Partnership-Building and Information Sharing between Public Health and Pharmacies

Pharmacists are a largely untapped public health partner. Over the past decade, pharmacy services have expanded to include immunizations, point-of-care testing, medication management, and other primary care services. Pharmacists are also experienced in product dispensing and allocation, which can be an asset in public health emergencies.

As pharmacists are increasingly integrated into the public health system, it is important that pharmacies and health departments share information to their mutual benefit. Because of their expanded roles and broad reach, pharmacies have access to an immense amount of information that can be used in infectious disease surveillance and prevention, and in emergency preparedness and response. As pharmacists are increasingly integrated into the public health system, it is important that pharmacies and health departments share this information to their mutual benefit.

Pharmacy Partners

Community Pharmacies: Chains and Independents

There are over 60,000 community pharmacies in the U.S. As of 2014, they can be split into the following: independent owned (22,478), traditional chain (21,514), supermarket (8,356) and mass merchant (8,382) pharmacies. The size and complexity of each of these pharmacies may vary based on the number of stores owned, franchise procedures, hours of operation, their inclusion in health plan networks and the scope of services offered. This variation means the approach to collaborating with pharmacies will vary by community. In general, partnerships that happen at the state level will have the broadest coverage.

Associations, Boards, and Schools

Pharmacy associations, boards of pharmacy and schools of pharmacy can be important allies in working with the pharmacy community. Boards of pharmacy have contact information for all licensed pharmacists in the state. They can disseminate public health communications to their pharmacy members through their websites and newsletters. Further, many state boards require pharmacies to report to prescription monitoring programs. This may provide another information stream for health departments.

Associations and boards can work with health departments to write guidance for pharmacies (e.g., on mandatory vaccine reporting), develop and present continuing education curricula, and engage medical providers. Their meetings and conferences offer the opportunity to reach many pharmacies in the state. Associations will also have a strong grasp on the legal landscape around pharmacy scope of practice in their state.

Schools of pharmacy can serve as venues to promote community public health services and to engage the next generation of pharmacists in public health. Associations, boards of pharmacy, and schools of pharmacy can also be used to build a pharmacy volunteer base for use in emergencies and community initiatives.

Pharmacy-based Data Collection and Surveillance

Immunization Reporting

Pharmacists perform a growing percentage of vaccinations for both adults and children. All fifty states now allow pharmacists to administer influenza vaccine to adults. Forty-six states allow pharmacists to administer any vaccine to adults, though many of these states require prescriptions or apply other stipulations. A 2013 American Pharmacists Association
A survey asked over 2,000 pharmacists to identify their highest priority for expanding immunization services beyond influenza. Pharmacists ranked “obtaining the support of public health” as the most important priority.6

As pharmacists provide a larger proportion of immunizations, it becomes increasingly important that they also provide accurate and timely data to immunization information systems (IIS).7 In addition to increasing the number of pharmacies that report vaccination data, it is important that pharmacists receive training on reporting best practices, in order to avoid record duplication and poor data quality. By opening a dialogue with local pharmacies about their immunization reporting practices, local health departments can begin to identify and overcome barriers to accurate reporting. For more information, please see Table 1.

**Pharmacy-Based Disease Surveillance and Detection**

**Changes in Pharmacy Inventory**

Pharmacy data can also be used to detect and to prepare for infectious disease outbreaks and emergencies. Pharmacies can serve as surveillance sites, in part because sick people often visit a pharmacy for over-the-counter (OTC) medications before they see a medical provider.8,9,10 Changes in OTC drug inventories can indicate an unfolding disease outbreak, especially in the case of gastrointestinal and respiratory diseases.11 Studies have shown that increases in certain OTC medication sales can precede rises in hospital and emergency room visits.12 Prescription drug sales can also indicate disease activity in a community. Several studies have shown a correlation between antiviral prescription sales and reports of influenza activity.13,14,15 Notably, one study looked at changes in the volume of prescriptions for antiviral medications during the 2009 H1N1 epidemic in Canada. Researchers found that antiviral prescriptions rates increased prior to laboratory-confirmed reports of influenza.16 These and other findings indicate that pharmacy prescription data could alert health departments to an unfolding epidemic in advance of traditional surveillance methods.

**Active Surveillance: Point-of-Care Testing**

While pharmacies can be a source of passive disease surveillance, they can also take an active role in testing for, and reporting, disease. A clear example of this is the rise of pharmacy-based point-of-care (POC) testing (or, rapid diagnostic testing [RDT]) for chronic and infectious diseases.

