Deprescribing guidelines education and research – the interplay and the way to move forward

Lisa Dolovich, BScPhm, PharmD, MSc
Leslie Dan Faculty of Pharmacy, University of Toronto
Toronto, Canada
Department of Family Medicine, McMaster University, Hamilton, Canada
School of Pharmacy, University of Waterloo, Waterloo Canada
Executive Committee, Ontario Pharmacy Evidence Network
Many intersections for research and education

- Research **GUIDES** development of curriculum content and skills
- Education / Practice **GUIDES** research needs
- Training in **RESEARCH SKILLS** as part of the curriculum
- Research to **EVALUATE EFFECTS** of putting new knowledge and skills into the curriculum
  - Understand changes over time including effectiveness
Research guides curriculum content

• A growing focus on multimorbidity / polypharmacy research

Polypharmacy MEDLINE entries 1955-2017

Deprescribing MEDLINE entries 2007-2017
Prescribing competency of medical students in Canada: survey of medical education leaders
(Liu J et al, 2018)

- 372 (34.6%) respondents faculty from n=17 schools
- 23.4% (SD 22.9%) felt their own graduates’ prescribing knowledge was unsatisfactory
- 131 (44.8%) felt obligated to provide close supervision to more than a third of new residents
- 239 (73.0%) believed an assessment process would improve quality
- 262 (80.4%) thought it should be incorporated into their medical school curricula

Research has identified a strong need for focus on prescribing (and thus deprescribing) within formal education systems
Tasks required for shared decision making in deprescribing

Complicated process: a lot goes into decisions


Informed by research from the domains of psychology, communication, decision making

Research providers evidence that education in a number of areas would be helpful
There is lots of research showing prescribing (and thus Deprescribing) can be improved.

12 studies (computerised decision support or pharmaceutical care approaches) across various settings reduced inappropriate prescribing.

Medicines self monitoring, self-management programs generally effective plus other approaches show promising.

Improves quality of prescribing and reducing errors.
Many components:
  - Tools
  - Activities
  - Processes
  - Relationships
  - Confidence
  - Context
  - Etc....

Many stakeholders:
  - Patients/families
  - Physicians
  - Pharmacists
  - Nurses
  - Other health care providers
  - Health organizations
  - Etc....
Research used to guide curriculum: examples

• Recent PPI (and other guidelines) woven into pharmacotherapy education
• Deprescribing decisions (interplay of multiple stakeholders)
• Research on desprescribing quality indicators (identify and learn from / do research with sentinel practices)
Education / Practice guide research needs

Trends:
• Interprofessional education
• Integrated Care/health system reform
• Quality Improvement
• Technology (use in learning & care)
• Equity/vulnerability
• Global health
• Etc....

Research plans need to account for these evolutions (? revolutions)
Research and education about health and care over time

Prescribe → Deprescribe

Time

Examples: Life, health and system changes, follow up and monitoring
Training in research skills as part of the curriculum (re deprescribing guidelines)

• Guideline development

• Critical appraisal skills including primary literature, systematic overviews

• Research methods
  • Quantitative
  • Qualitative / social science
  • Including implementation science/knowledge translation and outcomes oriented methods

• As part of leadership training
Self efficacy for deprescribing
Farrell B et al, 2017

• Need to ensure we teach people how to use guidelines because

• Having guidelines increases self-efficacy
Methodology for Developing Deprescribing Guidelines: Using Evidence and GRADE to Guide Recommendations for Deprescribing

Barbara Farrell¹,²,³*, Kevin Pottie¹,²,⁴**, Carlos H. Rojas-Fernandez³,⁵‡, Lise M. Bjerre¹,²,⁴‡, Wade Thompson¹,⁴‡, Vivian Welch¹,⁴‡

¹ Bruyère Research Institute, Ottawa, Canada, ² Department of Family Medicine, University of Ottawa, Ottawa, Canada, ³ School of Pharmacy, University of Waterloo, Waterloo, Canada, ⁴ School of Epidemiology, Public Health and Preventive Medicine, University of Ottawa, Ottawa, Canada, ⁵ Schlegel-UW Research Institute on Ageing, Waterloo, Canada
Research to evaluate effects of putting new knowledge and skills into the curriculum

Evaluating Educational Interventions to Improve Prescribing: Systematic review (Karamudin, BMJ Open 2013)

1. Prescribing competence (‘knows how’) — assessing prescriptions written for theoretical cases;
2. Prescribing performance (‘shows how’) — assessing prescriptions written for real patients.

- Specific prescribing teaching / interventions can lead to improvements in prescribing
  - Tutorials, education programs including incorporating into PBL
    - WHO Guide to Good Prescribing
  - Prescribing can be positively influenced from interventions centred on practice guidelines
  - Improved communication among professionals

Figure 1  Miller’s framework for clinical assessment.13
Need more scholarship on effects of curriculum change

• Promote scholarship in these areas
  • Reflective practice
  • Experiential learning
  • Interprofessional education and practice
  • Experience, Quality, Outcomes and Value
A Competency Framework for all Prescribers

Fig 1. The prescribing competency framework. The full competency framework can be found on the Royal Pharmaceutical Society website (www.pharms.com/prescribingframework). Reproduced with permission from the Royal Pharmaceutical society.
Learning Health System – how does this translate into a Learning Education System?

- LHSs are systems in which “science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience.” (Institute of Medicine)
- Best practices are fed back into the system to promote change and scale.

Can deprescribing be a model for evolving to a LES as part of a LHS?
Learning Education System: Promote systems for researcher-curriculum developer interactions
Emerging Deprescribing International Research Collaborative  
(based on meeting on Monday)

- Developing a GRADE Special Interest Group (SIG)
- White Paper on research needs
- Review of current guidelines to examine how deprescribing is handled
- Developing a question on patient experience stopping a medication
- Sharing of research across the collaborative