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Issue Brief

PHARMACY AND EMERGENCY PREPAREDNESS: A LANDSCAPE ANALYSIS



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EXECUTIVE SUMMARY

Research for this issue brief was conducted with two objectives in mind: (1) summarize both persistent and emerging challenges to protecting access to medications and medical supplies during natural disasters and disease outbreaks and (2) highlight partnerships and resources in the field that could be used to proactively address challenges.

A number of common themes emerged from the series of interviews conducted with a wide range of pharmacy stakeholders. Themes included:

- **Improved Communications, Though Challenges Persist:** Consensus among interviewees was that communication mechanisms are improving situational awareness, but opportunities to streamline information sharing and to better leverage technology exist. For example, retail pharmacists cited a lack of specific protections in regulations governing text-based communications for pharmacies health-related messaging during disasters as a hurdle to wider adoption of text messaging programs. Community pharmacy associations noted that independent pharmacists often play several roles during an emergency and may not have readily

available guidance or information on whom to contact at local emergency management agencies.

- **Challenges Stem from Varying State Regulations:** Varying regulations at the state level governing mechanisms for expanding pharmacists' scope of practice, emergency refill rules, and other pharmacy practices that can be engaged during an emergency present a challenge to organizations operating across states or at the national scale. Interviewees recognized changing rules would be a massive effort but expressed a desire for training and materials on the status of regulations in states and the implications of differences.
- **Balancing Flexibility and Predetermined Actions in Response Plans:** Payers, pharmacy owners and operators, and other private sector stakeholders emphasized the need to maintain flexibility in emergency response plans and protocols. These stakeholders explained that formalizing timelines and requirements in cross-sector plans could in fact hinder response efforts, as it can be difficult to predict some response needs. Stakeholders suggested increased cross-sector exercising and gaming of different events to help address this.

INTRODUCTION

The role of pharmacy and pharmacists in preparing for and responding to events that impact public health has evolved markedly in the decade since Hurricane Katrina. From increasingly recognizing pharmacists as essential first responders to developing myriad novel programs and initiatives, pharmacy and health preparedness stakeholders have made impressive strides in protecting patients' access to medications in a complex health system that is situated in an evolving threat environment.

The evolution of pharmacy engagement in preparedness and response has involved many organizations and seen fluctuations in funding and related resource support over the years. As concerns about sustainable funding for public health persist, while the threat of disease outbreaks and other public health emergencies continue to increase, it is important to take stock of resources created by and available to pharmacy and public health and highlight and amplify advances in the field.

The aim of this issue brief, then, is three-fold:

1. Discuss new and revisit persistent challenges pharmacy stakeholders face during emergencies;
2. Present a high-level landscape of partnerships and resources that have been established to protect access to medications and medical supplies during emergencies, and;
3. Highlight advances and practices in the field that increase healthcare resilience.

Significant progress has been made in the field, but as is always the case in preparedness, opportunities for improvement and enhancement remain. The collaborative and complementary efforts of pharmacy stakeholders and public health organizations have helped educate patients that pharmacies are "more than just a place to pick up medicines" – that they are an invaluable resource

THE ROLE OF PHARMACY AND PHARMACISTS IN PREPARING FOR AND RESPONDING TO EVENTS THAT IMPACT PUBLIC HEALTH HAS EVOLVED MARKEDLY IN THE DECADE SINCE HURRICANE KATRINA.

for public health information, healthcare services, and more, year-round and during an emergency. As one of the most trusted and accessible healthcare professionals, pharmacists play a vital role during natural disasters and disease outbreaks.^{1,2}

These same efforts have also contributed to equipping pharmacists and public health preparedness organizations with greater authority to proactively address anticipated medication needs before an emergency and respond nimbly during a disaster.

In a resource-constrained environment, it is important to review challenges in the context of progress made. Challenges are detailed alongside innovative partnerships and novel programs in an effort to stimulate conversation on how they might be scaled up, shared, or repurposed in response to another challenge.

Research Methods: Research for this issue brief included over a dozen interviews with public and private sector stakeholders along with a review and analysis of relevant literature and reports from working groups, including the Prescription Medication Preparedness Initiative. A list of organizations interviewed can be found on page 17.



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EXPANDED ROLE OF THE PHARMACIST: HOW THE ABILITIES AND AUTHORITIES OF PHARMACISTS ARE EXPANDING

Numerous factors have contributed to the expanding role of pharmacy and pharmacists. Advances in technology that have enabled better information sharing between pharmacists and providers, advances in technology that have allowed patients to engage more proactively in their care, recognition that engaging pharmacists more actively in patient care can reduce costs and improve outcomes, a paradigm shift to focusing on preventive efforts – the list could go on. Importantly, increased pharmacy involvement in patient care has been proven to improve both public health and patient health outcomes, lower healthcare costs and reduce fragmentation in care.³

As our healthcare system continues to transform how healthcare is delivered to improve outcomes, reduce costs, create efficiencies, and protect patients, pharmacists are increasingly being recognized by policymakers as a means to achieve this.⁴ This recognition is demonstrated in key laws and regulations that have helped expand the authority and scope of practice of pharmacists at the state level.

