group can be addressed.

## **GRADUATE PROGRAMS**

The SOP offers both MSc and PhD graduate programs in pharmaceuticals (currently on hold) and medical chemistry/pharmacognosy. MSc programs are offered in neuropharmacology, cardiovascular pharmacology/pharmacokinetic-pharmacodynamics, target drug delivery, therapeutic drug monitoring, pharmacoepidemiology and pharmacy practice. However, there are no graduate students currently in the latter group because the workload of the Pharmacy Practice Faculty is too heavy. There is a new stream within the SOP identified as the Social-Administrative Stream, which is potentially a growth area for graduate students.

Over the past decade or so, the programs have had a modest but consistent track record of producing a small number of graduates. In the past three years, the SOP has been able to create new faculty positions, which has enabled the addition of new and skilled faculty members. These, in time, will be able to contribute to the expansion and growth of the graduate program. Several organizational factors have been put into place to foster growth in the graduate programs, including the appointment of a faculty to the position of an Associate Dean of Graduate Studies and Research and hiring of a Grants Facilitator on a contractual basis. Recruitment of students to the graduate programs is enhanced through the current low tuition levels with additional funding available to graduate students through teaching assistantships and special funding initiatives by the School of Graduate Studies (e.g., The President's Doctoral Student Investment Fund). The admissions process to the graduate programs appears to work well and the two MSc graduate students who met with our committee were satisfied overall with the program.

The SOP provides a common seminar course for all the graduate students, which helps to foster a sense of community among the students, despite their considerable differences in areas of study. However, they did express concern that while they found the orientation program offered by the School of Graduate Studies helpful, they also would appreciate a unit-specific orientation program offered by the SOP to learn more about the School and meet other faculty and staff.

The self-study document projects significant growth in the graduate programs over the next seven years (to 26 students) although it is difficult to envision the SOP reaching these projections with current space and funding limitations. It also would appear that some of the senior faculty are not as involved in graduate student supervision as was the case previously and if this continues to be the case it puts further limitations on recruitment of students. The more successful the faculty are in obtaining research funding to support graduate students the more likely expansion will occur. Moreover, the SOP at MUN is the smallest pharmacy program in the country so there are fewer faculty members able to supervise graduate students.

It would seem that the graduate program has been marginal over its entire existence. It remains a small program (roughly ten students, with the vast majority being MSc students), although there is great breadth in program offerings as was previously described. While this does enable most faculty members to be at least theoretically in a position to supervise a graduate student, it does result in a lack of critical mass in any one area. It also results in a small class size for most of the graduate courses taught by the SOP faculty (typically one to three students per course), which is not an optimal utilization of faculty resources. As was previously recommended an urgent need within the SOP strategic planning is building research capacity and this is critical to increasing graduate students within the SOP.

***Recommendation 12:*** Consider reducing the number of areas of study within the graduate programs and instead focus on building capacity and a critical mass of students in a couple core areas of study.

***Recommendation 13:*** Develop a SOP-specific orientation program for the graduate students and explore other ways they can be better integrated into and know more faculty within the SOP.

#### **FACULTY RESEARCH AND SCHOLARSHIP**

The recruitment of new and skilled faculty members over the past three years will help to increase the research productivity of the faculty by creating more of a critical mass and introducing new skills and different methodologies. Additionally, the appointment of a Grants Facilitator is positive and has already increased the research productivity of the faculty through a substantial increase in the number of submitted research proposals (although it has yet to be determined whether this will result in an increase in the number of funded grants). There was concern over positions that play an important role in the future development of the SOP, which are contractual such as the grants facilitator. With the challenges that lie ahead, the SOP cannot afford to lose this important position. We heard consistently from faculty about the tremendous positive impact the work of the grants facilitator has had on their ability to submit grant applications. There is an identified need for a permanent grants facilitator within the school. There is also an expressed need for additional support for established and on-going research, such as access to clerical and research assistants (and office space for these). If the SOP does move to ELPD degree, the research capacity of the faculty could be increased if one or more required student research rotations with faculty members were added to the curriculum.

