The University of British Columbia acknowledges the location of its two main campuses on the traditional territories of the Musqueam and Okanagan peoples and seeks to develop respectful and reciprocal relationships with all Aboriginal people in British Columbia and Canada, and other Indigenous people throughout North America and the world.

Our vision is to be a catalyst for change in pharmacy practice and the pharmaceutical sciences.

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## Challenges, Risks and Opportunities

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This report was prepared by Leonie Harper, Special Projects Manager, in consultation with Dean Michael Coughtrie, and many other members of the Faculty. If you have questions or need more information, please contact Leonie at leonie.harper@ubc.ca.

Design by Jimi Galvão. Photos by Justin Lee Ohata.
What is Catalyst for Change: 2017–2022?

Catalyst for Change: 2017–2022 is the UBC Faculty of Pharmaceutical Sciences’ Strategic Plan. The plan provides an outline of the direction in which the Faculty is headed, the goals that it is seeking to attain, and the methods by which it plans to succeed. The strategic priorities outlined in the plan were developed through a significant consultative approach in 2017, focused on a 5 year period from 2017-2022; the plan considers both the internal environment of the Faculty, and the broader societal context.

How is the Faculty using its Strategic Plan, Catalyst for Change: 2017–2022?

The Dean and Senior Management Team (SMT) within the Faculty are using Catalyst for Change to:

• guide decision making, prioritization and allocation of resources, with the goal of maintaining the Faculty’s position as a leading Faculty of Pharmaceutical Science;
• communicate (to faculty, staff, students and partner organizations) the direction that the Faculty is headed over the period 2017-2022;
• highlight the approaches that the Faculty will use to reach its goals, mission and vision;
• support the Faculty’s application when seeking accreditation through the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) for the Faculty’s Entry-to-Practice PharmD (E2P Pharm D) program.

What does this Progress Report include?

As an interim update on Catalyst for Change, this progress report summarizes the achievements of the Faculty from July 2017 to June 2020.

Additionally, this report considers the ongoing relevance of the goals, and the current status of each of the strategies outlined in the plan. Input for this report came from discussions with key faculty and staff from all portfolios in the Faculty.
How is the Faculty’s Strategic Plan Organised?

Strategies in Catalyst for Change are organised around four priority areas: People and Place, Education, Research and Practice. For each priority area several strategic goals are outlined, and within those, a number of actions are described, which define how the faculty seeks to meet its goals by 2022.

Summary of Status to Date

As of June 2020, work has been initiated on all 15 of the strategies outlined in Catalyst for Change. Of the 57 underlying actions in the plan, substantive progress has been made on all (100%) of them, with demonstrated success in all four priority areas: People and Place, Education, Research and Practice.

The majority of actions are on track for completion by 2022, although strategies with strong external-facing aspects should continue to be monitored as they are more subject to risk.
The Faculty’s budget is strong (increasing from $20.5M to $23.5M in the period 2017-2020), with many key initiatives bolstered by significant contributions from university funding and strong planning/budgeting from an excellent finance team.

A number of projects have been initiated and allocated dedicated funding to advance the goals in the strategic plan through the Associate Dean portfolios. Additionally, the Senior Management Team is planning to launch the Strategic Plan Implementation Investment Fund (SPIIF), most likely in 2020, to support projects within the Faculty that would benefit from additional financial resources.

Overall, the Faculty has made good progress toward realizing its strategies, and all four of the priority areas in Catalyst for Change remain highly relevant at this time. The recent visit from the Canadian Council for the Accreditation of Pharmacy Programs (CCAPP) highlighted strengths in the cohesion of the Faculty, the ideas and implementation in its practice innovation portfolio, and its ambitious research focus, as well as the very high quality of the educational programs.

When reviewing the external environment in this unprecedented time of COVID-19 it is hard to know exactly what the future may hold, but having reviewed both our financial situation and our intended goals and strategies, it appears that we will still be able to achieve our mission, although timelines may be impacted. The overall message at this interim point is clear for the Faculty. **The Faculty is performing very well, and most strategies are on track at this time.**

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### Status of Strategic Actions and Trajectory

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The direction of the arrow represents the likely trajectory in the coming year.
People and Place
People and Place

Status: Spring 2020 - Snapshot of initiatives that have launched/are in progress

**Strengthened culture, governance and operational infrastructure** - Status →
- New committees and groups established to strengthen the Faculty and its progress to strategic goals (e.g. governance structure implemented in the Graduate and Postdoctoral Studies portfolio.)
- Workload processes developed to measure academic contributions from faculty members
- Launch of social committee (which has delivered 6 events)

**Recruitment, mentorship and professional development** - Status →
- Numerous strategic faculty and staff hires completed.
- Launch of significant investment into research faculty to hire 12 x faculty members from 2020-2022.

