Community pharmacy is key to more resilient healthcare systems

September 2023

Evidence from the COVID-19 pandemic response demonstrates the value and effectiveness of community pharmacy as an integral part of public health infrastructure. Community pharmacies and their staff already contribute to more productive and resilient health systems and integrated, streamlined, primary care teams. Preparatory measures for future shocks must include enabling community pharmacists to take a greater role as part of more agile and flexible health systems. These roles should not be activated only at times of system stress or shock – community pharmacists should be authorised and funded to perform at their full scope of practice at all times.

In many countries community pharmacists are the most accessible and most frequented health professional[1,2], and are conveniently located close to where people live or work[3].

Through the pandemic, community pharmacy demonstrated its agility and fulfilled its great potential, quickly and effectively taking on roles traditionally delivered elsewhere in the health system, when other medical services were either closed or stretched to their limits. Unfortunately, some of these roles have been removed as the pandemic impact has lessened. These roles should instead be made permanent, and national health system leaders should be encouraged to go beyond established roles for pharmacy. They should review experience from around the world to see how health services can be improved through broader use of community pharmacies in areas including public health and prevention, management of long-term conditions, point-of-care testing, and initiating treatment for common illnesses.

Even before the pandemic, inefficient distribution of tasks between components of primary health care has been acknowledged as a major factor limiting the resilience of health care systems. In a May 2019 OECD policy brief entitled "Realising the Full Potential of Primary Health Care", the problem of the current maldistribution of activities among members of primary health care teams was well highlighted. The OECD's brief also referred to examples of increasing community pharmacists' role in prevention or management of chronic conditions in order to improve the efficiency of health care system investment. It stated:

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[1] Berenbrok, Lucas A et al. "Evaluation of Frequency of Encounters With Primary Care Physicians vs Visits to Community Pharmacies Among Medicare Beneficiaries." JAMA network open vol. 3,7 e209132. 1 Jul. 2020, doi:10.1001/jamanetworkopen.2020.9132

[2] https://www.cdc.gov/pcd/issues/2020/20_0317.htm

[3] https://bmjopen.bmj.com/content/5/5/e007328

> *"The current distribution of skills and tasks among primary health care teams is inefficient. According to the OECD PIAAC [Programme for the International Assessment of Adult Competencies] survey of adult competencies, as many as 76% of doctors and 79% of nurses reported being over-skilled for some of the tasks that they have to do in their day-to-day work, across OECD countries. Given the length of training of doctors and nurses, this represents a waste in human capital. There are some good examples of reforms to provide nurses with advanced roles and to* ***increase the role of community pharmacists in prevention or management of chronic diseases****…These efforts enable better use of health professionals' human capital."*[4]

Examples of community pharmacy's contribution to health system resilience

The COVID-19 pandemic exposed the fragility of the existing primary care model in most developed countries. It has also highlighted how community pharmacy can be a cornerstone of the solution to that problem, providing strength and resilience to health care systems.

Some of the major policy and practice changes that were triggered by the pandemic in WPC member countries (and others) have included:

1. the implementation and/or extension of vaccination administration authority to include greater age ranges and more vaccine types (including, in many countries, COVID-19 vaccination).
2. involvement in point-of care COVID-19 antigen or antibody testing, and/or the provision of take-home test kits.
3. the authority to extend or adapt prescriptions to ensure continuity of treatment when access to doctors was limited.
4. the authority to dispense medicines previously only available through hospitals.
5. enabling of, and specific funding for, medicine home delivery services (especially for vulnerable or isolated people); and
6. social support services through pharmacies, such as protocols to help victims of domestic violence observed during lockdowns.

Example 1: Vaccination services

Utilising community pharmacies for vaccination services reduces strain on other parts of the health system infrastructure. It has also been shown to increase overall vaccination rates in the target population.

All 36 studies evaluated in a 2016 systematic review and meta-analysis found an increase in vaccine coverage when pharmacists were involved in the immunisation process[5]. This is

[4] Realising the Full Potential of Primary Health Care (Policy Brief), OECD 2019. https://www.oecd.org/health/health-systems/OECD-Policy-Brief-Primary-Health-Care-May-2019.pdf (accessed 9 May 2022).

[5] Isenor, J E et al. "Impact of pharmacists as immunizers on vaccination rates: A systematic review and meta-analysis." *Vaccine* vol. 34,47 (2016): 5708-5723. doi:10.1016/j.vaccine.2016.08.085,

largely due to the convenience and accessibility of pharmacies and the high level of community trust in pharmacists.

Evidence of the safety, acceptance, capability and effectiveness of community pharmacy-based vaccination services is now abundantly clear, and all governments should now enable and encourage community pharmacies as the public's principal destination for all vaccination programs for adults and children.

