Interdisciplinary Research Team Training

An emerging demand for solution-driven models of research has the potential to address issues that create large social and economic burdens for society. Today’s health researchers are expected to contribute to the health of both individuals and populations along with the quality of the health system as a whole. Government funding is directed to projects that tackle specific health care problems and this trend towards applied research often requires teams that are interdisciplinary, inter-institutional, contextually relevant and capable of working across health sectors. While some universities are addressing this requirement in their strategic planning documents, there is a growing need to prepare researchers to work in this emerging research environment. A recent discussion paper by Duthie and colleagues, seeks to inform stakeholders of key issues and stimulate consultation to address this area.

Defining the Landscape: A number of similar terms refer to slightly different research approaches:
- Trans-disciplinary refers to a process where researchers assimilate discipline-specific theories and concepts to solve a problem, while minimizing the segregation of the various disciplines.
- Multi-disciplinary refers to a process where each discipline brings a clearly delineated, separate contribution to the whole.
- Interdisciplinary refers to an approach involving integration and synthesis of information, data, techniques, tools, perspectives, concepts and theories from two or more disciplines to approach problems that are beyond the scope of each of them individually.

Differing Opportunities: There is no formal requirement for interdisciplinary research in the four CIHR defined fields of research.
“...stakeholders should be informed of the key issues associated with interdisciplinary research training and should stimulate a consultation process with other stakeholders to improve and expand training opportunities to produce health researchers who can work effectively in interdisciplinary work teams.”

- Biomedical Research focuses on normal and abnormal human functioning at the molecular, cellular, organ and systems levels. Students in this discipline may be exposed to some clinical research opportunities.
- Clinical research seeks to improve diagnosis and treatment of disease and injury and often focuses on bodily systems. This research focus sometimes involves other disciplines.
- Health Science Research aims to improve the efficiency and effectiveness of health professionals and the health care system through practice and policy changes and by its very nature is both multi-disciplinary and inter-disciplinary.
- The goal of Population Health Research is to improve the health of the population or sub-populations through understanding how social, cultural, environmental, occupational and economic factors determine health status. This research is likely the most interdisciplinary of all the health sciences.

Taking Action: Multiple stakeholders need to be involved in building capacity for interdisciplinary research:

- Graduate students should consider selecting supervisors from across disciplines, or a supervisor that works on an interdisciplinary team; and be proactive in seeking courses, supervisors or situations that reflect a team atmosphere.
- Universities, facilities and departments could consider a ‘boot-camp’ for new graduates, to create a dialogue around research implications and dissemination; develop courses on research team building; and, encourage faculty members to participate in inter-disciplinary team research through incentives and supportive environments.
- Health service providers could act as research brokers to identify complex research problems; support interdisciplinary research through funding and partnering with universities; and, facilitate access to patients, health systems and professionals.
- Health service funders could support and coordinate interdisciplinary training for graduate students; provide flexible, student-centered funding arrangements for students working in a range of environments; and, facilitate educational and networking events.

These suggested measures will help build the next generation of researchers, ready to tackle the health problems of tomorrow with interdisciplinary solution-driven research.

Reference: Duthie, K. Riddell, M. Weller, C. Colton, L. Benzies, K. Olson, D. Alberta’s new health research paradigms: Are graduate students being prepared for interdisciplinary team research. Available at rrasp-phirn.ca