Collaboration of Global Faculty to Empower Students and Pharmacists as Future Immunizers

Sandy (Jeong Yeon) Rhie, PharmD, PhD, Professor
Ewha Womans University, College of Pharmacy, Seoul, South Korea

See-Won Seo, PharmD, BCACP, Assistant Professor
Albany College of Pharmacy and Health Sciences, Albany, NY

Hoai-An Truong, PharmD, MPH, FAPhA, FNAP, Professor
University of Maryland Eastern Shore School of Pharmacy and Health Professions, Princess Anne, MD

1/25/2022 EST [1/26/22 KST]
Moderator & Speakers

Moderator:
Nisreen Mourad, PharmD, MSc, Clinical Associate Professor and Chairperson of Pharmaceutical Sciences Department, Lebanese International University, Khyara, Lebanon

Speakers:
Sandy (Jeong Yeon) Rhie, PharmD, PhD, Professor
Ewha Womans University, College of Pharmacy, Seoul, South Korea

See-Won Seo, PharmD, BCACP, Assistant Professor
Albany College of Pharmacy and Health Sciences, Albany, NY

Hoai-An Truong, PharmD, MPH, FAPhA, FNAP, Professor
University of Maryland Eastern Shore School of Pharmacy and Health Professions, Princess Anne, MD
Learning Objectives

- Identify the **benefits** of a global health education partnership on advancing pharmacy practice and education for each partner

- Conduct a **needs assessment** for curricular gap and faculty expertise

- Discuss the **opportunities and challenges** for developing a global education partnership
Impact and Value of Pharmacist Immunizers

Pharmacists are considered the most accessible healthcare professionals.

“>90% of US residents live within 5 miles of a pharmacy.”1

32% (2003) 40% (2013)

41% Increase in Vaccination Rates due to Pharmacists

7 weeks Projected reduction in flu pandemic response

Benefits of a Global Partnership

- Exposure of students to new ideas
- Address need for curricular content
- Interchange of ideas
- Opportunities for collaborative research
- Challenges in scope of practice
Steps for Needs Assessment

- **Needs identification** - analyzes the current state and needs; prioritizes
- **Data collection & analysis** - gathers information to understand the gaps between now and desired future
- **Data application** - use findings to evaluate solutions and determine what is best
- **Evaluation** - assesses action plans and/or identifies weak point for improvement
Needs Assessment: Curricular Gap & Expertise

- When developing global partnership, it is important to conduct a needs assessment and identify topics of interest and/or important issues in pharmacy education for faculty and students in both countries.

- Faculty partners can plan for needs assessment by identifying course, faculty instructors, etc.

- **Global Education** - unmet need with identified partnerships
- **Pharmacy Education** - unmet need of curricular topic in partner countries
- **Scope of Practice** - unmet need - authority for pharmacist-provided immunization
- **Immunization Trainer** - unmet need - lack of faculty expertise to teach immunization
- **Advocacy** - unmet need - pharmacist’s ability to advocate
Needs Assessment: Curricular Gap & Expertise

In South Korea:

- No current law allowing pharmacists to immunize
- No current billing and reimbursement for pharmacists to immunize
- Immunization is a topic of curricular need in pharmacy education
- There is a lack of pharmacist educator to teach immunization

Thus, global collaboration of pharmacy faculty of two schools in the U.S. and a faculty member in South Korea can address curricular gap and expertise need to advance pharmacy education and practice in South Korea.
Teaching Experience & Partnership

Logistics
- Meetings to prepare in advance
- Time zone, daylight savings (4am ET on 5/27/21)
- Online conference call platform
- Lighting

Tips and Lessons Learned
- Pace of presentation due to language
- Class culture and expected engagement level
- Varying familiarity with learning activities
Teaching Experience & Partnership

- Ewha Womans University’s course for P3 students, “Pharmaceutical Experiment Laboratory VI”
  - Online platform (Zoom) Pre-registration
  - Duration ~75 min
  - n= >100 pre-registered attendees
    - Mostly Ewha students, faculty, external students and faculty, pharmacists from the local pharmacists association in South Korea
67 years old female presents for COVID-19 vaccine clinic.