While many of these laws and regulations were designed to more fully integrate pharmacists into the patient care team and healthcare

delivery system for the purposes of routine care, they stand to contribute to building the health resilience of communities and could play an instrumental role in preventing or mitigating against the consequences of a public health emergency.

Expanding the scope of practice and services of pharmacists often facilitates more expedient access to life-saving drugs and care, factors that are essential during public health emergencies and even natural disasters. Several key methods of expanding pharmacists' scope of practice are highlighted here.

■ Collaborative Practice Agreements (CPAs):

A collaborative practice agreement creates a formal relationship between a pharmacist and prescriber that allows the pharmacist to provide services and perform functions related to patient care beyond the pharmacist's typical scope of practice.⁵ Services and functions most frequently delegated to a pharmacist in the CPA include initiating, modifying, or discontinuing medication therapy.⁶ This can include authorizing refills, which can assist in mitigating potential disruptions or challenges to adherence brought on by emergencies.

■ Statewide Protocols: Statewide protocols are issued by an authorized state regulatory body and specify the conditions under which a pharmacist is authorized to prescribe specific medications. [The National Alliance for State Pharmacy Associations \(NASPA\)](#) emphasizes

that statewide protocols are usually issued for preventive care in response to a public health concern and for conditions that are already diagnosed, or for which a diagnosis is easily made.⁷ Statewide protocols therefore better equip pharmacists to be key players in responding to or mitigating against a public health threat or responding during an emergency.

The most common statewide protocol (in place in 17 states) permits pharmacists to administer influenza vaccines in community pharmacies.⁸ Other common protocols include ones for hormonal contraceptives and smoking cessation. Increasingly, state regulatory bodies are using statewide protocols to allow pharmacists to administer naloxone.

■ Standing Orders: Standing orders refer to medical treatment orders developed by an authorized prescriber that may be carried out by another healthcare professional – such as a pharmacist – when certain conditions have been met.⁹ Standing orders are therefore incredibly effective in positioning pharmacists to provide time-sensitive treatments, particularly for drug overdoses. For example, currently forty (40) states authorize pharmacists to dispense naloxone under standing orders.¹⁰

As pharmacists' scope of practice is determined and governed by state regulatory bodies, the abilities of pharmacists vary by state. This is an important consideration from a preparedness and response standpoint, as events often have multi-state impacts and up-to-date awareness of state regulations is a persistent challenge. Further, events with multi-state impacts often require organizations with operations spanning multiple states to reconcile regulations, or adjust their response efforts accordingly in different states. As these, and other means of expanding pharmacists' scope of practice are increasingly being recognized as an important tool by policymakers to address

Insurance Considerations

Statewide protocols and other methods of expanding scope of practice are only impactful if the medications patients receive through them are covered by insurance. It is essential that policymakers and insurers develop guidance and plans on these methods in concert.

public health concerns and emergencies, pharmacy stakeholders are actively developing resources to assist in their adoption.¹¹ A working group convened by NASPA and the National Association of Boards of Pharmacy (NABP) released a series of recommendations in its [Pharmacist Statewide Protocols: Key Elements for Legislative and Regulatory Authority](#). The Centers for Disease Control and Prevention (CDC) has also developed guidance for establishing CPAs, [Advancing Team-Based Care Through Collaborative Practice Agreements](#), as well as material on the benefits CPAs afford the healthcare system and patients, [Collaborative Practice Agreements and Pharmacists' Patient Care Services](#).

The Centers for Medicare and Medicaid's (CMS) Center for Medicaid and CHIP Services (CMCS) extolled the benefits of expanding pharmacists' scope of practice, stating that CMCS "encourages states to consider using these methods to promote access particularly to those drugs that can help address priority public health issues."

EMERGING AND PERSISTENT CHALLENGES

Expanded scopes of practice, advances in technology, and novel partnerships and initiatives have provided many solutions to challenges

CPA vs. Statewide Protocol

CPAs are individually developed between a prescriber and pharmacists, whereas statewide protocols are issued by a state regulatory body. Statewide protocols also have broader applicability, as it allows all pharmacists who meet the specifications of the protocol to practice it, which is an important consideration for public health events.



Photo credit: FEMA photo news/Jocelyn Augustino

patients and responders have faced in accessing medicine and care during a natural disaster or public health emergency. At the same time, factors including constrained resources, a complex and growing patient population, and evolving threats to healthcare, among others, have allowed for both new challenges to emerge and familiar ones to persist. For the purposes of this brief, these challenges are categorized into two fields: 1) legal and regulatory and 2) response operations.