**Integrated approach to underserved communities** - Status →
- Formation of Underserved Communities Task Force.
- Implementation of mandatory indigenous health curriculum for pharmacy students.

**External, alumni and cross-UBC engagement** - Status →
- Ongoing peer partnerships with other institutions.

**Positioning and Sustainability** - Status →
- Development of ‘institutional charter’ to maximize building use.
- Work underway to attract significant strategic investment.

**Strengthened Culture, Governance and Operational Infrastructure**

Within the Faculty, extensive work has been done to consolidate governance to help faculty, staff and students understand how and what decisions are made. The academic and graduate portfolios have extensively overhauled their reporting hierarchy in recent years; including a review of committees/working groups, representation on each group, and the development of policies and processes to standardize approaches. As the research portfolio evolves, it has followed a similar approach, although theme-level governance structures are still to be determined. Many individual units within the Faculty have developed their own strategic plans aligned with the Faculty’s plan. Additionally, the Pharmaceutical Sciences Equity, Diversity and Inclusion Committee was launched in 2019.

To optimize workload management, an innovative workload model has been developed with the goal of providing a more equitable and transparent approach to measure faculty members’ contributions in their work-related activities (i.e. teaching, research, and service). The data will inform how to best adjust
work to meet the needs/strengths of both the Faculty and individual faculty members. Phase I and II of development in 2018-19 focused on educational contributions.

Elsewhere, the Faculty has been preparing for the cross-UBC launch of the Integrated Renewal Program to streamline finance and HR operations, planned for 2020. Additional in-house activities are also underway to improve faculty and staff understanding of resources.

Various activities have been implemented in the spirit of community building and recognition of each others’ roles. A social committee was formed in 2018 that has led multiple successful events with up to 100 attendees (including Science World, a quiz night, kids’ holiday party). The Faculty also received funding through UBC’s Healthy Workplace Initiative Program (HWIP) for activities relating to nutrition, resulting in more excellent bonding experiences. Additionally, formal activities are scheduled on a regular basis, such as the prestigious Alumni Agent of Change event, which recognises outstanding alumni each year, and social events for new and leaving/retiring staff and faculty.

Recruitment, Mentorship and Professional Development

Since 2017, the Faculty has hired numerous faculty and staff to support a host of strategic initiatives. Including some upcoming completed hires, a total of 18 faculty hires have expanded various research themes (including 2 in 2020 not shown on graph) and will deepen the breadth of foundational and clinical science training in our educational programs. A further 12 faculty hires are planned for the next three years, to further bolster our position as a leader in Pharmaceutical Sciences Research and Education.

Additionally, 43 staff have been recruited in all portfolios. From web developers to project managers, program managers and research coordinators, these individuals have already demonstrated their expertise and are supporting the operationalization of many strategic goals.

Demonstrating our commitment to retaining high quality individuals, numerous staff and faculty have been promoted in recent years, expanding their ability to support our goals, most notably Dr Larry Lynd to the position of Associate Dean, Research. Future plans include optimizing transition support to ensure that individuals who achieve a promotion feel fully supported as they move into their new roles, and expanding our onboarding processes.
Integrated Approach to Underserved Communities

One of the Faculty’s highest priority goals is to enhance our approach to support underserved communities. Prior to, and since the launch of the strategic plan some initiatives had been underway with the First Nations Health Authority (see box), which have already had an impact on the pharmacy resources available in specific communities.

In 2019, a Task Force comprising students, faculty and staff was launched to consolidate and prioritize efforts across the Faculty in a more strategic manner. The group has already supported funding for recruitment initiatives to increase the pipeline of students from underserved backgrounds, such as increased outreach, and moved to online interviews for prospective students (expedited due to the COVID-19 pandemic), making it more accessible for individuals living far from the Lower Mainland. Additionally the Office of Experiential Education has made significant efforts to improve support for students to participate in practicums in rural/remote areas of the province, such as housing databases, and online resources. An alumni ambassador program is planned to provide regional support to students. These efforts have been accompanied by improved resources for practice educators across the province, offered through both online courses and travelling roadshows. Many more initiatives are planned.

THE HEALTHY MEDICATION USE INITIATIVE CONNECTED PHARMACISTS/PHARMACIES WITH LOCAL COMMUNITIES TO PROVIDE CARE AND EDUCATION. UBC RECEIVED $100,000 IN FUNDING FOR THE PERIOD 2016-2019.

