Role of the Pharmacist in the Provision of Immunization Services

Susan Bowles, PharmD, MSc, FCCP
Dalhousie University
Capital District Health Authority
Conflict of Interest

- Received speaking honorarium and/or research funds from Merck Frosst Inc., Sanofi-Aventis, and Glaxo-Smith-Kline regarding immunizations and unrelated topics.
Outline

- Review the three levels of immunization services
- Discuss the US experience of pharmacists as immunizers
- Results from Canadian Pharmacist survey
American Pharmaceutical Association identified three levels of pharmacist participation in immunization services (1996)

- Educator
- Facilitator
- Immunizer
Pharmacist as Educator

- Collaboration with Public Health Officials and other health care providers to provide positively framed information regarding benefits/risks of immunizations
  - Respond to specific questions
  - Identification of patients in need of specific immunizations
    - Patient counseling
      - Patients likely to act on immunization advice by pharmacists
        (Grabenstein et al 1992, Grabenstein et al, 1998)
  - Administrative functions
    - Committee participation to develop immunization-related policies and procedures
    - Variety of health-care settings
Pharmacist as Facilitator

- Assist in vaccine delivery
  - Traditional distribution of vaccines
    - Includes maintenance of the cold-chain
  - Immunization clinics held in the pharmacy
    - Immunization provided by other health care providers
      - Many adults prefer non-traditional settings (*Singleton, et al, 2005*)
  - Examples
    - Annual influenza immunization clinics
    - Immunizations needed for travel
      - Hepatitis A
Community Pharmacy Influenza Immunization Pilot

- Partnership with CDHA PHS & PANS
  - Pharmacy-based clinics + PH nursing staff
  - High risk screened from med profiles
- 2828 vaccines were administered
  - 20% had never been previously vaccinated
  - 80-90% cited pharmacy as preferred site

### Patient Characteristics

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;65yo</td>
<td>790</td>
</tr>
<tr>
<td>&lt;65yo</td>
<td>598</td>
</tr>
<tr>
<td>HHC*</td>
<td>738</td>
</tr>
<tr>
<td>HCP#</td>
<td>344</td>
</tr>
<tr>
<td>Other@</td>
<td>358</td>
</tr>
</tbody>
</table>

*HHC = household contact  
#HCP = health care professional or first responder (police, firefighter)  
@Other = non-high risk individual (vaccine not publicly funded)
Post-splenectomy Immunizations

- Chart review conducted at Capital Health

- Vaccination rates
  - *S. pneumoniae*: 53%
  - *N. meningitidis*: 45%
  - *H. influenzae*, type b: 44%

Splenectomy vaccine kit

- Vaccines:
  - 1 dose Pneumococcal polysaccharide
  - 1 dose Hib conjugate
  - 1 dose Meningococcal

- Documentation
  - Physician’s order form
  - Policy and Procedure
  - Vaccine package insert
  - Family doctor fax sheet
  - Patient information sheet
  - Wallet card
Pharmacist as Immunizer

- Provide immunization to the public in those jurisdictions where this function is within the scope of pharmacy practice

- Legislative barriers
Pharmacist as Immunizer
Why it Makes Sense?

- Accessible health care professional
  - Canadians report that pharmacists are their most frequently accessed health care provider

- Considered a credible source of information
  - Primary source of medication-related information

- Considerable opportunity for intervention
  - Likely that intervention will be perceived by public as very credible
Pharmacist as Immunizer
US Experience

- 1994 – 1996
  - Development of “certification” program by CDC and APhA

- 1st program offered in 1996
  - 67 pharmacists
  - Within 6 weeks of completion 50% were providing immunizations in their pharmacies
  - ~ 500 patients immunized (APhA 2004)
  - 2004 ~ 15,000 pharmacists/pharmacy students trained

- 2005 – pharmacists as immunizers considered within scope of practice in 42 states
Pharmacist as Immunizer
US Experience

Perception of Patients

- Several studies (*Ernst et al, 1999; Blake et al, 1999; Xu et al, 2000; Ndiaye et al, 2003*)