Legal and Regulatory Challenges

Due to the fact that pharmacy practice is governed at the state level, several challenges in dispensing and accessing medicines and medical supplies during emergencies stem from the fact that laws and regulations vary by state, as is evident in some of the challenges listed here. It can be burdensome to the public and private sector operators alike to track pharmacy governance in each state, especially given that regulations may be relaxed or lifted during an emergency. Challenges exist outside of variances in state regulations, particularly as they relate to issues of coverage and reimbursement.

- Varying Emergency Prescription Refill Laws:** Recent studies have demonstrated that the laws and regulations governing emergency prescription refills vary markedly across states.¹² Data indicate that as many as twenty-one (21) states do not have a law governing the provision of an emergency refill in the event of a public health emergency and that among the states that do have a law governing refills in such declared emergencies, emergency refill quantities vary significantly. A majority of those states, at fifteen (15), allow for a 72-hour emergency supply, with just six (6) allowing for a 30-day supply. Public health emergencies and even certain non-public health emergencies last beyond 72-hours and can frequently have multi-state impacts. Ford et. al found that only ten (10) states have implemented model language developed by the NABP on public health emergency dispensing, which suggests that a “Pharmacist may Dispense a Refill of a Prescription Drug, not to exceed a thirty (30) day supply, without Practitioner Authorization,” provided certain conditions were met.¹³

Ohio Law Change

In 2016 Ohio unanimously passed legislation allowing pharmacists to dispense up to a 30-day supply of life-sustaining drugs in an emergency, even if the prescription is expired. The impetus for the change came after a diabetic passed away after not being able to refill an expired insulin prescription.

Source: [New laws and rules impacting consult agreements and emergency dispensing now in effect](#) (Ohio Pharmacists Association)

Approximately 70% of Americans take at least one prescription, with 22% taking three or more. With the burden of chronic disease increasing, and the number of patients on multiple medications growing commensurately with it, it is important that states have language addressing refills during a public health emergency in their regulations that is known between states and within pharmacy groups within the state.

It is important to note that a majority of states do allow a limited (e.g. 72-hour) emergency prescription refill for non-public health emergencies, i.e. “emergencies” in which a patient has lost or misplaced medication and a prescriber cannot be reached on a weekend. However, interviews with pharmacy stakeholders suggest that the distinctions between these emergency protocols, i.e. for a declared public health emergency vs. an everyday “emergency,” are not always well socialized or known within the field, or by patients.

It is additionally important to note that language addressing emergency refills for maintenance medications is often included in disaster declarations. This mechanism is addressed more in depth in subsequent sections, but direction in disaster declaration can authorize pharmacists to override refill-

too-soon restrictions and dispense up to a 30-day supply of medication in areas with a disaster declaration. However, as stakeholders pointed out, these declarations often do not address means of obtaining controlled substances.

Inconsistent emergency refill regulations can add to confusion during a crisis and even put additional strain on patients trying to acquire needed medication and pharmacists trying to provide for them.

- Insurance Coverage:** Impressive progress has been made in ensuring patients do not incur unforeseen costs in obtaining medicines before or during an emergency. A systemic review of emergency preparedness of health insurance plans affirmed health insurance plans do prioritize preparedness, with 95% of plans indicating an emergency declaration would trigger an internal review of benefits to identify and implement short-term changes (policy liberation) and 85% reporting they had a preparedness team.¹⁴ Additionally, the override mechanism the National Council on Prescription Drug Programs (NCPDP) developed with stakeholders allows pharmacists to signal to payers when a refill is needed based on a declared emergency, thereby preventing “refill-too-soon” restrictions from preventing patients obtaining medicines before an event with notice. The federally funded Emergency Prescription Assistance Program (EPAP) is a vital safeguard for

Vacation Waivers

Pharmacy stakeholders shared examples of patients using vacation waivers to receive an early refill of medications. In some cases, patients had used the vacation waiver to stockpile medicines that had a longer shelf life.

Zika Outbreak and Insurance Questions

The Zika outbreak that began in 2016 highlighted challenges in determining the public-private cost sharing of a disease outbreak. Little was known about the virus before it began impacting communities and it presented with symptoms not common to previous outbreaks.

Additionally, it directly affected only certain demographics. These and other factors led to public health and preparedness agencies being eager to learn of payers' plans for coverage while payers often had little knowledge of what government prevention and response efforts would look like.

ensuring patients without insurance or are under insured do not go without needed medical supplies due to an emergency.

However, new or proposed preparedness initiatives must align with health insurance plans and vice versa if they are to be successful. For example, a pilot program testing the efficacy of mobile text messages prompting patients to refill prescriptions before a severe weather event proved successful.¹⁵ For initiatives that encourage or allow for early refills or preemptive replenishing of other medical supplies to have the desired effect, though, it is imperative that insurance plans and pharmacy benefit

managers (PBMs) are engaged in development efforts from the beginning and approve of such programs.¹⁶

A more persistent challenge related to coverage – one that is similarly evolving in complexity as threats to health increase and technology advances – concerns plans for emerging infectious diseases and other public health emergencies. Determining the public-private sector division of cost sharing in a public health emergency is notoriously challenging, especially given that the symptoms and scale of impact on health systems of emerging infectious diseases is often difficult to predict or unknown. This was seen recently with the outbreak of the Zika virus, during which government preparedness agencies and the public alike were eager to learn what private insurers would cover while private insurers had little knowledge of what government prevention efforts or funding for the response looked like.

