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COMMENTARY

Global engagement of pharmacists in test and treat initiatives: Bringing care from clinics to communities

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ABSTRACT

The coronavirus disease 2019 pandemic has placed substantial strain on the global health care workforce, disrupting essential and nonessential services. Task sharing of test and treat services to nontraditional prescribers, such as pharmacists, can facilitate more resilient health care systems by expanding access to health services while simultaneously decreasing the pressure on traditional health care providers. Expansion of pharmacists’ scope of work has historically been hindered by sociopolitical, resourcing, and competency considerations; addressing these challenges will be key to including pharmacists in testing and treatment of priority diseases. Sociopolitical considerations include migrating to flexible national legislation and scope of practices as well as engagement with other health care providers and the public to increase the acceptance of pharmacists participating in test and treat services. Resourcing issues include health care financing for test and treat services to parallel established systems or use voucher systems and service competition. In addition, pharmacists can use their training in supply chain management to ease and prevent medication stockouts in test to treat initiatives. Investments in technologies that support disease surveillance, basic reporting, and interoperability with health management information systems can integrate these initiatives into health care systems. Competency considerations comprise test and treat specific education for the pharmacy profession to equip them with the knowledge and confidence to execute successfully. Monitoring and evaluating the outcomes of these services can facilitate the scalability of test and treat initiatives. Pharmacists are uniquely positioned to bring testing and treatment from the clinic to the community.

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BACKGROUND

The coronavirus disease 2019 (COVID-19) pandemic has placed considerable pressure on health care systems globally. An estimated shortage of 18 million health care workers existed before the pandemic and burnout has been rampant during the pandemic.1,2 These health care worker shortages could result in excess morbidity and mortality of communicable and noncommunicable diseases (NCDs).3 Meanwhile, declines in health care facility visits have been common during the pandemic and still may not have fully rebounded 3 years into the pandemic.3 Task sharing, that is, the redistribution of tasks to health care cadres in nontraditional roles, can address these disrupted services and foster more resilient health care systems.4 Pharmacists have the clinical training and medication-use system expertise to help alleviate health system pressures and address acute health care needs by providing testing and treatment services for select diseases, including COVID-19.5,6 Pharmacists are also often the most accessible health care provider in many countries, particularly in rural areas.7,8

The World Health Organization (WHO) recommends implementing or expanding task sharing, particularly when certain services are hindered by a shortage of health care personnel such as physicians or nurses. WHO includes pharmacists as a cadre whose scope of practice could be expanded.6 Conditions that require point-of-care testing and simple treatment regimens to prevent severe disease and transmission can be well suited for task sharing. Globally,
Key Points

Background:

- The COVID-19 pandemic placed considerable strain on health care workforces globally.
- Task sharing is an effective approach to engage non-traditional prescribers to enhance test and treat services.
- Pharmacists have participated in test and treat services historically but often encounter barriers such as the sociopolitical context, resources, and training.

Findings:

- Pharmacists can contribute to addressing test and treat barriers by advocating for flexible legislation, voucher systems, and competency standards for students among other approaches.
- Pharmacists can bring care from clinics to communities through the task sharing of test and treat services.

Pharmacists have seen their scope of work expand, albeit, at various rates, from one of pure dispensing to providing testing and treatment for diseases such as urinary tract infections. Similarly, in countries with large human immunodeficiency virus (HIV) epidemics, pharmacists now provide HIV testing and subsequent pre- and postexposure prophylaxis. Chronic care, such as hypertension and diabetes, has seen improvement in outcomes when pharmacists participate in the diagnosis, monitoring of appropriate tests, and subsequent drug therapy. Other diseases for which pharmacists trained in disease-based protocols could manage include mild cases of malaria, sexually transmitted diseases, leishmaniasis, influenza, and COVID-19 requiring oral therapies (or topical therapy in the context of leishmaniasis).