**Allergies:** eggs, latex, seasonal allergies, pet dander

**Past Medical History:** Hypertension, dyslipidemia, chronic obstructive pulmonary disease (COPD), rheumatoid arthritis, GERD

**Social History:** Retired school bus driver, lives with her husband; Denies drinking/illicit drugs, past smoker (1 PPD x25 years, quit at age 56)

Current medications:
- Lisinopril (Zestril) 20 mg; take 1 tablet by mouth once daily
- Hydrochlorothiazide (Microzide) 25 mg; take 1 tablet by mouth in the morning
- Rosuvastatin (Crestor) 10 mg; take 1 tablet by mouth once daily
- Albuterol HFA (ProAir HFA 90 mcg/actuation); take 2 inhalations every 4 to 6 hours as needed for exacerbation
- Salbutamol (Serevent Diskus) 50 mcg; take 1 inhalation twice daily
- Etanercept (Enbrel) 50 mg; inject 50 mg subcutaneously once weekly
- Methotrexate (Trexall) 20 mg; take 20 mg by mouth once weekly
- Folic acid (Folinate) 1 mg; take 1 tablet by mouth once daily
- Famotidine (Pepcid) 20 mg; take 1 tablet by mouth twice daily

**Pharmacy student counsels worried patient** (4.5 min)
Opportunities as Immunizers

Vaccines are “the single most life-saving innovation ever in the history of medicine.”
-Mark Davis, PhD (Stanford immunologist)

- Aligned perspective among all partners on vaccination potential for public health
- Faculty champion from South Korea, who also completed American Pharmacists Association (APhA) Immunization Certificate program
- Partner certified as train-the-trainer in APhA Immunization Certificate program

Photo credit: https://www.historyofvaccines.org/index.php/content/1920s-immunization
Opportunities as Immunizers

Vaccines are “the single most life-saving innovation ever in the history of medicine” - Mark Davis, PhD (Stanford immunologist)

- Strong history and advances in pharmacists and interns as immunizers in the US
- Partners from states in the US with varying levels of scope of practice
- Recent transition to PharmD education in South Korea (6-year)
- South Korea — current advocacy efforts are through professional organizations

How Vaccines Eradicated Common Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>20th Century Annual Morbidity</th>
<th>Reported Cases in 2019</th>
<th>Percentage Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td>530,217</td>
<td>1,287</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>200,752</td>
<td>15,662</td>
<td>92%</td>
</tr>
<tr>
<td>Mumps</td>
<td>162,344</td>
<td>3,509</td>
<td>98%</td>
</tr>
<tr>
<td>Rubella</td>
<td>47,745</td>
<td>3</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Smallpox</td>
<td>29,005</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>21,053</td>
<td>2</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Polio (paralytic)</td>
<td>16,316</td>
<td>0</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Centers for Disease Control and Prevention

Photo credit: https://www.statista.com/chart/21641/historical-morbidity-and-vaccinations
Challenges in Developing a Global Education Partnership

**Recognize differences**
- School program & curriculum
- Social structure & professional culture
- Geographic/physical accessibility

**Look at what I have**
- Immunization training curriculum
- Pharmacist-vaccination program
- Legislative status
- Evidence of public benefit

**Look at what they need**
- No immunization training curriculum
- No pharmacist-vaccination program
- No legislative status
- No expectation on public benefit
Opportunities as Educators

**to Students**
- Willing to learn new knowledge
- Open to reflection on their roles and actions
- Need insight as future clinician
- Appreciate global pharmacy community

**to Faculty**
- Availability of new digital technology
- Collaboration potential (education and research)
- Satisfaction
## Conducting a SWOT Analysis

### Strengths
- Easy access to pharmacists by the public
- PharmD education
- Availability of pharmacy practitioners, faculty, students
- Innovative and entrepreneurial pharmacists
- Active pharmacy organizations

### Weaknesses
- No current law allowing pharmacists to immunize in South Korea
- No current billing and reimbursement structure
- Lack of data sharing infrastructure
- Workload and implementation concern
- No legislative advocacy training to change the law

### Opportunities
- Need for pandemic response to vaccinate the community
- Preparedness for post-pandemic public health prevention
- Convenience for patients
- Advanced practice change
- Funding and revenue sources
- Pharmacist and student champions

### Threats
- Low acceptance by other professions (scope of practice)
- Public perception (not familiar with the idea)
- Limited interest and interaction by legislators

---

2. https://www.yna.co.kr/view/AKR20100713115300017
3. https://m.blog.naver.com/skyg12/221296137587
Conclusion

Next Steps:

- **Identify** pharmacist & student **champions** as immunizers in SK
- Schedule immunization course for champions in SK
- Consider sports pharmacy as **next topic** for reciprocal educational exchange
- Advocate for **expansion** of pharmacists’ global role through global education partnerships

Acknowledgements: Nisreen Mourad, PharmD, MSc, Anna White, PharmD, P3 Ewha pharmacy students

sandy.rhie@ewha.ac.kr  
see-won.seo@acphs.edu  
htruong@umes.edu