COMMUNITY-DRIVEN CLINICAL PHARMACIST SERVICES (CCPS) WAS AWARDED FUNDING OF $800,000 TO SUPPORT PHARMACISTS TO PROVIDE CULTURALLY SAFE CARE IN A MANNER THAT EMPOWERS FIRST NATIONS INDIVIDUALS AND COMMUNITIES TO ACHIEVE OPTIMAL HEALTH AND WELLNESS OUTCOMES. A NEEDS EXPLORATION HAS BEEN UNDERWAY IN 8 COMMUNITIES, AND THE PROJECT HAS ENTERED PHASE II (SERVICE, SUPPORT AND/OR DELIVERY (2018-20)

$127,000 TLEF FUNDING PER YEAR TO SUPPORT THE DEVELOPMENT OF A COMMUNITY-BASED APPROACH TO DECOLONIZING AND INDIGENIZING THE PHARMACY CURRICULUM (2020-21)

Significant work has been done in the area of indigenous health, with various elective and mandatory curriculum elements implemented for pharmacy students. Development of a core curriculum is underway, under the auspices of an Indigenous Advisory Council, which includes elders, and other indigenous representatives, supported by a large Teaching and Learning Enhancement Fund (TLEF) grant. Various other funds have been received to support other research and education activities, such as research into an indigenous component of Healthy Life Trajectories, funding for knowledge mobilization in traditional medicines and many more. An indigenous research coordinator was hired in 2020 to support initiatives in this area. Additionally, one of our researchers (Annalijn Conklin) is a Co-Investigator on a CIHR grant to research an Indigenous Component of Healthy Life Trajectories (I-HeLT1), awarded over $1 million in November 2019 for 2 years.
External, Alumni and cross-UBC Engagement

In addition to collaborations with indigenous groups and health authorities, some progress has been made in the area of external collaborations. A new Director of Development and Alumni Engagement was hired in 2019; this position will help to support the establishment of advisory council for the Faculty to support improved external connections.

The Director of the new Bachelor of Pharmaceutical Sciences program has made a significant effort to attract industry partners - it will be exciting to watch these potential practicum opportunities come to fruition from 2022. Various graduate students have benefited through collaborative relationships: for example, Mitacs has funded nearly $600K in recent years. Other relationships with the University of Copenhagen and Tokushima have been successful, and extension of those relationships is currently being pursued. The Faculty is also extensively involved in the NanoMedicines Innovation Network (NMIN), which received $18.5M in new funding from the Networks of Centres of Excellence (NCE), matched by over $22M in additional funding from industry and not-for-profit agencies.

Within UBC, the Faculty has worked in progressing the development of UBC Health from a new entity to a substantial consortium; we have had input to planning processes and representation at all levels of decision making committee within the organization. The Faculty of Pharmaceutical Sciences Associate Dean, Academic, served as Acting Associate Provost Health from Jul 2018-Feb 2019, further demonstrating our commitment to the strength of this interdisciplinary approach. We will continue to refine how we work with UBC Health as they complete a restructuring process.

Positioning and Sustainability

In recent years, the Faculty has obtained a significant amount of funding from non-governmental donors. This includes the Initiative for Sustainable Health Collaboration, a $5 million partnership with industry (e.g. pharmaceutical companies, governments and universities) Other donors are also being sought for further expansion and support of strategic goals, such as underserved communities and students in the new BPSc program.
Since the launch of the plan, the Faculty Communications and Marketing team has been working to build the Faculty’s brand and impact through sustained media interest. The website has had a consistent number of visitors, and we have seen a steady increase in social media interest. Outside the Faculty, UBC has highlighted numerous of our high quality faculty members and many of them have also appeared in the mainstream media for both their outstanding research, and as experts on newsworthy topics, such as the COVID-19 crisis.

In order to optimize our resources, the Faculty has developed an Industrial charter to support relationships with our in-building partners. Currently these value approximately $180,000. The goal is that the Faculty will also benefit from other partnerships, such as equipment and knowledge sharing, and education/internship opportunities for students. Relationships have already been created with our main partner, adMare (formerly CDRD).
Education

Status: Spring 2020 - Snapshot of initiatives that have launched/are in progress

Program development to enable clinical career trajectories - Status →
• First class of the Entry-to-Practice (E2P) PharmD graduated in 2019.
• Flexible PharmD was launched in 2018.
• Significant progress in planning for a Professional Masters program.
• Continuing Pharmacy Professional Development (CPPD) program has been developing new goals focusing on modernizing and refreshing the offerings.

Program development in foundational sciences - Status →
• Bachelor of Pharmaceutical Sciences program was developed, approved by the Ministry, and students are admitted ready for launch in September 2020.
• Graduate Program renewal implementation was initiated in 2019.

Strengthened student communities - Status →
• Recruitment work (UG and PG) is underway.
• Building career events into graduate program.