Any facility in the US that performs testing on people is regulated by the Clinical Laboratory Improvement Amendments (CLIA). But with the advancement of POC testing, the Food and Drug Administration has allowed for some CLIA-waved tests.17 These are tests that are simple to administer and have a low risk of test error. Under federal law, pharmacists are allowed to perform POC testing using CLIA-waved tests, although state scope of practice laws affect how and if pharmacies can administer these tests.18 Point-of-care testing is an expanding area of practice and could result in increased diagnosis and linkage to care for people living with undiagnosed illnesses like diabetes and hepatitis C.19 Pharmacy-based POC testing can also improve chronic disease management (e.g., through lipids testing).

It is important that health departments know if pharmacies are performing POC tests in their jurisdiction, both to ensure pharmacies are reporting their results to the health department and to ensure that newly diagnosed patients are linked to services. More education and training is needed around this issue.20 Health departments could provide training on results-reporting to pharmacists interested in providing this service.
# TABLE 1. PHARMACY REPORTING TO IMMUNIZATION INFORMATION SYSTEM (IIS): CHALLENGES AND RECOMMENDATIONS

<table>
<thead>
<tr>
<th>CHALLENGES</th>
<th>RECOMMENDATIONS</th>
<th>WHO TAKES CHARGE?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The health department does not know the number of vaccinating pharmacies in the community.</strong></td>
<td>Boards of pharmacy have member information on all of the licensed pharmacists in your state. State pharmacy associations also have contact information for pharmacies in your state.</td>
<td>LHD: X Pharmacy: X Other: X</td>
</tr>
<tr>
<td><strong>The health department is having trouble reaching pharmacies.</strong></td>
<td>Fax is an effective way to reach pharmacies. Pharmacies are often faxed prescriptions, so they frequently check their machines. Many pharmacies, especially chain pharmacies, have clinical services and/or patient care coordinators. These are good points-of-contact for discussing a potential partnership.</td>
<td>LHD: X Pharmacy: Other: X</td>
</tr>
<tr>
<td><strong>Pharmacies seem unavailable or unwilling to be trained on using the IIS.</strong></td>
<td>Offer continuing education (CE) credits to pharmacists for IIS training. Pharmacists need CE credits to stay licensed. Further, if pharmacists find the IIS useful to their work, they are incentivized to report. It is important that pharmacists can pull information from the IIS, not just report into it.</td>
<td>LHD: Pharmacy: X Other: X</td>
</tr>
<tr>
<td><strong>IIS and pharmacy systems are not connected to exchange data electronically.</strong></td>
<td>States must work with pharmacies to assess system compatibility for automated data exchange. Large chain pharmacies should be able to feed data directly into the IIS. Independent pharmacies may need to work out alternate reporting methods with the state. Pharmacies should ask their IT systems managers to allow limited, secure access to the IIS.</td>
<td>LHD: Pharmacy: X Other: X</td>
</tr>
<tr>
<td><strong>Records submitted by pharmacies seem incomplete or inconsistent.</strong></td>
<td>Pharmacies may complete patient data differently from other providers. Pharmacies may be unaware of state guidelines on IIS reporting. This can lead to errors in the IIS, e.g. a pharmacist writes “See ID” in an address field and “See ID” shows up in the IIS record. Guidelines on IIS reporting do exist. Health departments should work with pharmacies to train front-end pharmacists and technicians on acceptable data entry, as outlined in state guidelines. As part of this training, ensure pharmacists understand the importance of standard data entry to avoid record duplication.</td>
<td>LHD: Pharmacy: X Other: X</td>
</tr>
<tr>
<td><strong>The IIS system closes accounts that have not been accessed in a certain period of time.</strong></td>
<td>Many pharmacies only vaccinate during influenza season. Penalizing pharmacies for infrequent log-ins could discourage reporting. Consider referencing the existing rules for other seasonal users, like school nurses. Another idea is to deactivate – rather than delete – accounts after a short period (e.g. 6 months), and then prompt the pharmacist to create a new password. Be sure to work with your IT department to address this issue.</td>
<td>LHD: X Pharmacy: Other: X</td>
</tr>
<tr>
<td><strong>The health department knows that pharmacies are vaccinating but not reporting.</strong></td>
<td>Aside from directly contacting the pharmacies, reach out to the board of pharmacy and the state pharmacy association. They can send reminders to their members. Also ensure that your pharmacy partners are aware of any state reporting requirements.</td>
<td>LHD: Pharmacy: X Other: X</td>
</tr>
<tr>
<td><strong>The health department is partnering with local pharmacies to provide free vaccines.</strong></td>
<td>Some health departments that provide free vaccine to pharmacies require them to report all administered vaccines to the IIS.</td>
<td>LHD: X Pharmacy: X Other: X</td>
</tr>
<tr>
<td><strong>Pharmacies should not be the only entities required to report to IIS. Physicians can also be overlooked regarding immunizations tracking.</strong></td>
<td>Begin with Accountable Care Organization (ACO) providers with targeted education on the IIS system. Require these providers to report. Then expand outreach and education to other providers.</td>
<td>LHD: X Pharmacy: Other: X</td>
</tr>
</tbody>
</table>
Information Sharing in Emergencies

