Pharmacy specialty residency programs in Canada: Present and future considerations

Nancy Sheehan, B.Pharm, MSc
Associate Clinical Professor, and
Pharmacist, Chronic Viral Illness Service
McGill University Health Centre
Conflicts of interest

- Viiv HealthCare
- Jansenn
- Abbott
- Pfizer
- Merck
Acknowledgements

- Canadian Hospital Pharmacy Residency Board
  - Barb Evans
  - Gloria Day

- Association of Deans of Pharmacy of Canada
  - Pierre Moreau

- HIV Pharmacy Specialty Residency
  - Alice Tseng
  - Michelle Foisy
Objectives

1. Define specialty pharmacy residency programs;

2. Contrast general pharmacy residency programs versus specialty programs;

3. Describe key aspects and potential requirements for the development of specialty residency pharmacy programs;

4. Examine how faculties of pharmacy could further contribute to the development of specialty residency pharmacy programs.
**Definition**

**Specialized Pharmacy Practice Residency**

« A Specialized Pharmacy Practice Residency is an organized, directed, accredited program in a specific area of practice that builds upon the competencies established in a pharmacy practice residency or a pharmacy professional degree program beyond the entry level. The Specialized Pharmacy Practice Residency program increases the resident’s depth of knowledge, skills, attitudes, and abilities to raise the resident’s level of expertise in medication therapy management and clinical leadership in the area of focus. »

PGY1 = post-graduate year 1 residency
PGY2 = post-graduate year 2 residency

CSHP, Canadian Hospital Pharmacy Residency Board, January 2010
Adapted from ASHP PGY2 accreditation standard, 2005
Usual progression in clinical pharmacy training

Specialty residencies, low uptake
- awareness
- few options
- salary / stipend
- fatigue
- no accreditation
- no university diploma

B.Pharm or entry-level PharmD

PGY1, M.Sc pharmacy practice +/- graduate PharmD

Specialty Residency (PGY2)

Fellow

< 2%

≈ 20%

100%
Motivation for doing a specialty residency

Purpose:

• ↑ specialized disease and medication knowledge
• Improve therapeutic thought process
• Offer pharmaceutical care to complex patients with complex medical or psycho-social problems
• Integrate knowledge and experience to find creative solutions to complex problems

Added benefits:

• Exposure to a variety of practice settings
• Working with expert pharmacists and physicians in the field
• Multiple occasions for networking
• ↑ research skills
• Work independently
• Gain experience with preceptoring students
• Develop leadership skills
Key characteristics of the pharmacist after the specialty residency program

Specialist
Expert
Leader
Model
Innovator

Diversified practice
<table>
<thead>
<tr>
<th>Program</th>
<th>Site</th>
<th>Contact</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulatory</td>
<td>Sunnybrook, TO</td>
<td>B. Hardy</td>
<td>1 year</td>
</tr>
<tr>
<td>Primary Care</td>
<td>UHN, TO</td>
<td>K. Cameron</td>
<td>1 year</td>
</tr>
<tr>
<td>Drug Information</td>
<td>Ottawa Hospital</td>
<td>?</td>
<td>6 months</td>
</tr>
<tr>
<td>Community pharmacy</td>
<td>Ontario</td>
<td>?</td>
<td>1 year</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Sacré-Cœur, Mtl</td>
<td>C. Pharand</td>
<td>1 year</td>
</tr>
<tr>
<td>Critical Care</td>
<td>Sacré-Cœur and MGH, Mtl</td>
<td>D. Williamson, M. Perreault</td>
<td>1 year</td>
</tr>
<tr>
<td>Critical Care</td>
<td>Toronto</td>
<td>H. Kertland / C. Chant</td>
<td>1 year</td>
</tr>
<tr>
<td>Gyneco-oncology</td>
<td>Ottawa Hospital</td>
<td>L. Rambout</td>
<td>?</td>
</tr>
<tr>
<td>Geriatrics</td>
<td>RVH, Mtl</td>
<td>L. Mallet</td>
<td>1 year</td>
</tr>
<tr>
<td>HIV</td>
<td>UHN, To and MCI, Mtl</td>
<td>A. Tseng / N. Sheehan</td>
<td>1 year</td>
</tr>
<tr>
<td>HIV</td>
<td>Providence HealthCare</td>
<td>Jack da Silva</td>
<td>1 year</td>
</tr>
</tbody>
</table>
### Example: Structure of HIV pharmacy specialty residency