Program evaluation and continuous improvement - Status →
• Accreditation of the E2P PharmD program culminated in a site visit in November 2019. Full accreditation was awarded for a six-year term in June 2020.
• Course reflection processes implemented in E2P and Flex PharmD programs.
• Evaluation of Interprofessional Education (IPE) and development of a curriculum map are underway.

Enabling Clinical Trajectories

Huge milestones have been achieved in the pharmacy-focused programs in the Faculty, with the first 193 graduates from the Entry-to-Practice (E2P) PharmD program in summer 2019, and the launch of the Flex PharmD program in September 2018. Both of these events have been accompanied by ongoing work to improve and refine processes, policies and procedures, to improve the quality of the educational training, and to improve the student experience. Additionally, a state of the art Inpatient Pharmacy Practice Skills Centre was officially launched in 2020 to prepare students for institutional practice; this exciting venture will be particularly beneficial during the times of COVID-19 where student practicums may at times be limiting. Integration of Interprofessional Education (IPE) into the E2P program has begun strongly. Work is currently underway to evaluate students’ interprofessional experiences in the program and determine what more needs to be done to prepare students for collaborative roles once they graduate as professionals.
Another significant program under development is the **Master of Pharmacy Leadership**. Along with partners from other UBC Faculties, the Faculty was awarded $150K over 2 years for the Design, Development, and Implementation of a Certificate in Canadian Health and Healthcare for Working Professionals through UBC’s Online Learning Advancement Fund (OLAF); this certificate program will either be completed on its own or ladder into the Master’s program. This will be an exciting expansion of our offerings to support personal growth to strengthen industry leadership.

**Continuing Pharmacy Professional Development (CPPD)** programming is undergoing improvements in efficiency, and technology modernization to help the programs better meet the needs of its clients under the auspices of its new Director, hired in fall 2018. As well as maintaining a significant base of accredited online experiences, redesigning the Canadian Pharmacy Practice Program (CP3), and refreshing the annual Update professional development conference for Pharmacists to provide numerous learners an opportunity to further expand their contemporary pharmacy knowledge, the team hired a program manager in 2020 to support expansion endeavours. These will focus on new knowledge and expanded scope of practice.

**Program Evaluation and Continuous Improvement**

**Program development to Enable Clinical Trajectories**

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Planned</th>
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<tbody>
<tr>
<td>2017-18</td>
<td>Entry-to-Practice (E2P) PharmD - New Executive Director Hired</td>
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<tr>
<td>2018-19</td>
<td>Flex PharmD - September: Program launched</td>
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<td></td>
<td>E2P PharmD - May: First Graduates</td>
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<tr>
<td></td>
<td>CPPD - September: New Director Appointed</td>
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<tr>
<td>2019-20</td>
<td>E2P PharmD - September: Submitted self-study to CCAPP, November: CCAPP Site Visit, June: Full Accreditation Status for six year term awarded by CCAPP</td>
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<tr>
<td></td>
<td>Professional Masters - Program development including Certificate program, Submission for Faculty and Senate approval</td>
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<tr>
<td>2020-21</td>
<td>Professional Masters - Submission for Faculty and Senate approval</td>
<td></td>
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<tr>
<td></td>
<td>Flex PharmD - August: First graduates expected</td>
<td></td>
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<tr>
<td>2021-22</td>
<td>Professional Masters - Possible approval by Ministry of AEST, Possible program launch</td>
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In late 2017, the Faculty underwent a robust external review as part of the Dean’s reappointment process demonstrating areas of strength and challenge across the Faculty.

In November 2019, the Canadian Council on Accreditation of Pharmacy Programs (CCAPP) visited the
Faculty to review and determine the **accreditation** status of the E2P PharmD program. An Accreditation Task Force conducted a significant self-review of the program and the Faculty as a whole, with consultation from internal and external partners. This process helped to drive change within the program and beyond. The Faculty was lauded by the site visit team for various aspects, especially the cohesive nature of the individuals contributing to our Program, and our innovative Pharmacists Clinic environment and ambitious research expansion. The report outlined some challenges which Faculty and program leadership plan to address in coming years as part of our continuous quality improvement program. Full accreditation was awarded for a six-year term in June 2020.

Numerous activities are underway to expand and enhance **program improvement and evaluation** in the Faculty. Course reflection processes have been developed and implemented for the Entry-to-Practice and Flex PharmD programs, and will be built into other programs over time. Additionally, the development of a clear overarching program evaluation plan is underway for the Faculty; in the meantime individual units have initiated their own evaluation and quality improvement projects to maintain the progression of success, and development of a clear curriculum map is ongoing.