A review of Faculty C.V.s and a Summary of Research Grant Revenue since 2002 shows that research productivity over the past five years (the years for which we were provided data) would best be described as marginal. Over the past five years, there has been a range of \$60,000 to \$300,000 per year in external research funding brought into the SOP by the entire faculty, with roughly \$250,000 in the most recent year of data provided (2011-12). In addition, from 2007 to 2011, the faculty published a total of 64 peer review publications, or approximately one peer review publication per faculty member per year (assuming these 64 papers are all unique publications).

While some start-up funds have been provided to some of the newly hired faculty, the amount of start-up funding has been very modest (up to \$30,000, but in some cases as low as \$5000). Some faculty have been able to access additional funds through the Research and Development Corporation (RDC) but these funds require a successful application to a major research granting council/agency by the faculty member and, if obtained, the funds are not in the form of unrestricted start-up funding.

Some senior faculty members continue to obtain grants and be productive in their research programs, however overall there appears to be a dearth of senior faculty members who currently have large research programs and who could serve as mentors to the junior faculty. In some cases, junior faculty members must look outside of the SOP to find successful research mentors.

***Recommendation 14: Make the Grants Facilitator position permanent to give stability to that position and allow the position to develop to its fullest potential.***

***Recommendation 15: Establish a formalized research mentorship program for junior faculty members.***

High teaching loads have had a negative effect on research productivity. While this is true across all faculty in the SOP, the pharmacy practice faculty have significantly high teaching loads because they are required to serve as preceptors for students in practice experience, in addition to their own clinical practice commitments. For the pharmacy practice faculty, this results in the majority of their research activities being restricted to their non-teaching semester. Furthermore, if the SOP adopts the ELPD degree, this will require considerable resources for curricular redesign, as noted in other sections of this report, and this, in turn, may further restrict the ability of the faculty to engage in research.

We saw limited examples of joint research initiatives between the SOP faculty and the pharmacy departments in the regional health boards. The Regional Directors of Pharmacy did express some interest in expanding research activities within their facilities. For example, one of the Directors of Pharmacy noted “the research piece is critical if we want to move pharmacy services forward in this province.” Moreover, the new Pharmacy Act, which greatly expands the scope of practice of pharmacists in Newfoundland and Labrador, creates a unique opportunity to evaluate the value of new pharmacist services in the form of a natural experiment. This is a one-in-a-generation type of opportunity for evaluation research (of which pharmacy researchers in provinces such as Ontario and Alberta have already taken advantage in creating relevant practice-based research initiatives in partnership with community and hospital pharmacists). There are also significant changes in the role of pharmacists in community and hospital practice related to patient safety, which have created new opportunities for pharmacist researchers in Nova Scotia and Ontario and which could also provide opportunities for the SOP faculty.

There is more limited provincial health research funding in NL than exists in most other provinces. The Newfoundland and Labrador Centre for Applied Health Research (NLCAHR) has limited funds and could be a source of limited funding for some of the research suggested above as these projects would fit in the applied health category. However, we recognize it is challenging for faculty to find funding for pilot or demonstration projects.

***Recommendation 16: The pharmacy practice and social-administrative faculty meet with the Directors of Pharmacy in the Regional Health Boards and with the provincial pharmacy association to discuss research/evaluation and funding opportunities around demonstrating the value and return on investment of the newly expanded scope of practice of pharmacists.***

## **FACULTY AND STAFF**

Pharmacy is a relatively small School. Memorial's Fact Book 2012 shows the SOP as having the lowest number of full-time undergraduate students and the lowest number of permanent faculty and staff of the three health professional schools at Memorial, i.e., nursing, pharmacy and social work. With a small faculty complement in a School producing generalist pharmacist practitioners, and offering a broad range of graduate study foci, the SOP is unable to benefit from the economies of scale present in larger schools of pharmacy.

### **Administrative team**

A very strong administrative team is effectively and efficiently supporting the work of the unit. We consistently observed a significant level of commitment to the SOP and its students. The SOP has benefitted in many ways from a period of stable leadership from the current Dean and Associate Deans.

The relatively recent establishment of the role of Senior Administrative Officer with support from an Administrative Staff Specialist II situates the school well to address financial and administrative challenges of the future, such as those that will emerge from the university's new budgeting model.

