Promoting the Development and Evaluation of Innovative Practices in Community Pharmacy

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Titulaire, Chaire sanofi aventis en soins pharmaceutiques ambulatoires

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President, Canadian Foundation for Pharmacy

CPhA Webinar
March 24, 2015
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Nathalie Turgeon
Community pharmacist

Funding
• Réseau québécois de recherche sur les médicaments (RQRM)
• Le Cercle du doyen de l’Université de Montréal (2012 et 2014)
• Blueprint for Pharmacy in partnership with Pfizer Canada Inc.
What would be your level of interest in participating in a virtual community of primary care pharmacists involved in research projects concerning the development and evaluation of pharmacy practice?

- 58% reported being interested
- 30% Not very interested
- 21% Interested
- 11% Very interested
- 3% Not at all interested
- 1% Did not respond

(CPJ 2013;146(1):47-54.)
<table>
<thead>
<tr>
<th>Possible PBRN services</th>
<th>Positive response rate, n (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to continuing education training programs developed for research projects</td>
<td>429 (75.9)</td>
</tr>
<tr>
<td>Access to clinical tools developed for research projects</td>
<td>435 (77.0)</td>
</tr>
<tr>
<td>Participation in research projects</td>
<td>221 (39.1)</td>
</tr>
<tr>
<td>Participation in developing new pharmaceutical practices</td>
<td>317 (56.1)</td>
</tr>
<tr>
<td>Exchanges between pharmacists and researchers about proposed research projects</td>
<td>196 (34.7)</td>
</tr>
<tr>
<td>Information about colloquiums/congresses/conferences about pharmacy practice research</td>
<td>362 (64.1)</td>
</tr>
<tr>
<td>Organization of an annual colloquium bringing together members of the PBRN</td>
<td>160 (28.3)</td>
</tr>
<tr>
<td>Other†</td>
<td>8 (1.4)</td>
</tr>
</tbody>
</table>

*More than 1 item could be checked.
†“Other” includes access to the tools and training that have yielded good results and improved pharmacy practice; exchanges between pharmacists and physicians to develop projects for their community; exchanges between nurses, physicians and pharmacists; virtual forum to exchange knowledge; involvement of interested physicians; information about seminars outside the country; and section for tips that pharmacists can give one another.
WHAT IS THE STAT NETWORK?

- The first network and research infrastructure for community pharmacy
- Support the development, evaluation, and large-scale implementation of innovative, patient-centered, effective and economically sustainable clinical practices
- Facilitate the creation of communities of practice and partnership involving community pharmacists, other primary care actors, academia, and decision makers
**WHO CAN PARTICIPATE?**

All people concerned by community pharmacy

- Pharmacists (owners and employees)
- Pharmacy students
- Technical assistants
- Nurses working in pharmacy
- Researchers and research professionals
- Managers and decision makers
- Other primary care clinicians

Registration is free but mandatory!

<table>
<thead>
<tr>
<th>STATUS of registration (June 2014 to March 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pharmacists: 306</td>
</tr>
<tr>
<td>- Students: 64</td>
</tr>
<tr>
<td>- Nurses: 1</td>
</tr>
<tr>
<td>- Technicians: 2</td>
</tr>
<tr>
<td>- Research teams: 15</td>
</tr>
<tr>
<td>- Decision makers: 7</td>
</tr>
<tr>
<td>- Others: 16</td>
</tr>
<tr>
<td><strong>TOTAL:</strong> 411</td>
</tr>
</tbody>
</table>
Bienvenue
Le pharmacien communautaire est un intervenant précieux pour optimiser l'usage des médicaments. Ses pratiques cliniques évoluent sans cesse afin de répondre aux attentes de la population, du système de santé et des législateurs.

Plusieurs pharmaciens participent au développement et à l'évaluation de pratiques cliniques novatrices. Joignez-vous à eux et participez-vous aussi à l'avancement de votre profession !

Nouveautés
Le Programme ACO débute !