**Development in Foundational Sciences**

**Program development in Foundational Sciences**

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<tr>
<td><strong>BPSc</strong> - Exploration and design phase</td>
<td><strong>BPSc</strong> - January: Faculty approval, March: Senate approval, May: Submission to BC Ministry of Advanced Education, Skills and Training (AEST)</td>
<td><strong>BPSc</strong> - Nov: Approval of program by MoAEST, Spring: Offers and Acceptance of students to program</td>
<td><strong>BPSc</strong> - September: Launch! Students primarily in Faculty of Science. Graduate Programs - Renewed Courses Initiated</td>
<td><strong>BPSc</strong> - September: Majority of BPSc courses run in the Faculty. Graduate Program - Renewed Courses Initiated</td>
</tr>
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Following extensive internal and external consultation and development, the Faculty’s application to initiate a new **Bachelor of Pharmaceutical Sciences** program was approved by BC Ministry of Advanced Education, Skills and Training in November 2019. It is the only English-speaking program of its kind in Canada, fulfilling the need for entry-level trained pharmaceutical science students for the private sector.
The Faculty will admit the first students in the 2020 Academic year, which is exciting both in its own right and as a potential source of graduate students. Initially students will be primarily clustered in courses in the Faculty of Science, with seminar sessions in the Faculty of Pharmaceutical Sciences. Future years will be primarily focused in our building and in placements across numerous external partners to prepare students for their future careers.

**Graduate program** curriculum renewal is underway. In September 2019, a Special Projects Manager was hired to support curricular renewal. The current approach is to map the existing curriculum, and retire old courses. This will be followed by refinement of content to make it more relevant to contemporary needs and tailored to needs of particular research themes, potentially using or building on content available elsewhere across UBC.

Each summer UBC offers the **Vancouver Summer Program (VSP)**, an opportunity for international students to participate in courses and experience university culture. The Faculty offers a science-focused course called **Making Better Medicines**. Students were admitted in 2017 and 2019. In both years, students averaged 20 years old, from a host of countries and sending institutions (predominantly in Asia). If resources are available, the Faculty plans to expand enrollment in future years, although there is no plan in place currently to facilitate this. The program was cancelled in 2020 due to COVID-19.
Strengthened Student Communities

The Faculty is interested in expanding the number of quality trainees to the research program through enhanced recruitment efforts. There are two main approaches: direct entry, and building a pipeline. Research themes are working to build their online/public brand to more clearly articulate the kinds of exciting work that the Faculty is engaged in, as well as promoting the programs through networking activities (e.g. conferences, university visits, etc.). A record number of applicants applied in 2020. A future objective is to expand theme-related marketing to increase the number of quality graduate program applicants, particularly bearing in mind the intended increase in faculty members to support new recruits.

Additionally, it is hoped that the introduction of the BPSc program will build a robust pipeline of graduate students, although it will not be possible to measure this outcome during the period of this strategic plan. A future-looking goal to support this strategy includes the hiring of a staff member to support recruitment to the BPSc program.

Throughout the Faculty, career support efforts are being made to expand and improve exposure to prepare students for their future careers. On the pharmacy training side, the planned Master of Pharmacy Leadership program is being developed to offer multiple streams of training with tailored skills-based opportunities to enhance students’ ability to work in leadership positions in a host of organizations. With regard to research training, the new Bachelor of Pharmaceutical Science programs has been designed to include required internships to support students in gaining early career skills and identifying their interests, as well as classroom-based careers skills. The graduate program renewal outlined above will incorporate aspects of career training that suit the diverse needs of graduate students to supplement work that has already been done to implement careers events throughout the program. An annual Career Pathways event exposes students to the wealth of opportunities available to them.
Research

Status: Spring 2020 - Snapshot of initiatives that have launched/are in progress

Focused research themes - Status →
- Theme leaders identified
- Work underway on developing themes (e.g. branding, retreats, website)

Core research facilities & systems - Status →
- Development and launch of an internal grant review system
- Hiring of FT equipment support personnel to provide both training and service
- Monetization of in house technology through contract work.
- Launch of Data Analytics, Statistics and Informatics (DASI) unit

Knowledge mobilization - Status →
- Establishment of ‘industrial charter’
- Opportunities for students to participate in events

Strategic development for the first couple of years after the launch of the strategic plan were to some extent hampered by the lack of a permanent Associate Dean, Research. In spite of that challenge, dedicated faculty members ensured progress was made on various goals. Since the appointment of Dr Larry Lynd to the role in May 2019, there has been rapid progress, and continued success has been observed across the portfolio.