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV outpatient / retail pharmacy</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Ambulatory HIV Care – TGH</td>
<td>8 weeks</td>
</tr>
<tr>
<td>Ambulatory HIV Care – MCI</td>
<td>8 weeks</td>
</tr>
<tr>
<td>HIV pediatrics – CHEO</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Drug Information – Jansenn</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Marketing – Viiv Healthcare</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Inpatient HIV care</td>
<td>4 weeks</td>
</tr>
<tr>
<td>ARV TDM</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Elective rotation 1 (ex: ID)</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Elective rotation 2 (ex: HCV, IDU)</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Research</td>
<td>8 weeks</td>
</tr>
<tr>
<td>Vacation time</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Conference</td>
<td></td>
</tr>
</tbody>
</table>
Practice Standards, Levels and Ranges

Provide direct patient care as a member of interprofessional teams

General residency (PGY1)  Specialty residency (PGY2)

**Expected:** « manage simple DRPs in patients with uncomplicated medical problems or psychosocial needs with minimal supervision »
« for more complex DRPs, self-assess and identify supports required »

**Expected:** Offer pharmaceutical care to patients with complex medical problems, multiple comorbidities, polypharmacy and / or complex psycho-social needs with minimal supervision

*CSHP, Canadian Hospital Pharmacy Residency Board, August 2009
Practice Standards, Levels and Ranges

Manage and improve medication use systems

**General residency (PGY1)**

**Expected:**
- « effectively explain aspects of drug distribution and medication use systems; applies knowledge of management tools to ensure safe and effective use of medications »

**Specialty residency (PGY2)**

**Expected =** beyond expected level for PGY1
- « improves efficiency and effectiveness of health care delivery within a team-based context »
- « provides recommendations to prevent future incidents »

*CSHP, Canadian Hospital Pharmacy Residency Board, August 2009*
Practice Standards, Levels and Ranges

Exercice leadership

General residency (PGY1)

Expected:* « articulate alternatives and constructive proposals for change management »
« enhance patient safety within a collaborative environment »

Specialty residency (PGY2)

Expected = beyond expected level for PGY1
« articulate a new vision of the future…advances the profession toward the goal »*
« initiate, galvanize support for, and bring to fruition initiatives with widespread effects »*

*CSHP, Canadian Hospital Pharmacy Residency Board, August 2009
Practice Standards, Levels and Ranges

Exhibit ability to manage one’s own practice of pharmacy

General residency (PGY1)

Expected:* «self-access and respond to practice demands and practice-related learning needs »
« …demonstrate effective time- and resource-management skills »
« …balance multiple competing demands »

Specialty residency (PGY2)

Expected = same

*CSHP, Canadian Hospital Pharmacy Residency Board, August 2009
Practice Standards, Levels and Ranges

Provide medication and practice-related education

**General residency (PGY1)**

**Expected:** «appropriately adapts method, mode or style of presentation to audience »

« responds… to educational needs in general areas of practice »

« provides coaching, facilitation, modeling and preceptorship to pharmacy students and professionnals »

**Specialty residency (PGY2)**

**Expected** = beyond expected level for PGY1

« able to present at specialty rounds »*

« invited to present at regional, national, international conferences »*

« respond…to educational needs in specialty areas of practice »*

« publishes work in peer reviewed journals »*

*CSHP, Canadian Hospital Pharmacy Residency Board, August 2009
Demonstrate project management skills

General residency (PGY1)

**Expected:**
«identify a practice-based problem or issue, generate a research proposal, ..., demonstrate effective data gathering and analysis skills...complete a written report and defend all elements of the project»

Specialty residency (PGY2)

**Expected** = similar to PGY1
- ↑ clinical research
- works independantly throughout the year on the research project
- ↑ statistical analyses

*CSHP, Canadian Hospital Pharmacy Residency Board, August 2009*
Accreditation

• Not yet available for PGY2s in Canada
  • Eventually through the Canadian Hospital Pharmacy Residency Board
• Prerequisites:
  • Board must develop practice standards and accreditation standards
  • Program directors will then have to apply for accreditation
• Meanwhile ???
  • PGY1 accreditation available
Developing a specialty residency: steps

- **Program Director**
  - Single director even if multiple sites
  - Demonstrated expertise in the area
    - As per ASHP: completed PGY2, minimum 3 years experience, board certified (if applicable), maintains active practice in field

- **Sponsoring organization**
  - Maintains authority and responsibility for quality, coordination and administration of program
  - Contractual signed agreements with practice sites
  - On-site inspection of practice site

ASHP PGY2 accreditation standard, 2005
Developing a specialty residency: steps

• **Residency Advisory Committee**
  • Strongly recommended (optional)
  • Role: advice the resident and the program director
  • Meetings: 3 to 4 times per year, and as needed

• **Members (example):**
  • Program director and co-directors
  • Head pharmacist
  • Physician
  • Faculty representative
  • Community representative
Developing a specialty residency: steps