Despite evidence that the scope of work of pharmacists can be successfully expanded, proposals for expansion are often stymied by systemic and regulatory barriers. Efforts to expand the scope of practice of pharmacists have been met with sociopolitical, resourcing, and competency challenges. For example, the United States has struggled with the idea of giving pharmacists the right to treat COVID-19 with oral antivirals despite pharmacists testing for it, with national physician organization’s hesitancy and lack of reimbursement impacting the decision. Addressing these considerations will be critical for task sharing of test and treat initiatives with pharmacists.

Sociopolitical context

Engagement with government officials, health care professionals, and professional associations to transition to a regulatory system that provides flexibility, decentralization, overlapping, and nonexclusiveness for pharmacists’ scope of practice is critical for task sharing. Existing pharmacy practice legislation may limit engagement of pharmacists in test and treat programs, namely through restrictions on prescribing rights and billing for pharmacy clinical services. Centralized pharmacy legislation can be rigid and unable to be adapted to specific local needs; successful decentralized models such as boards of pharmacy or pharmacy-determined may provide a more efficient route to enacting test and treat services. For example, several states in the United States have proceeded with a decentralized approach to allow pharmacists to prescribe hormonal contraceptives.

Legislation and national guidelines that are broad can allow pharmacists to test for and treat emerging diseases immediately. Temporary waivers and expanded scope of practice during public health emergencies such as the COVID-19 pandemic can empower pharmacists to provide test and treat services. In Europe, several countries relaxed regulation on controlled substances and increased pharmacist prescribing authority and medication substitution rights during the COVID-19 pandemic.

Medications or diagnostic tests that are approved by regulatory agencies for emergency use could include pharmacists in authorization to prevent legal hurdles. In the United States, for example, the COVID-19 Public Readiness and Emergency Preparedness Act allowed pharmacists to test and treat COVID-19 at the same time as restrictions on oral antivirals’ initial emergency use authorization excluded pharmacists as viable prescribers for these agents. More inclusive regulatory policies can facilitate collaboration among health care professionals and can enhance participation of pharmacists in task sharing initiatives.

Traditional health care prescribers’ acceptance and confidence in shifting testing and treatment services to pharmacist can affect the rollout of such efforts. Providing clarity for the role of pharmacists in a certain health care program and how they can benefit other health care workers can help garner buy-in. Positive interprofessional relationships and ease of disease management are 2 factors to consider in execution. Strong partnerships with pharmacists may encourage other health care providers to consider the benefit of referring patients with priority diseases to pharmacists for testing and treatment. Community attitudes toward expanding pharmacy services in country-specific contexts will also need to be explored to encourage use of testing and treatment from pharmacists. In countries where pharmacists only dispense medications, starting task sharing with initiatives such as providing medication refills for chronic diseases after appropriate biomarker monitoring by pharmacists and treatment of minor ailments may facilitate the transition to more involved diagnosis and treatment initiation.

Global, national, and local pharmacy associations can play a critical role advocating for test and treat services. These professional bodies may influence aspects of task sharing through partnerships with regulatory agencies, pharmacy education accreditation councils, and other health care professional organizations. Pharmacy organizations can conduct needs assessments and outline priorities for test and treat initiatives. The Commonwealth Pharmacists Association organized virtual interviews with national pharmacy associations to frame themes and subthemes of priorities, including the expansion of pharmacy roles, to achieve sustainable development goals and universal health coverage (UHC).

Pharmacy associations can also leverage data or support the development of data systems for the inclusion or effective
use of pharmacists. The American Pharmacists Association (APhA) examined federal test and treat locations in socially vulnerable communities and found a dearth of pharmacists in these neighborhoods that were being underutilized and could be used to fill Paxlovid access gaps. APhA communicated these data to the Food and Drug Administration, which played a role in the approval of pharmacists to prescribe Paxlovid in July, 2022.26,27 Pharmacists in Quebec, Canada, were authorized to prescribe Paxlovid in May 2022. In Canada, the Pharmacists’ Association of Newfoundland and Labrador has long advocated for expansion of pharmacists, giving them a large degree of autonomy to prescribe and allowing a quick adjustment to prescribe on introduction of new agents during a pandemic.28 International pharmacy bodies, such as the International Pharmaceutical Federation (FIP), can share best regulatory practices between countries with established test to treat services and those in their infancy.29