### **Staff**

The School has been extremely fortunate not only in how long-term staff members have developed their positions but also in how the two newer staff positions (Manager of Academic Programs and Grants Facilitator) have addressed long standing needs of students and faculty and evolved their positions. Students and Faculty were truly appreciative of all these individuals have accomplished in their positions.

There is evidence of effective use of the school's human resources, facilitated in part by clearly defined job duties. There is considerable effort to promote cross training of staff such that multiple areas are covered by one position. While the administrative team has managed quite well these multiple demands, future development will require attention to ensure that the duties assigned to these positions do not become unmanageable. We did note an especially diverse and time-consuming range of activities assigned to the Administrative Staff Specialist, particularly related to fund-raising for student events. This appears to significantly detract from the provision of dedicated support for the work of the Senior Administrative Officer and for the core

administrative functions of the School. The role of the Administrative Staff Specialist within the School should be reviewed.

We also heard of challenges in staff deployment related to the need to distribute limited support staff over two locations. This has created barriers to cross training and limited the availability of services, such that faculty from time to time have had to undertake work such as photocopying of exams. Options for back-up support staff coverage at each site needs to be explored.

The Manager of Academic Programs position entails wide-ranging and pivotal contributions to the success of students and the undergraduate program in its current form and is very proactive in nature. The implications of moving toward an ELPD degree will need to be considered in relation to this position. Overall the administrative support currently in place positions the unit well to sustain the process of development and change that lies ahead, particularly related to the potential introduction of the ELPD degree. However, this will necessitate additional support in some areas, most especially in coordination and support of the experiential components of the program.

### **Faculty, Workload and Expectations**

There are a number of new faculty members who were noted to bring renewal and invigoration to the unit and particularly to its research agenda. While this is a source of strength for the School, it also means a number of the faculty are not yet tenured. They face barriers to research such as limited start-up funds and laboratory space and high teaching loads and clinical supervision that may leave little time for intensive and productive research periods. Some new faculty have found it difficult to secure a clinical appointment with Eastern Health and faculty expressed considerable frustration with what is sometimes perceived as a chronic lack of support from top administrators in the health care system for pharmacy education overall. Some suggested that it would be helpful to have senior university administration work with senior health care administration to resolve this. There is uncertainty and some anxiety expressed by untenured faculty regarding their ability to meet the criteria for tenure, especially in relation to research expectations.

Faculty resources are stretched to meet current demands. No one with whom we met said that workloads were inequitable. However, from clinical faculty we heard concern about the difficulty of balancing active clinical work with heavy teaching loads and research grant cycles which often conflict with teaching demands. We saw evidence of the demands of professional practice in the case of one of the clinicians called away from our meeting to address clinical matters. Many faculty members have cross-appointments that present particular challenges in balancing the multiple demands on their time. It is important to recognize the special demands on faculty who maintain an active professional practice as clinical demands must ethically be given priority over academic responsibilities.



### **Community Service**

The SOP provides strong leadership to Pharmacy Services and Care within the province of Newfoundland and Labrador. All Practice Faculty maintain a specialty clinical practice within Eastern Health, the largest Health Authority in the province. Their contribution and expertise would contribute a great deal to ensuring optimal pharmacotherapy and patient safety in the areas where they work.

The service within the university, the community and the profession places particular demands on faculty in the School of Pharmacy. It was noted that as a School, the unit shoulders a demand for the same number of committees as larger units and this further erodes research time. Moreover, in a small province, some faculty are called upon to play roles in supporting their professional associations and regulatory board and a review of Faculty C.V.s shows a very high level of commitment and responsibility not only provincially but nationally. The high level of involvement of faculty required to actively support the professional bodies in the province is a unique feature of service that must be recognized and valued. A particular strength for the School is that there are strong collaborative relationships between faculty and the provincial professional associations and regulatory board. However, this comes with an associated cost. The combined demands of teaching, research, clinical practice, and service are heavy.

### **Promotion and Tenure**

Promotion and tenure within the SOP was a great concern of members of the Pharmacy Practice Faculty. The SOP mission addresses the importance of teaching, learning, and professional practice together with research, however, those voicing concern felt that accomplishments and output in research were given much greater weighting in the award of promotion and tenure and felt clinical work and other forms of scholarship needed greater weighting in the promotion and tenure process. While there is opportunity to adopt unit-specific interpretations of the Promotion and Tenure criteria, as stated in the MUN-MUNFA collective agreement Clause 12.15, this has not occurred and might help in addressing the concern. We would encourage the SOP to explore whether or not establishing interpretations of Promotion and Tenure criteria that are unit specific would be helpful in addressing these circumstances.