• Residency Manual
  • Program purpose → outcomes → educational goals → educational objectives
    • ASHP: provides generic set and specific sets of purpose / outcomes / goals / objectives for some fields
      • Critical care, drug information, geriatrics, oncology, primary care

• Program structure, rotations, rotation descriptions, evaluation process, certification requirements, etc

ASHP PGY2 accreditation standard, 2005
Developing a specialty residency: steps

• Learning experiences / preceptors
  • Exemplary environments conducive to learning
  • Must provide experiential learning that meet the goals and objectives
  • Sufficient patient population (# and variety of disease states)
  • Pharmacist integral part of interdisciplinary team
  • Collaborative practice with other providers
  • Active pharmacy service 12 months/year
  • Sufficient professional staff to supervise
  • Preceptors: qualified to provide effective training
    • PGY2 and 1 year experience in field or
    • Demonstrates expertise and ≥ 3 years experience
  • Rotation descriptions: practice site, objectives, activities

ASHP PGY2 accreditation standard, 2005
Developing a specialty residency: steps

- Competency-based and criteria-based evaluation
- Focused on program and rotation goals / objectives
- Example: HIV specialty residency

<table>
<thead>
<tr>
<th>Evaln.</th>
<th>Evaln done by:</th>
<th>Mid rotation, formative</th>
<th>End rotation, summative</th>
<th>Mid-year</th>
<th>End-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-assessment</td>
<td>Resident</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>Preceptor</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preceptor</td>
<td>Resident</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotation</td>
<td>Resident</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>Resident</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Director(s)</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Other:</td>
<td>Director(s)</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

ASHP PGY2 accreditation standard, 2005
Developing a specialty residency: steps

Other

• Admission criteria / candidate selection

• Funding
  • Must offer « sufficient financial support » to resident

• Other logistics
  • Orientation
  • Provide work space, computer, opportunities to attend conferences
  • Policies and procedures: vacation / sick leave / failed rotations, etc

• Certification requirements

ASHP PGY2 accreditation standard, 2005
Challenges

• Recruitment

• Funding
  • Hospital pharmacy departments ?
  • Hospital foundations ?
  • Industry ?
  • Research granting agencies ?
  • Health ministry ?

• For Faculty members
Faculties of pharmacy as sponsoring organization?

Responsible for the quality, coordination and administration of the program

- Advantages for the resident
  - University diploma
  - May facilitate obtaining « specialist » title

- Advantages for the program director
  - Work recognized from Faculty / university
  - Time devoted to direction of program
  - Administrative support
  - Sharing of tools / experience
  - May funding options

Responsable for the quality, coordination and administration of the program
Faculties of pharmacy as sponsoring organization?

• Advantages for Faculties
  • Credits and associated ↑ funding
  • Potential to hire more professors (clinical)
  • Train professionals for future academic careers
    • Clinical professors
    • Clinician scientists
Faculties of pharmacy as sponsoring organization?

Degree?

- **Specialized graduate diplomas**
  - (DESS: dîplome d’étude supérieure spécialisée)
  - 1 to 2 year program
  - A few classes

- **Clinical PhD**
  - 2.5 to 3 year program
  - ↑ research component
  - Some classes

Canadian network of specialty residency programs

- Harmonize programs
- ↑ capacity for external elective rotations
Conclusions – Specialized pharmacy residency programs

• Clear benefits for pharmacists to do these programs
  • Advanced pharmaceutical care, teaching, clinical research

« Orphan pharmacy programs »
• Few programs actively recruiting residents
• Programs « left on their own »
  • No practice standards
  • No accreditation
  • Difficult / little funding

University degree
• Benefits for resident, preceptor and Faculties of pharmacy

Thank you for your attention!
Faculté de pharmacie

Because drugs are complex

- To train devoted, creative and open-minded professionals and specialists;
- To perform basic and applied research;
- To share knowledge and expertise;
- To contribute to the development of pharmacy practice and pharmaceutical sciences.

Research Themes

- Medication and Population Health
  - Therapeutic Targets and Pharmacotherapy
    - Drug Formulation and Analysis
    - Molecular Pharmacodynamics
    - Pharmacokinetics & Pharmacometrics
  - Analysis & Bioanalysis
    - Formulation, procedures & targeting
    - Pharmacogenomics
    - Clinical Pharmacology
    - Pharmacokinetics & Pharmacometrics
    - Analysis & Bioanalysis
- Clinical and Pharmacy Practice
  - Clinical Pharmacology
  - Pharmacokinetics & Pharmacometrics
- Drugs in Society
  - Pharmacoeconomics
  - Pharmacoeconomics
  - Pharmacoepidemiology

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