Resourcing allocation

Pharmacists providing test and treat services will need to be compensated for the services they provide. To realize the potential of task sharing to pharmacists, funding mechanisms must cover the broad network of pharmacies embedded in local communities. Test and treat payments to pharmacists could be covered in a manner consistent with how care is already funded. Broadly, health care is funded through 4 different mechanisms, with each major mechanism having its own defining features. First, many people gain access to health care services through government sponsored UHC. In countries that offer UHC, government pays health care providers, directly or indirectly, to serve the population. This type of funding is considered public health insurance. In addition to, or in place of, public insurance, private health insurance is another mechanism. In countries that depend in little or part on private health insurance, individuals or employers purchase insurance through premiums to help pay for future care. In many countries, patients pay for all or select health services at the point of care. These are often referred to as out-of-pocket payments or user fees. Finally, in some countries, nongovernmental organizations (NGOs) or faith-based organizations provide resources to run or supplement health care facilities. These funding mechanisms may co-exist in a country.

Given these funding mechanisms, test and treat payments to pharmacists could parallel or be integrated into current health payment systems. Governments could roll out test and treat services in public pharmacies to expedite service expansion while developing mechanisms for government-subsidized service provision in private pharmacies. In countries with public or private health insurance, payors could extend payments to community-based private pharmacies in the same way that it pays for covered medications dispensed locally, for example, by submitting a claim with identifiable patient information while billing for their clinical services. The rapid increase in the number of urgent care and community clinics in the United States highlights the potential for profits in this arena and unmet health care needs.30 New Zealand transitioned COVID-19 oral antivirals to advance prescriptions, allowed pharmacists to prescribe them, and then ensured funding for these pharmacy services from previously agreed on national COVID-19 health care provider service’s rates.31 In countries where pharmacy services are primarily funded by out-of-pocket payments, 2 approaches may exist. In the first, pharmacists who procure their own commodities may charge for testing and treatment services. In this scenario, an additional benefit of expanding pharmacy services is that patients may pay lower fees owing to the increased competition and potentially lower cost for offering services in this setting of care. In the second, private pharmacists who receive subsidized testing and treatment commodities from the government or donors could in turn provide these services for free or at a subsidized rate. Fraud and overcharging could be prevented by requiring pharmacists to submit proof of services provided and results to the appropriate agency to be reimbursed. Alternatively, governments and NGOs could implement a voucher-like system, in which (1) community health workers or an NGO distributes vouchers to patients, (2) patients surrender vouchers to pharmacists providing test and treat services as specified by the voucher, and (3) pharmacists submit vouchers for payment after services are rendered.32 Voucher distribution could be targeted or broad depending on the disease.

Although not unique to the pharmacy profession, gaps in the pharmaceutical global supply chain can limit the effectiveness of test and treat programs. Pharmacists may not have access to the appropriate antimicrobial agent or a chronic NCD therapeutic modality. The COVID-19 pandemic has exacerbated medication stockouts stemming from large distribution hubs being locked down or a shortage of workers.33 Health care systems can protect themselves from supply chain disruptions through dual sourcing, diversifying importation location, promoting supply chain transparency, investing in local supply companies, and digitalizing supply chain management.34 If supply chain disruptions are not adequately addressed, the distribution and use of counterfeit and substandard medications (CSMs) could increase, imperiling patient health and weakening the global supply chain further. In a review of drug products from low- and middle-income countries, WHO found that more than one-third of the hypertension, cancer, epilepsy, and analgesic medications were either falsified or substandard.34 CSMs have led to increased mortality from absence of active ingredients or harmful substances present in the final product.35,36 In addition, theft and resale of approved medications threaten the supply chain’s integrity.37 Internet pharmacies that operate outside of the traditional supply chain can also introduce CSMs. Pharmacists, often the leaders of supply chain management in health facilities globally, have been identified as competent professionals within the medication supply chain and recognized as experts in safe and legitimate medication procurement, handling, storage, and administration.38 Pharmacists can serve as stewards of high-standard medications and diagnostic test procurement in test and treat initiatives through their connections with the pharmaceutical industry, educating patients and other health care providers about the black market, examining and reporting suspicious medications to the authorities, and monitoring counterfeit product alerts.39