ProFil, journal de bord des tensions artérielles

Programme ACO
Forum

Programme ÉCO
Babillard
Bibliothèque
Formation

FORUM
TOP 5 NOUVEAUTÉS
1 - Article sur la polypharmacie en gériatrie
2 - Quels sont les thèmes qui devraient être abordés dans le
3 - Enquête sur les services cliniques spécialisés
4 - La loi 41 et la rémunération en pharmacie
5 - La collaboration INTRA professionnelle

TOP 5 LES PLUS POPULAIRES
1 - La collaboration INTRA professionnelle
2 - La loi 41 et la rémunération en pharmacie
DISCUSSION FORUM

Allows members to discuss and share ideas on various topics of interest related to their practice.

- Remuneration and Bill 41 (*Judith Choquette*)
- Intra-professional collaboration (*Anne Maheu*)
- Results of a survey on clinical services offered in pharmacy (*Mylène Chartrand*)
BULLETIN BOARD

- News related to the Network
- News related to pharmacy practice
- Advertisement for new research projects
LIBRARY

Allows members to share documents, clinical tools and links to other websites of interest

• Link to INESSS collective prescriptions
• Links to clinical guidelines
• Clinical tools developed in research project (e.g.: ProFiL Program)
- Initiate a discussion
- Post messages on the board
- Add tools / documents / internet links on the library
Bienvenue

Le pharmacien communautaire est un intervenant clé pour optimiser l'utilisation des médicaments. Ses pratiques cliniques évoluent sans cesse afin de répondre aux attentes de la population, du système de santé et des législateurs.

Plusieurs pharmaciens participent au développement et à l'évaluation de pratiques cliniques novatrices. Joignez-vous à eux et participez-vous aussi à l'avancement de votre profession !

Nouveautés

Le Programme ACO débute !!!

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Programme ACO

Forum Babillard Bibliothèque Formation

Programme ÉCO

FORUM

TOP 5 NOUVEAUTÉS
1. Article sur la polypharmacie en général... >
2. Quels sont les thèmes qui devraient être abordés dans la... >
3. Enquête sur les services cliniques spécialisés... >
4. La loi 41 et la rémunération en pharmacie... >
5. La collaboration INTRA-professionnelle... >

TOP 5 LES PLUS POPULAIRES
1. La collaboration INTRA-professionnelle... >
2. La loi 41 et la rémunération en pharmacie... >
ON-LINE TRAINING

1.5 credits from OPQ
ON-LINE TRAINING

La pertinence de la recherche
Cliquez sur leur photo respective pour avoir leur point de vue!

Manon Lambert
Directrice générale et secrétaire de l'Ordre des pharmaciens du Québec (OPQ)

Normand Cadieux
Vice-président exécutif et directeur général de l'Association québécoise des pharmaciens propriétaires (AQPP)

Pierre Moreau
Doyen et professeur titulaire, Faculté de pharmacie, Université de Montréal
ON-LINE TRAINING
ATRIAL FIBRILLATION

- Most common type of arrhythmia (350 000 Canadians)
- Increases the risk of ischemic stroke by 4 -5
- Monitoring of patients on oral anticoagulant is the most prevalent service offered in community pharmacy
  - 45% of pharmacies
  - INR measurements (pharmacy or regular lab)
  - dosage adjustments
- Few studies have evaluated the quality of this service and no quality improvement programs were implemented
PRIMARY OBJECTIVE

In a pilot study, evaluate the feasibility of implementing a quality improvement program in community pharmacy through the STAT Network for the monitoring of oral anticoagulant treatment in patients with atrial fibrillation.
STUDY DESIGN

- Uncontrolled pre-post study with no control group

Recruitment of pharmacies and participants

Quality improvement program

Retrospective evaluation over six months

Retrospective evaluation over six months
CONDUCT OF THE STUDY - STAT NETWORK

- Advertisement/information about the study
- Recruitment (on line informed consent for pharmacists)
- Identification of study patients (anonymous)

Recruitment of pharmacies and participants

Quality improvement program

The program is entirely provided through the STAT Network

- Retrospective evaluation over six months
- Retrospective evaluation over six months

- On-line questionnaires
STUDY POPULATION

Pharmacy:
• At least one pharmacist actively involved in the follow-up of patients on oral anticoagulant
• Identification of at least 5 patients, including at least 1 patient on warfarine/nicoumalone and one patient on NOAC (maximum of 20 patients)
Quality of pharmacist follow-up

A good indicator
• Precise
• Based on scientific data
• Perceived as relevant and representative of « state-of-the-art » practice
• Mesurable in community pharmacy