Focused research themes

The Faculty has identified four key research themes and associated leads, around which all research activities are organized. Each theme is at a different stage of its evolution, but each has similar ultimate goals: to ensure sustainability through high quality hires and student recruits, to develop governance structures to support a collaborative research and training environment, and to update communications (branding, marketing, reporting, etc.) to improve their effectiveness. Multiple hires have taken place and are planned for each theme (see People and Place section).

- The longest-established theme, Collaboration for Outcomes Research and Evaluation (CORE), has implemented a Director of Research and a Director of Education roles, produces an annual report, launched a newsletter, is updating its website and is working toward developing a specialized health outcomes training program.
• In relative infancy, Pharmacy Education (PERL) recruited its first graduate student in 2019, and is seeking ways to expand their funding options and hires to propel their success to the next level.
• In addition to the above, Nanomedicines and Chemical Biology (NCB) and Molecular and Systems Pharmacology (MSP) have initiated theme-specific retreats, are working to implement annual progress reporting, as well as providing content-relevant training to update graduate courses.
• All groups are also looking into innovative ways to increase their grant success rate.

To further reinforce the research portfolio, collaborations are being sought through the Development Office. For example, Principal Investigators in the CORE theme are seeking to support trainees through the creation of relationships with industry and non-industry collaborators to support the expansion of funded graduate training opportunities.

A review of grant data in recent times indicates that the total number of externally-funded grants awarded has been increasing. Funding in the PERL research area is largely obtained from internal UBC grants - a total of $250,000 in Teaching and Learning Enhancement Funding (TLEF awards were granted for the 2020-21 academic year, which is the highest in recent years (up from $159,000 in 2017-18).

Core Research Facilities and Systems

In 2018, the research portfolio implemented a Grant Facilitation System to provide faculty members with support on their grant applications through a peer-review process. To date 15 grants have been supported through the system. To further expand the support for research grant proposals, a grant facilitator hire is planned for 2020.

With regard to equipment in the labs, a vast amount of work has been put into identifying our equipment usage and needs through inventory, and analysis of usage. This process included the development of ways to increase our return on investment on expensive equipment through contract services and rentals, provided both within and external to UBC, and the hire of a full time Analytical Suite
Research Technician to support trainees and faculty members on the use of common/shared equipment within the Pharmaceutical Sciences building. A Faculty Equipment Committee (FEC) was created in 2019 to provide advice to the Associate Dean, Research, related to equipment purchases, maintenance, support and contract renewals more effectively and efficiently across the Faculty; the group will also be responsible for developing Strategic Equipment Renewal and Replacement Plan to begin in mid-2020. Specific equipment training is being integrated into the graduate curriculum for individuals who require it, provided by the Analytical Suite Research Technician. Going forward there are plans to integrate equipment training into the new BPSc program to prepare future graduates for working with state-of-the-art equipment.

The Data Analytics, Statistics and Informatics (DASI) unit was formed in 2019, to provide a wide variety of internal and external services to support ongoing research work and grant proposals through a cost-recovery approach. Within one year, DASI was able to cover the costs of operation through contracts, and thus, plans for potential expansion of the unit have already been initiated.

**Knowledge Mobilization**

In order to reinforce and mobilize knowledge in the research portfolio, the Faculty has been working to **build industry partnerships**. For example, the Faculty along with the VP International Office is involved in a multi-university collaboration with Ethiopian universities, and the Faculty is working with a number of external organizations to develop partnerships to support the graduate program.

To support faculty and staff **training in translational opportunities** monthly “Chalk and Talk” sessions have been implemented where researchers share their knowledge and seek expertise from others. Students are being trained in social media and other aspects to increase their capacity for knowledge translation.

In terms of increasing **student exposure to research activity** across the Faculty, pharmacy undergrads have been increasingly exposed to the research activities through Directed Studies and Summer Student Research Projects over the past few years (see graphs). A plan for an Indigenous Undergraduate Summer Student Research Program has been developed, with a projected launch in the summer of 2021. Graduate students in the Faculty have also benefitted from a restructured seminar.
program that aims to provide exposure to a greater breadth of research, including theme-specific sessions, career-relevant sessions, and general research. Students are increasingly invited to participate in activities such as research retreats, and other activities to build and ultimately provide them with the tools they need for success.

Finally, to extend the value gained from sharing a building with other high quality research organizations, in 2019, the Faculty developed an Industrial charter to strengthen relationships. This charter outlines expectations that groups sharing the Faculty’s space provide added value to the Faculty. Examples include a partnership with our main building partner, adMare (formerly CDRD), which supports access to high through-put automation equipment for UBC researchers.
Practice

Status: Spring 2020 - Snapshot of initiatives that have launched/are in progress

Optimization of the pharmacist role - Status →
Integrated models of care - Status →

• BC government approved funding for a three-year Pharmacists in Primary Care Network (PCN) Program as part of the government’s primary health care strategy. Working with stakeholders within BC health authorities, government, and the PCNs, the Faculty will be leading the Program which includes provision of centralized training, and operational support for an initial cohort of up to 50 primary care clinical pharmacists.
• Increased interactions between the Pharmacists Clinic and education portfolio, through increased elective and practicum opportunities.
• Increased use of technology-enabled care and development of programs to support pharmacists in accessing medical records.