More broadly, it might be useful to consider the nature and role of the type of scholarship, as well as research within the School, and possibly to frame community and professional service in relation to the new public engagement framework endorsed by the university. If there is a decision to pursue this approach, it would be helpful to provide some resource to facilitate the work to build shared understandings within the unit around Promotion and Tenure criteria, rather than leaving this to an already overburdened group of clinical faculty to bring forward. It would possibly benefit all faculty members within the unit, as knowledge translation work in the form of commercially viable patents did not appear to be valued as a form of scholarship.

***Recommendation 17: We suggest the SOP explore the utility of developing promotion and tenure criteria specific to the faculty activities within Pharmacy and to consider the different types of scholarship valued and produced by nature of the required work in the discipline.***

## **UNIVERSITY SUPPORT**

### **Resources**

**Physical Space** One of the major recurring themes from faculty and students (especially undergraduate) in many of the interviews was the need for a greater and improved space for the SOP within a single facility. A tour of the facilities at the Health Sciences Centre and trips back and forth from the Tiffany Court site made this need abundantly clear. Although the best use has been made of the available space, to say it is less than adequate or desirable to meet the needs of faculty, staff and students for teaching, research, and related activities is an understatement. This situation puts constraints on current functioning of the SOP and leaves no room for expansion.

1. **Classroom Space** - There are two formal classrooms or lecture theatres located in the SOP with a capacity for 45 and 50 students respectively. Classroom space is at a premium and scheduling can be very challenging. Within the Health Sciences as a whole classroom space is limited. During winter semester in Pharmacy 2102, one weekly lecture/tutorial class had to be scheduled from 7:00 -8:45 pm as no other classroom space was available during the daytime. Undergraduate students also reported that lack of classroom space affected examinations in that often they were required to go to buildings that might not be familiar to them around campus to be accommodated for examinations. Size and number of classrooms would certainly limit any increase to enrolment or curriculum changes that require additional courses if these had a classroom component.

2. **Laboratory and Research Space** –There is some research laboratory space available to the Pharmaceutical Sciences faculty but these are old and outdated as is some of the equipment. Money that has to go into renovating laboratory space may not be the best use of financial resources. Although not ideal, SOP faculty with joint-appointments in Medicine, are slightly better placed as they can sometimes ask (plead) to be accommodated there for certain equipment needs. A laboratory space is currently being renovated for a new faculty member to accommodate her research expertise and interest. Space is a real issue for this group as well and no doubt constrains some of the research and graduate student supervision that could be done. Given the School’s projected growth in the number of graduate students, the lack of space will become more of an issue in coming years.

3. **Office Space**: Offices are located in two sites 1) Health Sciences, MUN and 2) Tiffany Court. A temporary solution for overcrowding at the SOP has been to move the Practice Faculty to Tiffany Court approximately 5 kms away from the Health Sciences Centre where the SOP is located – a leased space consisting of a reception area, small

conference room, two small work rooms, and 18 Offices (12 of which are faculty offices, and the remaining six offices for the Grants facilitator, Administrative Staff Specialist, Senior, Administrative Officer, and swing office for faculty who need to be at this site but have Offices elsewhere). While the space is new, clean, bright and conducive to certain work (writing and preparation for teaching) it has a number of negative consequences for faculty, staff, and students. It hinders the ability to build and sustain relationships with students, other faculty and staff, as well as other units on campus. It presents unnecessary barriers to research collaboration as well as teaching.