Challenges During Response Operations

New technologies, as well as creative uses of existing systems, and periodic influxes of resources and attention to the issue of protecting access to medicines during an emergency have contributed

A MORE PERSISTENT CHALLENGE... CONCERNS PLANS FOR EMERGING INFECTIOUS DISEASES AND OTHER PUBLIC HEALTH EMERGENCIES.

significantly to enhancing the preparedness posture of pharmacies and pharmacy stakeholders in the last decade. However, challenges in responding to both natural disasters and public health emergencies remain. Persistent challenges, such as communication, endure while new threats and an evolving healthcare system present new challenges. At the same time, providers and pharmacists may face different challenges than payers, who face different challenges than public health departments, though all are working towards the same goal.

While the challenges these groups face during a natural disaster or a disease outbreak are not exclusive to that event, key unique considerations exist for each. For the purposes of this brief, the key challenges stakeholders face in each type of event are broken out by event.

Challenges During a Natural Disaster

- **Awareness of Changes in Practice Regulations:** Disaster declarations and executive orders issued by state and local officials in response to an emergency often include language suspending, relaxing, or otherwise temporarily changing regulations governing pharmacy practice. (E.g. allowing for extended emergency refills.) These declarations may come from governors and mayors, but also from state boards of pharmacy. Timely notification and awareness of these changes is important during a response.

Pharmacy stakeholders interviewed for this brief cited tracking and maintaining awareness of these changes as either a burden they had experienced in a past response or a potential burden for future large-scale events, particularly for an event with multi-state impacts. Stakeholders expressed that a central hub, such as a pre-identified website, that would track and compile declarations with language impacting pharmacy practice and rule changes could lower the barrier

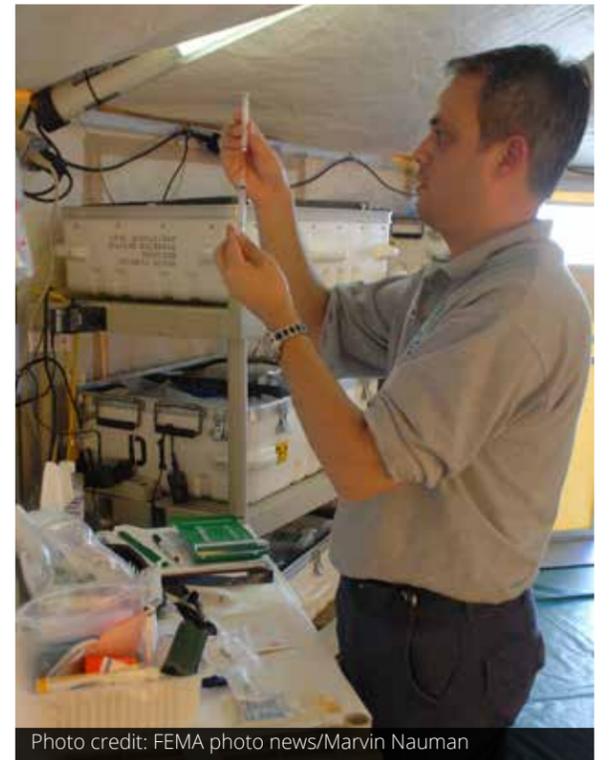


Photo credit: FEMA photo news/Marvin Nauman

for maintaining awareness for retail and community pharmacies alike.

- **Identifying Cross-Sector and Other External Contacts:** A variety of pharmacy stakeholders interviewed cited knowing whom, outside of their organization or customary partners, to contact for assistance or to share information with during a disaster as a persistent challenge. This is a common and unsurprising challenge in emergency management for a variety of reasons including staff turnover, the varying nature of different events, and, often, limited resources to dedicate to outreach before an event. Many interviewees added that this challenge extends into preparedness efforts as well, with private sector representatives citing awareness of the efforts of preparedness organizations as a gap in knowledge. Routine updating and circulation of key organizations and appropriate POCs or emergency contact information were put forth as a possible action to take towards fostering public-private relationships to address this recurring challenge.

WIDE ADOPTION OF E-PRESCRIBING COUPLED WITH DATABASES LIKE SURESCRIPTS' NATIONAL RECORD LOCATOR SERVICE HAS BETTER EQUIPPED PHARMACISTS AND PROVIDERS TO QUICKLY MEET PATIENT NEEDS.