Pharmacies can enhance situational awareness in an emergency by reporting on the availability of antibiotics, antivirals and other pharmaceutical countermeasures. This information can be used to direct resources and make planning decisions. During a declared emergency, pharmacy inventory information could inform the distribution of Strategic National Stockpile. Pharmacists can also serve as a communication conduit between the health department and the community for information about the response and recovery, including accessing emergency services.

Preparedness planning with pharmacies can help state and local health departments comply with the Centers for Disease Control and Prevention (CDC) Public Health Preparedness Capabilities. For example, jurisdictions can significantly increase the number of points-of-dispensing locations in their community by integrating pharmacies into their POD network (see Capability #8: Medical Countermeasure Dispensing). With proper advanced planning, retail pharmacy chains may also offer upstream supply chain support through their distributor networks (see Capability #9: Medical Materiel Management and Distribution). Pharmacies can help jurisdictions comply with the following capabilities:

- 1. Community Preparedness
- 2. Community Recovery
- 4. Emergency Public Information and Warning
- 6. Information Sharing
- 8. Medical Countermeasure Dispensing
- 9. Medical Materiel Management and Dispensing
- 10. Medical Surge
- 13. Public Health Surveillance and Epidemiological Investigations
- 15. Volunteer Management

To be effective, partnerships must be built in advance of an emergency. One way to formalize pharmacy partnerships in advance is to develop and implement collaborative practice agreements (CPAs), also known as collaborative drug therapy agreements. A CPA is a formal partnership between a pharmacist and a physician. A CPA defines the services that a pharmacist can do under pre-specified conditions and under physician oversight. The CPA establishes how oversight is performed and the conditions of the agreement. In some states, the physician that signs the CPA can be the health department medical director.

State and local governments can also enter into a Memorandum of Understanding (MOU) with a pharmacy. MOUs represent a mutually voluntary arrangement and are different from a contractual agreement. For instance, a health department and pharmacy may sign an MOU that says the pharmacy will dispense pandemic vaccine in an emergency. The Association of State and Territorial Health Officials, in collaboration with the Centers for Disease Control and Prevention, has created a draft MOU for partnerships between states and chain pharmacies. Chain pharmacies are more likely to enter into a statewide MOU, rather than multiple MOUs with local government.

During an emergency, state governors may also make executive orders that waive existing scope of practice limitations on pharmacies, for example, allowing them to prescribe certain medications during a declared emergency.

Partnerships should also benefit pharmacies. One benefit health departments can offer is input on continuity of operations plans, which can be critical in an emergency, as many businesses do not re-open following a disaster. Helping pharmacies to stay open during the emergency, or to re-open shortly thereafter, will aid in the response and help the community access much-needed prescriptions and OTC medications.

Conclusion

By working with pharmacies, health departments can expand their reach, their situational awareness, and their countermeasures dispensing networks. In turn, pharmacies can expand their services and increase recognition of their role as vital healthcare providers. Pharmacies vary in how they operate and no two health departments are alike. This difference can be a strength, allowing health departments and pharmacies to tailor their partnerships to the unique needs of their community.
Notes


5. Ibid.


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FOR MORE INFORMATION

Erin Roberts, MPH
Senior Program Analyst, Pandemic Preparedness and Catastrophic Response
eroberts@naccho.org
202-507-4280

The mission of the National Association of County and City Health Officials (NACCHO) is to be a leader, partner, catalyst, and voice for local health departments.

1100 17th St, NW, 7th Floor Washington, DC 20036

P 202-783-5550 F 202-783-1583

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