Some of the more negative consequences of having two sites need to be emphasized and are:

i) Separation of Practice Faculty and undergraduate students - Faculty and students no longer know each other in the same way they previously did and concern was voiced about this on both sides. One faculty captured the lack of presence of students as "missing their [students] energy." The vision espoused within the University Teaching Learning Strategy is that "The learning environment, within the classroom and across all manners of learning spaces, encourages the communication of thought and interaction among students, educators, staff and the community" and emphasizes building relationships within this context. The updated February 2013 Teaching and Learning Recommendations support this, however, the current separation of faculty and undergraduate students certainly makes it less likely that faculty can create such learning spaces and opportunity. Students also felt they no longer knew the faculty and some faculty are just "names."

ii) Separation of Faculty Members as Colleagues - Pharmacy Practice Faculty members are separated from Pharmaceutical Sciences Faculty members and their students. Furthermore, there are only two faculty members in the social-administrative pharmacy stream and these individuals are located at different sites. This is a barrier to any informal discussions that often lead to collaborative work on curricular, research, and other matters. It further fosters division between these two groups.

iii) Negative effects of travel – Offices for Clinical Practice Faculty are located at Tiffany Court but classrooms are at the Health Sciences Centre. Some days this means a great deal of time is taken up with travel back and forth between the two sites. This necessitates that more (unproductive) time is taken up with travel and planning what needs to be brought to the classroom. Other additional hurdles are parking being almost non-existent at the Health Sciences Centre (especially later in the day) and that often results in more time be taken up by having to leave early for class to get parking or alternatively driving around looking for a parking place. Most times the elevator is not working so a number of trips may need to be made from vehicle to classroom if faculty members are bringing in various teaching aids. The provision of a laptop computer for those at Tiffany Court helps but does not really compensate for time lost.

iv) Lack of space and privacy for individual student counseling – If a student is experiencing a problem that a faculty could address there is often no private space to talk with that student because the "swing" office is open to all that need the space and faculty are coming and leaving at different times depending on their teaching responsibilities. This makes it awkward to engage in this type of counseling and maintain privacy for and sensitivity toward the student issue.

v) Cost of maintaining the additional site- Not only is there a human cost to the current arrange but a monetary cost as well beyond what was budgeted. Costs are over what was anticipated.

3. Student Social and Learning Space – Within the SOP, undergraduate students do not have any common space where they can meet and interact as a group or small groups or with staff or faculty. They have nowhere they can have lunch together in the SOP. Although a lounge on the second floor, once designated as a medical student lounge was opened by negotiation to students in other health sciences disciplines is technically available, the space is described as hostile to other than students in medicine. Additionally, a number of the small rooms in the Health Sciences Library are dedicated to Medicine and their students thus making it more difficult for students in the SOP to obtain space for their small group work that a number of courses require. Many solve the problem by going to the Queen Elizabeth II Library on the main part of campus or trying to work in the Health Sciences Cafeteria during non-peak meal hours.

Graduate students did not have the same concern about physical space because they have two very small rooms with 6-7 study carrels in the rooms. They did admit if more students were in the graduate programs the space would be overcrowded.

***Recommendation 18:* There needs to be a concentrated effort on the part of the University to develop/obtain sufficient and quality space for the SOP to fulfill the mandates of teaching and research. This is an urgent matter.**

***Recommendation 19:* In the shorter term, the University ought to consider any of the space that will be vacated when Medicine moves into their new building and allocate as much of that space to the SOP so as to improve some of the negative consequences of their current situation.**

### **Strategic Initiative Grant**

The SOP received this grant in 2009 to further build capacity to increase the number of undergraduate pharmacy students graduating each year. This grant has enabled the SOP to hire much needed faculty and create and fill new staff positions. Severe space limitations do not allow for further expansion. However, it would seem that building new skills into current undergraduate programming and transitioning to the ELPD degree program would be contributing to the mandate of having well prepared graduates and to move these activities forward requires funding.

***Recommendation 20: Release Strategic Initiative Funds to put in place the necessary resources for planning for inclusion of the required content in the undergraduate program necessitated by the legislated expanded role for pharmacists and the move to the ELPD degree, as well as, any additional resources to implement the plans.***

### **SUCCESSION PLANNING**

The last issue that we want to address is succession planning within the SOP. The Dean and Associate Deans have played a major leadership role in bringing the SOP to where it is today. We had heard throughout the consultations a great deal from external stakeholders about the strengths of the BSc (Pharmacy) students. Faculty members are justifiably proud of both the graduate and the undergraduate program. We have noted that the Dean and Associate Deans will be all finishing their second term in their respective positions at the same time December 31, 2013.