- **Patient Education of Available Resources and Preparedness Actions:** Public health preparedness SMEs and disaster response organizations interviewed for this effort indicated that patient education of available resources and proper procedures for replacing medications during or after a disaster remains a challenge.¹⁷ Interviewees explained that patients often call non-profit relief agencies for assistance in replacing medications before hotlines established by insurance companies. Interviewees added that patient education on preparedness actions to take before a disaster, such as taking advantage of disaster declarations that allow for up to 30-day refill of maintenance medications, taking pictures of insurance cards and medication labels, and taking empty prescription bottles with them if they evacuate, could be emphasized more in patient education initiatives.
- **Information Sharing and Communicating with Patients:** Pilot pharmacy-based text messaging programs designed to remind patients to refill prescriptions before a disaster have proven to be successful.¹⁸ However, limited adoption of similar programs by national retailers hints at the challenges associated with implementing such programs. Provisions in the Telephone Consumer Protection Act (TCPA) contain stringent

requirements for lawfully conducting text-based outreach to consumers to include documentation that consumers opt-in to such messages. Retailers are further challenged in conducting text-based outreach in regards to the content of the message being sent. Chain pharmacy representatives explained that the language of messages must be carefully curated to clearly and inarguably be focused on preparedness actions and not appear to be encouraging patients to purchase any items.

Major chain pharmacies interviewed for this brief indicated several mechanisms that could foster wider adoption of text messaging programs during an emergency. Chief among these is clear language in legislation and/or emergency plans protecting entities conducting well-intentioned messaging during an emergency. Several chain pharmacies added that they are exploring additional functionalities of text messaging programs and mobile apps.

- **Identifying and Refilling Lost or Damaged medication:** The expansion and increasing sophistication of technologies and databases for storing electronic health records (EHRs) and medication histories have contributed significantly in improving the ability of providers and responders to identify and refill lost or damaged prescriptions. Wide adoption

Identifying Refills in Shelters

Although patients are encouraged to record their medication information and take pictures of labels, patients in shelters are often not prepared with this information. In past responses, pharmacists have been requested at shelters to help identify medication based on appearance and other available information.

of e-prescribing coupled with databases like Surescripts' National Record Locator Service has better equipped pharmacists and providers to quickly meet patient needs.

However, expanded technologies are not a fail-safe, universal solution. Several interviewees cited a revival of the In Case of Emergency Rx database (ICERx.org) as a useful tool for providers. Others considered how mobile technologies, such as cell phones and other personal devices might be leveraged for storing prescription information in Health Insurance Portability and Accountability Act (HIPAA) compliant fashion. Many cited state emergency refill laws as both assisting and compounding this challenge, noting that it is helpful that states appear to be moving in the direction of wider adoption of extended emergency refills. However, they also noted that these laws often require an emergency declaration in order for the law to be in effect, a requirement that can cause delays for patients that are adversely impacted in areas without a declaration, or if the declaration is issued late. That is to say, interviewees cited the requirement that emergency refills and other forms of assistance or relaxed rules be triggered by an emergency declaration as a persistent challenge.¹⁹

Challenges During a Disease Outbreak

- **Capitalizing on the Potential of Pharmacies and Pharmacists:** A wealth of literature and many initiatives dedicated to highlighting the important capabilities and role of pharmacies and pharmacists during an outbreak followed the H1N1 pandemic of 2009. This movement made significant strides in fostering partnerships between pharmacies in public health departments. This can be seen in the National Association of County and City Health Officials (NACCHO) report *Building and Sustaining Strong Partnerships between Pharmacies and Health Departments at State and Local Levels and the Association of State and Territorial Health Officials (ASTHO) and the CDC*, with support from the National Association of Chain Drug Stores, piloting of a state-level memorandum of understanding formalizing responsibilities between state public health programs and pharmacies in pandemic vaccine planning and response.²⁰
- However, experts in the field observed that limits on scope-of-practice could prevent pharmacists from contributing to the response to a disease outbreak to the greatest extent possible. For example, restrictive (or non-existent) collaborative practice agreements could prevent pharmacists from participating

HOWEVER, EXPERTS IN THE FIELD OBSERVED THAT LIMITS ON SCOPE-OF-PRACTICE COULD PREVENT PHARMACISTS FROM CONTRIBUTING TO THE RESPONSE TO A DISEASE OUTBREAK TO THE GREATEST EXTENT POSSIBLE.