Available indicators are mainly related to warfarine/nicoumalone (few are specific to NOAC) and none are specific to community pharmacy
Development of quality indicators

Step 1: Initial list

Step 2: RAND survey

Step 3: Feasibility
Development of quality indicators

Step 1: Initial list
- Literature review (Pubmed, Medline,...) and guidelines
- First list of indicators

Step 2: RAND survey

Step 3: Feasibility

<table>
<thead>
<tr>
<th>Lignes directrices</th>
<th>Indicateurs développés par d’autres équipes</th>
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</thead>
<tbody>
<tr>
<td>CCS, 2012</td>
<td>CCS, 2013</td>
</tr>
<tr>
<td>CADTH, 2013</td>
<td>AHA/ASA, 2014</td>
</tr>
<tr>
<td>OPQ, CMQ, 2005</td>
<td>ACC/AHA/Physician Consortium, 2008</td>
</tr>
<tr>
<td>INESSS, 2014</td>
<td>NHS Improvement, 2011</td>
</tr>
<tr>
<td>CHEST, 2012</td>
<td>Beauchesne MF et al., 2013</td>
</tr>
<tr>
<td></td>
<td>Cheng EM et al., 2007</td>
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<td></td>
<td>Brown A., 2000</td>
</tr>
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<td></td>
<td>Rose AJ et al., 2011</td>
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<tr>
<td></td>
<td>Rose AJ et al., 2009</td>
</tr>
</tbody>
</table>
Development of quality indicators

Step 1: Initial list

Step 2: RAND survey

Step 3: Feasibility

- Expert committee:
  - 2 community pharmacists
  - 3 hospital pharmacists
  - 2 family physicians
  - 1 cardiologist
  - 1 research

- Two rounds
  - Round 1: individual rating
  - Round 2: in person
Development of quality indicators

Step 1: Initial list

Step 2: RAND survey

Step 3: Feasibility

Feasibility evaluation:

• 5 community pharmacists applied the indicators to 2 of their patients
38 proposed indicators

Round #1

- Appropriate indicators: 21
- Inappropriate indicators: 0

- Modified indicators: 17
- Proposed indicators: 8

Round #2

- Appropriate indicators: 21
- Inappropriate indicators: 4

42 indicators
42 indicators

Feasibility evaluation

Inappropriate indicators
7
• No denominator
• Duplication
• Too complex

Modified indicators
2
• Concordance with guidelines

Added indicators
2
• Concordance with guidelines

37 indicators
37 indicators

Oral anticoagulants in general

3

Risk of bleeding (HASBLEED) is documented in pharmacy chart

Specific to warfarine/nicoumalone

20

Percent time within therapeutic INR ≥ 60%

Specific to new oral anticoagulants

11

Kidney function is documented in pharmacy chart

Switch of anticoagulant

3

Pharmacist intervention if % time in therapeutic INR is <60% for unknown reason
Programme ACO
Programme d’amélioration de la qualité de la surveillance de la thérapie anticoagulante orale en pharmacie communautaire

Rapport de qualité des pratiques
#1
Du 1er octobre 2014 à 1er mars 2015

Pharmacie 01
Localisation : Nantes
Participants : GIPPS, GLS, GMS, MMG

Vos pharmaciens de la maison :
Aurélie Gomis, Alexandre Levari, Robin Cordeau, Marine Bellin, Théophane, Dano Grenier

En moyenne, vos patients utilisés avec la Warfarine ou le Nicosmalone sont dans leur intervalle thérapeutique 72% du temps, variante de 55 à 90%. La moyenne des scores obtenus par l’ensemble des pharmaciens participants est de 90%.

Selon nos indicateurs, la qualité du suivi de vos patients varie entre 15 et 90%, avec une moyenne de 80%. La moyenne pour l’ensemble des pharmaciens participants est de 80%.