We are concerned about succession planning and in particular recruiting for the Dean's position to provide the leadership that will be needed within the SOP especially with the changing landscape of pharmacy education in Canada and the need for leadership to increase research quality and productivity within the SOP. In order to be effective in their positions Associate Deans need time to be appropriately mentored, especially if the faculty to fill these positions comes from newer faculty in the School. All faculty need time to think about these positions and have the collegial consultation that is required to fill these positions. These parallel processes need to be initiated sooner rather than later.

It is critical that the SOP begin the process immediately to search for two future Associate Deans and should advocate with university administration for immediate initiation of the search for a future Dean.

***Recommendation 21: Put in place a search process for a Dean of Pharmacy as soon as possible to effect a smooth transition in this position.***

***Recommendation 22: Begin the process of consulting for the positions of the Associate Deans for Undergraduate and Graduate Programs and Research.***

## **SUMMARY**

The SOP demonstrates a number of strengths including a sound undergraduate program that meets accreditation standards and produces graduates that are valued by the health system. There is also a highly committed faculty and staff. The SOP also faces a number of challenges into the future that we have identified throughout the Report. In order to maintain excellence in programming, increase capacity in research and graduate student recruitment, and support faculty, staff, and students to attain their goals we offer the following recommendations:

***Recommendation 1:*** Explore other ways by which the SOP is able to align with the strategic plans and frameworks of the University (research, teaching-learning and engagement).

***Recommendation 2:*** Review the Strategic Planning Process including the roles of the Strategic Planning Committee and the CPDC.

***Recommendation 3:*** Update the Strategic Plan that is currently in place and consider developing more specific activities to focus on some of the major changes taking place with legislative changes in the province, pharmacy education in Canada and the need to build capacity in research.

***Recommendation 4:*** Explore the aboriginal designated seats program to recruit undergraduate students from this group.

***Recommendation 5:*** Create a permanent position or at least a term appointment sufficient to ensure that the curriculum mapping work can continue and create the foundation for a solid ELPD degree program.

***Recommendation 6:*** In the planning that will be required for the new ELPD program explore the inclusion of greater interprofessional education for areas of the curriculum such as professionalism, ethics, and health care systems.

***Recommendation 7:*** Revisit preparation for preceptors and their identified needs and how to assist them in meeting these needs, e.g., conflict resolution and giving feedback to students.

***Recommendation 8:*** Prepare an academic and resource plan to ensure that recent and proposed scope of practice changes are included in the current undergraduate curriculum and involve the necessary stakeholders both within and outside the University in this planning.

***Recommendation 9:*** Prepare an academic and resource plan to convert the current BScPhm to an ELPD degree program, including a transition plan for some of the existing classes of students.

***Recommendation 10:*** Within the academic planning in recommendations 7 and 8 consider on-line learning approaches and increased use of technology as a means of enhancing student self-directed learning and more optimal use of resources (space and faculty).

***Recommendation 11:*** In particular explore a variety of means of obtaining experiential learning experiences for students that will meet academic and professional standards as well as licensing requirements and engage stakeholders in this exploration so that concerns of this group can be addressed.

***Recommendation 12:*** Consider reducing the number of areas of study within the graduate programs and instead focus on building capacity and a critical mass of students in a couple core areas of study.

***Recommendation 13:*** Develop a SOP-specific orientation program for the graduate students and explore other ways they can be better integrated into and know more faculty within the SOP.

***Recommendation 14:*** Make the Grant's Facilitator position permanent to give stability to that position and allow the position to develop to its fullest potential.

***Recommendation 15:*** Establish a formalized research mentorship program for junior faculty members.

***Recommendation 16:*** The pharmacy practice and social-administrative faculty meet with the Directors of Pharmacy in the Regional Health Boards and with the provincial pharmacy association to discuss research/evaluation and funding opportunities around demonstrating the value and return on investment of the newly expanded scope of practice of pharmacists.

***Recommendation 17:*** We suggest the SOP explore the utility of developing promotion and tenure criteria specific to the faculty activities within Pharmacy and to consider the different types of scholarship valued and produced by nature of the required work in the discipline.

***Recommendation 18:*** There needs to be a concentrated effort on the part of the University to develop/obtain sufficient and quality space for the SOP to fulfill the mandates of teaching and research. This is an urgent matter.

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