PHARMACY AND PUBLIC HEALTH PREPAREDNESS EXPERTS ALIKE ENCOURAGE EXPANDED ADOPTION OF SIMILAR PROGRAMS AND EFFORTS TO INTEGRATE PHARMACIES INTO PLANNING EFFORTS.

in drug therapy for affected patients, or possibly ordering lab tests. Similarly, while pharmacists are authorized to provide the influenza vaccine in all states and Puerto Rico, the practice model under which they operate in doing so varies. As of July 2017, seventeen (17) states permit pharmacists to prescribe and administer select vaccines, including flu shots, independently. In the remaining thirty-three (33), D.C. and Puerto Rico, pharmacists are permitted to administer vaccinations through CPAs, standing orders, prescriptions from authorized prescribers, other protocols, or a combination of these methods. The most restrictive of these models is in place in five (5) states (Florida, Kansas, Minnesota, Nevada, and Wisconsin) and limits pharmacists to immunize through a prescriber-issued protocol. This requirement could limit the ability of pharmacists to provide vaccinations if they are not able to form an agreement with a local physician.²¹ States further vary in the vaccination capabilities of pharmacists in regard to which vaccines they may administer and the age of patients that can be immunized. These extensive differences across states present challenges to better integrating and leveraging the expertise of pharmacists for public health efforts, including disease outbreaks and public health emergencies, potentially.

Several interviewees cited expanded prescribing authority of pharmacists as another mechanism that could be beneficial during a disease outbreak or other public health emergency. Notably, many states are allowing expanded prescriptive authority in some form, e.g. protocols allowing for prescribing of hormonal contraceptives and smoking cessation. However, the specifics of how expanded prescribing authority could be applied during a disease outbreak have not yet been studied.

- **Public-Private Sector Coordination for Dispensing:** A commonly expressed sentiment by both experts and the literature alike suggests that, similar to establishing partnerships between public health departments and pharmacies, while strides in collaboration between private sector supply chain operators and public sector responders have been made, room for improvement remains. For example, Recommendation 22 from the Blue Ribbon Study Panel on Biodefense's A National Blueprint for Biodefense directs Federal leadership (e.g. the ASPR, Director of the CDC, and FEMA Administrator) to work with non-Federal partners to "Develop and implement a Medical Countermeasure Response Framework."²² Specifically, the recommendation calls for a concerted effort to engage private sector and non-governmental partners in planning efforts to determine how regional distribution and local dispensing operations can best be coordinated in light of all partner assets.

Similarly, state and local public health emergency response officials, have encouraged partnering with the private sector, including pharmacies, for optimizing the distribution and dispensing of medical countermeasures (MCMs). Model programs in Michigan, Pennsylvania, California, Illinois, and Washington, for example, have developed dispensing plans that leverage pharmacies'



Photo credit: FEMA photo news/Jocelyn Augustino

widespread locations, familiarity to the public, and demonstrated inventory management, distribution, and dispensing expertise.^{23,24} Pharmacy and public health preparedness experts alike encourage expanded adoption of similar programs and efforts to integrate pharmacies into planning efforts.

RESPONSE PROGRAMS AND RESOURCES

Pharmacy partners have collaborated and innovated to produce a number of highly effective and beneficial resources publicly available for emergency preparedness and response. Key programs and resources are summarized here.

[National Council on Prescription Drug Programs \(NCPDP\) Emergency Preparedness Protocol:](#) The NCPDP Emergency Preparedness Protocol provides guidance to the pharmacy industry on resources available during a declared emergency. It was created and is updated by NCPDP's Emergency Preparedness Committee. The protocol provides guidance for pharmacies, payers, prescribers, pharmacy switches/clearinghouses on billing procedures, status reporting, and related topics such as e-prescribing renewal requests. The protocol additionally provides resources such as template payer sheets and information on prescription assistance programs.²⁵

The Emergency Preparedness Committee updates and shares the protocol for partner feedback input and review annually. A list of partners and reviewers is listed in the protocol.

[Emergency Prescription Assistance Program \(EPAP\):](#) EPAP is a federally funded prescription assistance program available during declared natural disasters or public health emergencies. It is activated through the authority of the Stafford Act or the Public Health Service Act and provides a 30-day supply of covered drugs and certain durable medical equipment (DME) to eligible individuals in a declared disaster area. Eligible individuals are those who are uninsured and impacted by a disaster of national significance.²⁶ EPAP is designed to mitigate against conditions

EPAP IS A FEDERALLY FUNDED PRESCRIPTION ASSISTANCE PROGRAM AVAILABLE DURING DECLARED NATURAL DISASTERS OR PUBLIC HEALTH EMERGENCIES.

IN THE EVENT OF AN EMERGENCY, THE SUPPORT CENTER PROVIDES PHARMACIES WITH SERVICES TO SUPPORT BUSINESS CONTINUITY, SUCH AS LIAISING WITH STATE BOARDS OF PHARMACY AND OTHER EXTERNAL PARTNERS AND PROVIDING GUIDANCE ON RECOVERY PROCEDURES.

that were manageable before a disaster, becoming unmanageable due to a disaster and ensure continuity care.