Résumé des recommandations par ordre de priorité
Afin d’améliorer la qualité de vos suivi, le programme ACO offre toutes les gaine d’activités de formation. En considérant, qu’il est difficile de déterminer la qualité de vos pratiques et la qualité de votre documentation, voici les activités qui pourraient vous être utiles :

- Formalisation en ligne : formalisation continue des patients - choix de l’anticoagulation - utilisation de l’outil clinique (INR/INSS)
- Formation en ligne : instructions
- Formation en ligne : cas cliniques complexes
- Outils : évaluation diagnostique et de suivi
- Outils : lignes directrices - anticoagulation en milieu ambulatoire (OFQ et CM)
- Outils : évaluation diagnostique de la Société Canadienne de Cardiologie 2012
- Appel individuel avec un pharmacien expert

Pour plus d’informations, vous pouvez vous adresser à Marie-Nicole Gomis au 02.40.49.30.20 et info@pharmacie01-02.com, ou par courrier à Marie-Nicole Gomis, pharmacie 01, 123 rue des Pharmaciens, 35000 Nantes.
Quality improvement program
ON LINE TRAINING
• Guidelines (INESSS)
• Managing complex patients (S. Côté)
• Managing drug interactions (V. Michaud)
• Managing food interactions (N.- Presse)

CLINICAL VIGNETTES

GUIDELINES/CLINICAL TOOLS
• Guidelines
• Renal function estimation
• Available computerised programs
• Follow-up formularies

MENTORAT
• Residents and pharmacists from Cité-de-la-Santé de Laval

Program is entirely accessible remotely adapted to the needs and preferences of participants
Status of the study

• Recruitment (10-2014 to 02-2015):
  – 51 pharmacies
    • 61 pharmacists
    • 4 pharmacy students
    • 0 nurses
    • 0 technicians

• Quality improvement program:
  – March 2015 to August 2015
To develop an economic model to estimate the financial viability of providing specialized clinical pharmacy services.
« PROGRAMME ÉCO »

**PHASE I:** Survey with pharmacy owners focusing on clinical pharmacy services offered in community (or retail) pharmacy.

**PHASE II:** A small working group (appr. 15 individuals from various areas) will develop an operational economic model for Quebec to evaluate the economic viability of clinical pharmacy services.

**PHASE III:** Model to be utilized in 30 community pharmacies that are offering clinical services to validate the model and document the financial viability of these services.
SURVEY OBJECTIVES

To describe the specialized clinical services offered in Quebec community pharmacies.

**DEFINITION:**

- Structured and individualized medication management program offered in a community pharmacy.
- Excluded: activities related to daily practice such as distribution of medication and patient counselling.
METHODS

- Survey of Quebec pharmacy owners

- Questionnaire:
  - Developed by the research team
  - Validated with members of the advisory board
  - Pre-tested with approximately 10 expert pharmacists
QUESTIONNAIRE

- Characteristics of the pharmacy
- Clinical services provided
- Detailed description of each service
- Perceptions of benefits and obstacles

1) Quels sont les services cliniques spécialisés, c’est-à-dire les programmes structurés et individualisés pour la surveillance de la thérapie médicamenteuse, actuellement offerts dans votre pharmacie? (Plusieurs items peuvent être cochés)

- Anticoagulotherapie
- Hypertension
- Diabète
- MPOC/Asthme
- Hypercholestérolémie
- Méthadone/buprénorphine
- Douleur chronique (douleur cancéreuse et non cancéreuse)
- Cessation tabagique
- Santé mentale
- Santé voyage
- Vaccination
- Grossesse et allaitement
- Fertilité
- Ostéoporose
- Ménopause
- Revue de la médication
- SIDA
- Oncologie (antinéoplasiques)
- Autre: _____________________
- Autre: _____________________
- Autre: _____________________
- Aucun
MAILING SURVEY

• Modified Dillman method (May to December 2013)
  — Invitation from « AQPP » sent by email
  — 1st wave - Spring 2013 (up to 4 emails)
  — 2nd wave - Fall 2013 (up to 2 emails)
  — Phone follow-up to those who only completed section 1
  — Final email - December 2013 for the non-respondents with link to section 1
  — Paper copy sent if email was not available (x2)

• Support letter sent from « ABCPQ », « AQPP », « OPQ »

• Maximum number of recalls: 12
1790 pharmacies in the province of Quebec

Pharmacies contacted (n = 1505)

Without email address or unfunctional email address (n = 118)
- Respondents (n = 40)

With email address (n = 1387)
- Respondents (n = 471)

Total number of respondents (n = 511)

- First section only (n = 167)
- First section + One service or more (n = 344)