Investments in technologies that support disease surveillance, basic reporting, and interoperability with health management information systems can support the expansion of test and treat services to pharmacists. Certain diseases and conditions are of public health concern and may be required to
be reported to health authorities; reporting could also highlight diseases that are increasing, which may need expanded pharmacy support. Pharmacists who provide test and treatment services can be trained to report their work into national reporting systems, providing critical data to inform public health monitoring. Modernizing institutional infrastructure such as health management information systems can facilitate pharmacist inclusion. Dispensing systems in pharmacies often cannot provide reports about medications given, therapeutic updates, or even adherence rates back to other providers or to national reporting systems. For patients with chronic conditions, a seamless stream of communication through platforms such as electronic health records or mobile paper health passports can improve continuity of care and promote collaboration with other health care professionals. Having access to medical records can also improve pharmacists’ confidence in participating in test and treat initiatives by obtaining relevant past medical history and current drug therapy.

Pharmacist competence

Assuring high competence among the pharmacy profession to participate in test and treat initiatives is key to implement task sharing. Preparation of pharmacists include building on practicing pharmacists’ skill sets and embedding training for diagnostic tests and treatment algorithms for relevant diseases into pharmacy degree curricula. Governments and health sector partners can build on licensed pharmacist’s foundational knowledge of pharmaceuticals through targeted continuing pharmacy education programs. These programs can be administered virtually or in-person with didactic and case-based learning and can be modeled off of established content such as the APhA’s Pharmacy-Based Test and Treat Training Program or the United Kingdom’s Centre for Pharmacy Postgraduate Education’s disease-specific test and treat modules. FIP and the pharmacist code of ethics in the United States and other countries express the shared professional obligation that pharmacists have to maintain competency through lifelong learning. This commitment to lifelong learning allows pharmacists to function as effective resources for the communities they serve and supports the capacity for pharmacists to function as effective resources for the community.

Accreditation bodies could also establish standards to ensure the competency of outgoing pharmacy students. Pharmacy school curricula could entrench test and treat principles for various diseases. The expansion of the testing component through experiential, hands-on learning may improve pharmacist’s knowledge and confidence in using assays of different types to diagnose patients, complementing their medication-use knowledge. Outlined modules, topics, and standards that have been proposed in the United States or implemented in Australia and New Zealand can serve as templates for pharmacy accreditation bodies globally.

Didactic learning topics could include good laboratory practices, clinical laboratory improvement amendments, business planning, quality control, disease surveillance, supply chain management, and public health disease reporting. The National Alliance of State Pharmacy Associations has created a Pharmacy-Based Point-of-Care Test and Treat Program that includes many of the aforementioned topics and may be used as a platform to design curricula around. Pharmacy rotations can provide venues to incorporate both the hands-on diagnostic training and didactic knowledge to improve competence and prepare students to enter test and treat programs directly after graduation. They can further build pharmacist confidence.

Conclusion

As health care systems continue to recover from the COVID-19 pandemic, task sharing to increase the scope of pharmacists to include testing and treatment for communicable and NCDs can enhance access to health services and foster a more resilient health system. The sociopolitical context, key resources, and pharmacists’ competence, if adequately addressed, can facilitate an expanding role of the pharmacy profession. Participating pharmacists would be given more opportunities to use their pharmaceutical training, be adequately compensated, and expand their contribution to improve population-level health. Scaling task sharing initiatives for pharmacists starting in in-house tests such as lateral flow assays and expanding to more complex diagnostics such as send-out tests may improve acceptance from other health care professionals and the public. Pilot test and treat services can be modeled after successful programs such as the Diabetes Ten City Challenge using community-based pharmacist coaching, evidenced-based guidelines, and patient self-management strategies. Monitoring the reach of test and treat strategies and the public health outcomes can provide critical evidence to support additional expansion of pharmacists’ scope of practice. COVID-19 has opened new avenues for task sharing; pharmacists are uniquely positioned to bring testing and treatment from the clinic to the community.

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