Strategic practice partnerships - Status →

• Further addition of clinical appointments (e.g. Partner appointments and development/formalisation of the Clinical Faculty policy/role)
• Substantive work with First Nations Health Authority (FNHA) to improve pharmacist care in indigenous communities
• Significant work to build the profile and work of the Clinic

Optimization of the pharmacist role

The Faculty has focused on expanding the scope of the pharmacist role within primary care in BC, working with the BC Ministry of Health (MoH) to launch a “Pharmacists in Primary Care Network (PCN) Program”. In June 2018, the MoH approved new funding for the first three years of this Program that will see a partnership with the Faculty and Health Authorities to add 50 clinical pharmacists to primary care teams across the province. An extensive effort is underway to implement this exciting and innovative approach, driven by experience and knowledge from the Faculty’s Practice Innovation portfolio and the Pharmacists Clinic. Contract finalization is nearing completion.

50
NUMBER OF CLINICAL PHARMACIST POSITIONS TO BE ADDED TO PRIMARY CARE TEAMS ACROSS THE PROVINCE

5591
NUMBER OF PATIENT ENCOUNTERS PROVIDING COMPREHENSIVE MEDICAL MANAGEMENT (CMM) AT THE PHARMACISTS CLINIC (JUL 17-APR 20)
The Pharmacists Clinic is recognised as a gold standard innovative living laboratory to trial new pharmacy approaches and initiatives. The Clinic has conducted nearly 6000 patient encounters since the launch of the strategic plan, most of which encompassed the Clinic’s primary focus of comprehensive medication management (CMM). The Clinic has trialled novel approaches to patient treatment with high levels of satisfaction and improved health outcomes.

To support future generations, student trainees have participated in numerous Clinic initiatives since the launch of the strategic plan, giving them exposure to clinical pharmacy, community outreach, and primary care. Examples include annual flu clinics, and health promotion activities across campus. The clinic regularly trials innovative tools to optimize training, such as an audio-visual technology approach to provide students with immediate feedback.

Integrated models of care

In addition to the work outlined above, the Pharmacists Clinic has engaged in several projects to optimize care models. One such example is a collaboration with the Provincial Health Services Authority (PHSA) to support electronic access for non-health authority users, such as pharmacists, to relevant medical records (Community Interoperability and Informatics Project (CIIP)).

Through collaborations with UBC Health and practicing pharmacists, numerous educational activities have been developed to support the intra-/inter-professional education (IPE) of students, with nearly 100 activities offered from 2017 to present. These sessions are often facilitated by practicing pharmacists, who are provided with practice educator resources to support them. The goal is to prepare students for the reality of working as collaborative members of teams in interdisciplinary environments. Additionally students have the opportunity to participate in optional sessions through an IPE passport.
Strategic practice partnerships

In the practice realm, great strides have been made toward fostering strategic practice partnerships with the goal of improving patient care in innovative ways. One key part of this is the Ministry of Health’s approval of the Primary Health Care Initiative (described above).

The Faculty has also worked to build province-wide connections. Existing agreements with the First Nations Health Authority through the Community Driven Clinical Pharmacist Services (CCPS) initiative have been expanded through additional funding to improve pharmacist access in remote indigenous communities.

Partner Appointments have been recognised as a real asset to the Faculty in recent years, providing current experience, educational offerings, and a geographical expertise. Appointees remain employees of the Health Authority and are also UBC faculty members that contribute to the Faculty’s educational and research enterprises. In 2019, the Faculty gained one new partner appointment in the Interior Health Authority (see map – to a total of four), and one more is planned for Vancouver Island Health Authority (VIHA) before the completion of the strategic plan.
In addition to large scale provincial activities, the Faculty has taken the opportunity to **streamline processes and formalize policies** around partner appointments and clinical faculty members. These changes will ensure that there is a clear career pathway for individuals interested in providing their expert guidance to the Faculty.

The Faculty continues to focus on **exceptional hires** in all areas, and recently appointed the Greg Moore Professorship in Clinical and Community Cardiovascular Pharmacy, to provide combined clinical and academic leadership to advance research, education and practice in relevant practice areas.