Impacted patients must seek eligible medicines and DME through a pharmacy enrolled in EPAP. A list of enrolled pharmacies is available on the EPAP website: www.phe.gov/EPAP

Rx Open: Rx Open (www.rxopen.org) helps patients and responders find nearby open pharmacies during an emergency by displaying the location and contact information of open pharmacies in impacted areas. Rx Open displays the precise location of not just open pharmacies but also closed pharmacies and pharmacies whose status is unknown on a publicly accessible Google Map. Contact information for all pharmacies is available through the map as well. In developing Rx Open, Healthcare Ready partnered with the National Council for Prescription Drug Programs (NCPDP) and the pharmacy switches/clearinghouses responsible for processing pharmacy payments to use billing as a surrogate for operational status. During a disaster, Healthcare Ready will activate the map and data from NCPDP's list of all pharmacies in the U.S. is merged with data from pharmacy switches indicating whether pharmacies are billing or not to create a searchable map displaying pharmacy operating status.

Rx Open is provided for free to the public during times of disaster. It can be used in a variety of

capacities, including by individual patients, by shelter workers to identify pharmacies available to fill the needs of patients in shelters, and by first responders to gauge the impact of an event on public health services.

The Pharmacy Disaster Support Center:

Supported by the National Community Pharmacists Association Foundation and Pharmacists Mutual Insurance Company, the Pharmacy Disaster Support Center helps independent pharmacies strengthen their disaster preparedness, response, and recovery procedures.²⁷ The Pharmacy Disaster Support Center accomplishes this by collecting non-financial, operations-related data during an enrollment process. In the event of an emergency, the Support Center provides pharmacies with services to support business continuity, such as liaising with state boards of pharmacy and other external partners and providing guidance on recovery procedures. The Support Center also provides preparedness materials such as checklists.²⁸ (www.rxdisaster.com)

Flu on Call: In the event of a severe pandemic, the Centers for Disease Control and Prevention has developed a national network of phone lines, Flu on Call®, that can be used to provide healthcare information and triage callers. This network of call centers engages United Way 2-1-1 help lines, poison control centers, and nurse advice lines. Callers will be assessed by healthcare providers

via phone and given health information and directed to appropriate care sites if needed, such as a pharmacy, hospital, clinic, based on the assessment of the healthcare provider.²⁹

HealthMap Vaccine Finder: Created in response to the 2009 H1N1 influenza pandemic, HealthMap Vaccine Finder is a free, online service that allows users to search for locations that offer immunizations, including pharmacies, clinics, and health departments. (www.vaccinefinder.org) Over 30,000 providers are enrolled in the system. Users can search for flu, tdap, meningococcal vaccines and more.

HealthMap's Vaccine Finder is currently being built out to include Flu Med Finder. Flu Med Finder will improve awareness and dispensing of antivirals during a pandemic or other public health emergency by encouraging pharmacies to report aggregate inventory data. Providers will be able to use the system to direct patients to antivirals, while public health can use the system to assess community supply of antivirals and direct resources.³⁰

MODEL PRACTICES AND STAKEHOLDER RESOURCES

In addition to the resources highlighted above that are available nationwide, pharmacy stakeholders have developed innovative tools, formed novel

partnerships, and leveraged existing data in unique ways to better response capabilities and bolster health resilience. Several of these initiatives are highlighted here so that they might encourage wider adoption or spur new ideas.

ASTHO Template MOU and Implementation Toolkit:

A national workgroup of pharmacy partners including ASTHO, APhA, NACDS, NASPA and the CDC developed a template Memorandum of Understanding (MOU) between public health departments and pharmacies for coordinating preparedness and response efforts to a pandemic vaccination campaign. The MOU formalizes responsibilities between state-level public health programs and pharmacies in pandemic vaccination planning and response. The accompanying toolkit contains supplemental materials including standard processes and timelines, background information, best practices, and more. Three states piloted the MOU in 2016 and several new states are piloting the program in 2017. Lessons learned and best practices from each will be incorporated into the MOU toolkit.³¹

NACCHO Pharmacy Partnerships Toolkit:

NACCHO maintains and routinely updates a Pharmacy Partnerships Toolkit as part of its NACCHO Toolbox, a free online collection of local public health tools produced by members of the public health community. The Pharmacy Partnerships Toolkit contains a wealth of

IN ADDITION TO THE RESOURCES HIGHLIGHTED ABOVE THAT ARE AVAILABLE NATIONWIDE, PHARMACY STAKEHOLDERS HAVE DEVELOPED INNOVATIVE TOOLS, FORMED NOVEL PARTNERSHIPS, AND LEVERAGED EXISTING DATA IN UNIQUE WAYS TO BETTER RESPONSE CAPABILITIES AND BOLSTER HEALTH RESILIENCE.

RESEARCH PUBLISHED FROM A COLLABORATION BETWEEN A MAJOR CHAIN PHARMACY AND HHS/ASPR DEMONSTRATED THAT AUTOMATED PHARMACY NOTIFICATIONS ENCOURAGED PATIENTS WITH CHRONIC CONDITIONS TO REFILL MEDICATIONS PRIOR TO A FORECASTED NATURAL DISASTER.

resources including, but not limited to, templates and guidance for creating CPAs targeted for public health emergencies, training videos, and partnership building resources and guides.