Analysis:
First section (n = 511)
Complete questionnaire (n = 344)

Participation rate: 34% (511/1505)
## Pharmacies (n = 511)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliated to a Chain or a Banner</td>
<td>66%</td>
</tr>
<tr>
<td>Surface area ≥ 5 000 sq ft</td>
<td>43%</td>
</tr>
<tr>
<td>Opening hours on average</td>
<td></td>
</tr>
<tr>
<td>Hours-pharmacists</td>
<td>74h/week</td>
</tr>
<tr>
<td>Hours-technicians</td>
<td>94h/week</td>
</tr>
<tr>
<td></td>
<td>182h/week</td>
</tr>
<tr>
<td>Between 250-500 scripts per day</td>
<td>36%</td>
</tr>
<tr>
<td>Separate consultation office</td>
<td>85%</td>
</tr>
<tr>
<td>Professionnals hired to perform certain services:</td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>36%</td>
</tr>
<tr>
<td>None</td>
<td>45%</td>
</tr>
</tbody>
</table>

No region under or over represented
**Clinical Services**

Number of clinical services provided in the past year?

- 81% of pharmacies offer at least 1 service
- 3 services per pharmacy on average

![Pie chart showing the distribution of clinical services offered by pharmacies.](chart.png)
MOST PREVALENT SERVICES

Chronic disease management

- Oral anticoagulant: 45%
- Hypertension: 36%
- Diabetes: 28%
- Dyslipidemia: 13%
- COPD/asthma: 6%
- Chronic pain: 5%
- Smoking cessation: 42%
- Methadone/Suboxone: 27%
- Vaccination: 21%
- Travel health: 21%

Specific conditions
DESCRIPTION OF CLINICAL SERVICES

Providing information about...

- Oral anticoagulant
- Hypertension
- Diabetes
- Dyslipidemia
DESCRIPTION OF CLINICAL SERVICES

- Oral anticoagulant
- Hypertension
- Diabetes
- Dyslipidemia
# Description of Clinical Services

<table>
<thead>
<tr>
<th></th>
<th>Oral anticoagulant</th>
<th>Hypertension</th>
<th>Diabetes</th>
<th>Dyslipidemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time since initiation of service (year)</td>
<td>4.5</td>
<td>5.5</td>
<td>5.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Number of patients last year (n)</td>
<td>22</td>
<td>60</td>
<td>54</td>
<td>63</td>
</tr>
<tr>
<td>Length of consultation (min): mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial visit</td>
<td>20</td>
<td>17</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Follow-up visit</td>
<td>8</td>
<td>9</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Service paid by patient (yes)</td>
<td>47%</td>
<td>14%</td>
<td>13%</td>
<td>59%</td>
</tr>
</tbody>
</table>
Strategies implemented to adjust medication dosage

- Anticoagulotherapy
- Hypertension
- Diabetes
- Hypercholesterolemia

Legend:
- Pharmaceutic opinion
- Collective prescription
- Individual prescription
**TECHNICAL REPORTS**

- Reports for each service are being written and will be placed on the “Réseau STAT” platform in the coming months.
- 1*st* report now available.
Benefits

- Increased # of scripts/patients: 31%
- Differentiation vs other pharmacies: 39%
- Team satisfaction and workforce: 45%
- Professional Duty: 46%
- Responding to patients' needs: 49%
- Personal Satisfaction: 56%
- Customer Loyalty: 58%
- Building trust with patients: 61%

% of respondents
OBSTACLES

- Difficulty in accessing lab data: 43%
- Shortage of pharmacists: 49%
- Insufficient remuneration: 62%
- Lack of time: 76%

% of respondents
DISCUSSION

• In Quebec, a minority (19%) of pharmacies do not offer specialized clinical services
  – On average 3 services per pharmacy
  – 77% expect adding services in the next year

• Few medication adjustments done independently (ACO via individual prescription)
  – Bill 41 would enable to increase efficiency of specialized pharmacy services

• Opportunities:
  – Few pharmaceutical opinions
  – Few interventions to increase drug adherence
  – More billing to patients
CONCLUSION

• The STAT network appears to be an appropriate infrastructure to support pharmacy practice research
• Financial viability of the Network is an issue
  – Research projects
  – Continuing education program involving quality improvement and evaluation
THANKS!