- **Key findings**
  - ~50% adults comfortable receiving immunization from pharmacist
  - ~60% adults support receiving immunization by pharmacist
    - Influenza & pneumococcal vaccine
  - If previously immunized in pharmacy, more likely to do so in future
  - Public is considerably less comfortable with pharmacists as immunizers for childhood immunizations
    - Pharmacists are also less comfortable administering childhood immunizations
Pharmacist as Immunizer
US Experience

Perception by Other Health Care Providers

- Endorsed by the American College of Physicians/American Society of Internal Medicine (Ann Intern Med 2002)

- Letter of congratulations to APhA from CDC upon 10th anniversary of pharmacists expanding scope of practice to include administration of immunizations
Pharmacist as Immunizer
US Experience

Impact on Immunization Rates

Influenza Immunization Rates

Steyer et al, 2004
Pharmacist as Immunizer
US Experience

Type of Vaccine Administered

Neuhauser et al, 2004
Pharmacist as Immunizer
US Experience

Safety

- 542,445 adults immunized in non-traditional setting
- 112 adverse events
  - 95 immediate, 17 late
  - 63 vasovagal
  - 22 injection site problem
  - 10 immediate hypersensitivity reaction requiring administration of epinephrine
  - 15 transported to emergency department for evaluation
  - No deaths

D’Heilly SJ, et al., 2006
Pharmacists as Immunizers
US Experience

Uptake
- 14% pharmacies were immunization providers
- 11% intend to implement with plan in place
- 8% provided immunization services in the past but no longer provided the service
- 38% no intention of providing
- 18% interested but no plan

Mount JK et al, 2007
Pharmacist as Immunizer
US Experience

Leadership from Pharmacy Students

- Operation Immunization
  - Program involving pharmacy students & public health officials
  - Sponsored by Safeway Inc
  - Objectives
    - Increase public immunization awareness
    - Expand number of immunizations nationwide
    - Promote the implementation of immunizations in pharmacies
    - Use collaborative efforts with other healthcare professionals to facilitate the immunization process
    - Increase public awareness of the pharmacist’s role in immunizations
  - Pharmacy students have immunized 660,000 patients & reached over 10 million with immunization education in the 10 year history of Operation Immunization
Pharmacist as Immunizer
Attitudes of Canadian Pharmacists

Willingness of pharmacists to expand scope-of-practice to include provision of adult immunizations

<table>
<thead>
<tr>
<th>Willing</th>
<th>Unwilling</th>
<th>Unsure</th>
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<tbody>
<tr>
<td>51%</td>
<td>25%</td>
<td>24%</td>
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Pharmacists Attitudes Toward Immunization

- Current provision of immunization adequate
- Pharmacist practice should expand to include immunization
- Pharmacist immunizers would increase coverage
- Pharmacist immunizers would increase public access

% strongly agree or agree

*p value ≤0.05
Pharmacists' attitudes toward immunization

- Current pharmacy education is adequate
- Comfortable answering questions about side effects
- Formal certification should be required
- Pharmacist immunizers would be acceptable to public

% strongly agree or agree

*p value ≤0.05
Pharmacist as Immunizer
Summary of Canadian Survey

- Although most pharmacists agree that pharmacist immunizers would increase vaccine access and coverage rates and be acceptable to the public, only half of pharmacists surveyed were willing to expand their practice scope to include immunization.

- Many potential barriers to immunizing identified including: concerns about legal liability, reimbursement issues, acceptance by physicians, and current level of immunization knowledge.

- Approximately half of pharmacists surveyed are willing to expand their scope of practice to include adult immunizations.
  - Certification process is needed ⇒ Core Competencies PEWG of CIC
Role of Pharmacists in the Provision of Immunization Services

Summary

- Pharmacists can fulfill three roles in the provision of immunization services
  - Educator, facilitator and immunizer

- US experience demonstrates that pharmacists effectively and safely administer adult immunizations

- Approximately one-half of Canadian pharmacists are willing to expand their scope of practice to include administration of immunizations
  - Most feel more education/training is required for this