Mobile Text Message Outreach: Research published from a collaboration between a major chain pharmacy and HHS/ASPR demonstrated that automated pharmacy notifications encouraged patients with chronic conditions to refill medications prior to a forecasted natural disaster.³² Following the success of the pilot program during Winter Storm Jonas in 2016, the major pharmacy chain has continued to expand the program such that patients that opt to enroll in the program will receive notifications prior to a severe weather event reminding them a prescription is ready to be refilled and when it is ready to be picked up. Patients may also receive notifications informing them of store closures following an event and where they can pick up medications during an emergency, including the availability of mobile pharmacies.³³

This text messaging capability was engaged for a disease outbreak to share health information. The chain used text messages to provide important health information pertaining to the Zika virus in 2016 to targeted patient populations in Zika-impacted areas.³⁴ Pharmacy officials worked with the CDC to develop messages that directed patients to CDC guidance.³⁵

NYC Public Health Emergency Response Network (PHERN) Pharmacy Program (PP): The New York City Department of Health and Mental Hygiene (DOHMH) created the PHERN PP in response to communications challenges encountered during Hurricane Sandy. During Sandy, and smaller-scale events following Hurricane Sandy, DOHMH staff found they had little capacity for effective or large-scale communications to pharmacies in the city, particularly given that many were independently owned. To address this, DOHMH created the PHERN PP registration site, which allows pharmacies to register to provide contact information and other relevant service information, such as vaccines offered and languages spoken.³⁶

STAKEHOLDER LANDSCAPE

Prescription Medication Preparedness Initiative (PMPI): PMPI is comprised of a group of public and private sector stakeholders that broadly aim to address the challenges associated with prescription medication maintenance in disasters. The initiative aims not only to improve the preparedness and resiliency of patients who rely on prescription medications during disasters, but also to improve the preparedness and resilience of the systems that serve them.

NACCHO Pharmacy Partners Working Group:

The NACCHO Pharmacy Partners Workgroup convenes experts from the fields of public health preparedness and pharmacy in order to identify areas for collaboration. The group also focuses on the distribution and dispensing of pharmaceutical countermeasures during emergencies and what those processes look like. The workgroup offers opportunities for resource- and information-sharing and serves as a platform to highlight on-the-ground work. Tools and resources can be found in NACCHO's [Pharmacy Partnerships Toolkit](#).

CDC Pharmacy Working Group (PWG): The PWG aims to provide input and guidance to CDC staff and partners in order to advance the interconnected disciplines of pharmacy and public health practice at CDC, improve the understanding and utilization of pharmacists as public health practitioners, scientists, and technical consultants, and develop CDC's capacity to use pharmacists to carry out its mission. Through the PWG, as well as internal and external partnerships, CDC pharmacists are able to increase awareness, promote recognition, and advocate for the valuable contributions that pharmacist-delivered services can make to CDC's public health mission.³⁷

CONCLUSION

Progress made in the last decade in ensuring patients have uninterrupted access to medicines during an emergency demonstrate that the emergency management, healthcare and public health communities are prioritizing this issue. At the same time, insights from pharmacy stakeholders interviewed for this research as well as challenges encountered in recent disaster responses underscore the notion that room for improvement remains.

Future of Pharmacy Preparedness: Proposed Considerations

- Telepharmacy
- Leveraging state prescription monitoring programs to track medications dispensed during an outbreak
- Granting pharmacists provider status
- Expanded use of texting and mobile applications

Renewed focus on establishing partnerships and working groups dedicated to this issue, including HHS's Prescription Medication Preparedness Initiative, are an encouraging sign that attention will continue to be paid to this important issue. Future progress hinges not just on sustained interest and resources but also appropriate delegation of responsibilities. In a fractured healthcare system situated with a federal system of government, it is essential that all stakeholders understand and agree on scopes of responsibility.

In the spirit of continuing to leverage advances in technology and innovate with existing resources to solve challenges, interviewees were asked what technologies, authorities, and other developments could be expanded or repurposed to enhance pharmacy and prescription preparedness. Commonly cited responses are listed in this section.

INTERVIEWS

We extend sincere gratitude to the staff and subject-matter experts from the following companies and organizations who graciously provided their time and insights for this research.

America's Health Insurance Plans (AHIP)
American Pharmacists Association (APhA)
Blue Cross Blue Shield Association
Centers for Disease Control and Prevention (CDC)
CVS
HHS/ASPR Office of Emergency Management
HHS/ASPR Office of Policy and Planning
Idaho Board of Pharmacy
National Alliance of State Pharmacy Associations (NASPA)
National Association of Boards of Pharmacy (NABP)
National Association of County and City Health Officials (NACCHO)
National Community Pharmacists Association (NCPA)
National Council on Prescription Drug Programs (NCPDP)
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Riteaid
Surescripts
Walgreens

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