One of the most important partners in practice innovation is the **patient**. The Clinic has undertaken 88 outreach activities in UBC and neighbouring communities since the launch of the strategic plan. Surveys reveal that there is a high level of patient satisfaction with the Clinic. To provide further input and engagement, the Faculty recently launched a Patient Advisory Group to guide the patient voice and input into clinic programs and communications.
Impact of COVID-19 on the Faculty

The global COVID-19 pandemic in Spring 2020 resulted in resounding impacts globally. For UBC and the Faculty of Pharmaceutical Sciences this unprecedented challenge has had huge impacts on education and research implementation, and will continue to do so. Major impacts are outlined here.

Operations

All faculty, staff and students moved to a remote work format from March 2020, except for those required onsite to maintain facilities and laboratories.

Research

Research laboratories were closed in March 2020, impacting project timelines and completion for both faculty members and graduate students, and undergraduate research projects. Summer Student Research Projects (SSRP) were limited for the summer of 2020, and COVID prevented the initiation of the indigenous undergraduate SSRP. Labs started to reopen in June 2020.

Some faculty members are participating in important COVID-19 research, using public health data to focus on policy & projections, and providing expert advice to media.

Practice

From March 2020, the Pharmacists Clinic moved to 100% telehealth appointments. Some limited appointments will be in person from the summer 2020.

Recruitment

From March 2020, faculty and staff recruitment was placed on hold, other than essential positions, or positions for which offers were already in place. Some new recruits have started remotely with great success.

Underserved Communities

Delays have impacted various projects. For example, strategic planning, community outreach events and practice educator roadshow training sessions, as well as alumni ambassador program development. Some implications as provincial travel is restricted.
Collaboration

Collaborations with partners such as UBC Health, other institutions and the Academic Health Science Network have been impacted. Work has been delayed or moved online as in person meetings will not be possible. Some shared service models may also be impacted that require in person meetings.

Education

From March 2020, all training, assessments and admissions processes were successfully moved online for pharmacy, graduate and BPSc programs. The fall 2020 term will be entirely online, until at least January for all educational programs.

Experiential Training

In March 2020, all student practicums in health authorities and community were halted. Community practicums have resumed although there are challenges with travel, lack of accommodation, lack of personal protective equipment (PPE). Students were able to make decisions based on their personal circumstances.

Travel

Restrictions on national/ international travel have reduced opportunities (e.g. conferences, international student travel/visas, cancellation of the Vancouver Summer Program, in person meetings with partner institutions, visits to community pharmacies in remote areas).

Social & Recognition Events

From March 2020, all formal and informal social events were put on hold or moved to an online format. This included the Annual Alumni Agent of Change event, Staff of the Year Award, celebration parties, portfolio retreats, and graduation among many more.

Professional Development

Delays, cancellations and format modifications to professional development activities and events (e.g. workshops, conferences) impacting faculty, students and staff.

See also University of British Columbia’s COVID-19 response: https://covid19.ubc.ca/
Challenges, Risks and Opportunities

Challenges to date (2017-2020)

Overall, the Faculty has made excellent progress towards its goals. Other than the positive achievements of the Strategic Plan outlined above, some challenges have also impacted the work completed to date. While unanticipated, it is always expected that there may be factors outside of our control impacting our work:

- Covid-19 has created huge impacts across all areas of the Strategic Plan as outlined above.
- Lack of a permanent Associate Dean, Research, for first two years of the plan impacted the research and graduate studies portfolios.
- Contract delays on the Pharmacists in Primary Care Network (PCN) Program delayed the initiation of implementation.

Factors that may impact strategic plan progress from 2020

In general, it is likely that some priorities may shift, either in timeline, or in importance, as a result of Covid-19. For example, staff and faculty may be focused on how to operate (e.g. provide services/conduct research) to their usual level under pandemic-related parameters, reducing their capacity for strategic endeavours. Impacts on hiring of staff/faculty/students, group meetings, funding, travel, professional conferences, and many more things will be ongoing for the foreseeable future. External partners are also affected by the pandemic, and their ability or willingness to interact on strategic initiatives may also have changed.

Notwithstanding the pandemic, there are also other factors that may influence the Faculty’s approach in the coming months/years. For example, some areas may no longer be of importance (e.g. the value of the Industrial Charter will minimize as the building is filled with an increased number of faculty members), or more resources may need to be allocated to drive certain priorities forward if we wish to achieve them (e.g. creation of external advisory council). The accreditation outcome will drive priorities in program development for the E2P program, which may have downstream effects on other programs (e.g. development of curriculum mapping processes).

Nevertheless, the Faculty continues to grow and develop towards our ambitious goal of being one of the leading academic centres internationally in the pharmaceutical sciences within the next decade.