Pharmacy becomes the leading vaccination destination in the USA and NZ

According to official figures from the USA's Centers for Disease Control & Prevention (CDC) as of August 18th 2023, more than 307.4 million doses of COVID-19 vaccine had been administered in the USA through pharmacies under the federal program, across more than 41,000 pharmacy locations[6].

Also, for the 2022-23 season, more American adults received their influenza vaccinations at a pharmacy (41.48 million) than any other location type including through physician medical offices (27.96 million)[7]. This was also the case in 2020-21 and 2021-22.

In New Zealand, community pharmacies have become the vaccination provider chosen by the majority of the population. Data showed that pharmacy's monthly market share had grown to over 55% of all COVID-19 vaccinations during 2022[8]. Community pharmacy was able to quickly develop its capacity to this point despite being the last vaccination destination to be brought on by funders in New Zealand.

Example 2: Point of care testing

The pandemic demonstrated that community pharmacies are an ideal location for point-of-care testing and for distribution of at-home test kits. Pharmacies were designated as a primary source of free tests under government programs established in many countries, including the USA[9], England[10] and Australia[11]. Research in Portugal (see the box below) demonstrated how community pharmacy's involvement there achieved greatly improved accessibility and equality of access to testing.

[6] CDC, accessed September 2023: https://www.cdc.gov/vaccines/covid-19/retail-pharmacy-program/index.html
[7] CDC, accessed June 2022: https://www.cdc.gov/flu/fluvaxview/coverage-2021estimates.htm
[8] Data and chart supplied by the Pharmacy Guild of New Zealand based on official data.
[9] https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/14/fact-sheet-the-biden-administration-to-begin-distributing-at-home-rapid-covid-19-tests-to-americans-for-free/
[10] https://www.gov.uk/government/news/9-in-10-pharmacies-now-offering-free-rapid-coronavirus-covid-19-tests
[11] https://www.health.gov.au/health-alerts/covid-19/testing

 **Accessibility and equality of access are keys to an effective testing strategy**	An evaluation by the Centre for Health Evaluation & Research in Portugal[12] shows how the provision of in-pharmacy rapid antigen testing in that country improved accessibility compared with alternative arrangements. As of 31 January 2022, there were 1,369 community pharmacies and 635 laboratories and other registered sites for performing tests for the diagnosis of SARS-CoV-2 in mainland Portugal covered by the national scheme. The CEFAR geo-spatial analysis showed that in a scenario without the participation of pharmacies, the average distance of each person to the closest testing place would have been 3.7 km, compared to 1.8 km with the inclusion of the participating pharmacies. Importantly, along with improved accessibility came improved equality of access. The Gini index for the distribution of access by income levels reduced from 0.42 to 0.26 with the participation of pharmacies (a reduction of about 39% in inequality).

 **Community pharmacy has demonstrated its ability to implement quickly**	During the height of the pandemic, the UK Government had purchased stocks of lateral flow test (LFD) devices and needed a way to distribute them free-of-charge to the public, beyond using a mail order solution, which had a fixed capacity due to the workforce challenges the pandemic brought to the postal system. A national distribution service (Pharmacy Collect) was set up in a matter of days and the vast majority of pharmacies in England signed up to provide the system within two weeks. In 2021/22, pharmacies undertook 25.5 million supplies of test kits to the public. Further information can be found at https://psnc.org.uk/national-pharmacy-services/advanced-services/c-19-lateral-flow-device-distribution-service/

Beyond COVID-19 testing, there is increasing evidence of community pharmacies as an important destination for point-of-care testing for other diseases and for the effective distribution of take-home test kits. For example, community pharmacies in some countries - including WPC members Australia[13], USA and Portugal[14] – are being used to distribute HIV testing kits. The USA's CDC has stated[15]:

> *The accessibility of pharmacies for HIV testing presents a unique opportunity for pharmacists to contribute to the identification of undiagnosed HIV. It is estimated that 70% of rural consumers live within 15 miles of a pharmacy, and 90% of urban consumers live within 2 miles of a pharmacy. A Centers for Disease Control and Prevention (CDC)-funded feasibility study offering rapid, point-of-care testing in community pharmacies and retail clinics stated: "Pharmacies and retail clinics represent a vast, largely untapped potential for the delivery of HIV testing in*

[12] CEFAR Infosaude (2022), "Performance Of Rapid Antigen Test (Trag) For Professional Use For The Diagnosis Of Sars-Cov-2 In Community Pharmacies" Provided to WPC by ANF; copy available on request.
[13] https://www1.racgp.org.au/newsgp/clinical/hiv-self-tests-to-be-sold-in-pharmacies
[14] https://www.portugalresident.com/home-use-hiv-self-tests-now-available-at-pharmacies/
[15] https://www.cdc.gov/hiv/effective-interventions/diagnose/hiv-testing-in-retail-pharmacies

settings that are more accessible and, for some people, less stigmatizing than traditional testing."

Example 3: Prescription extension & independent pharmacist prescribing

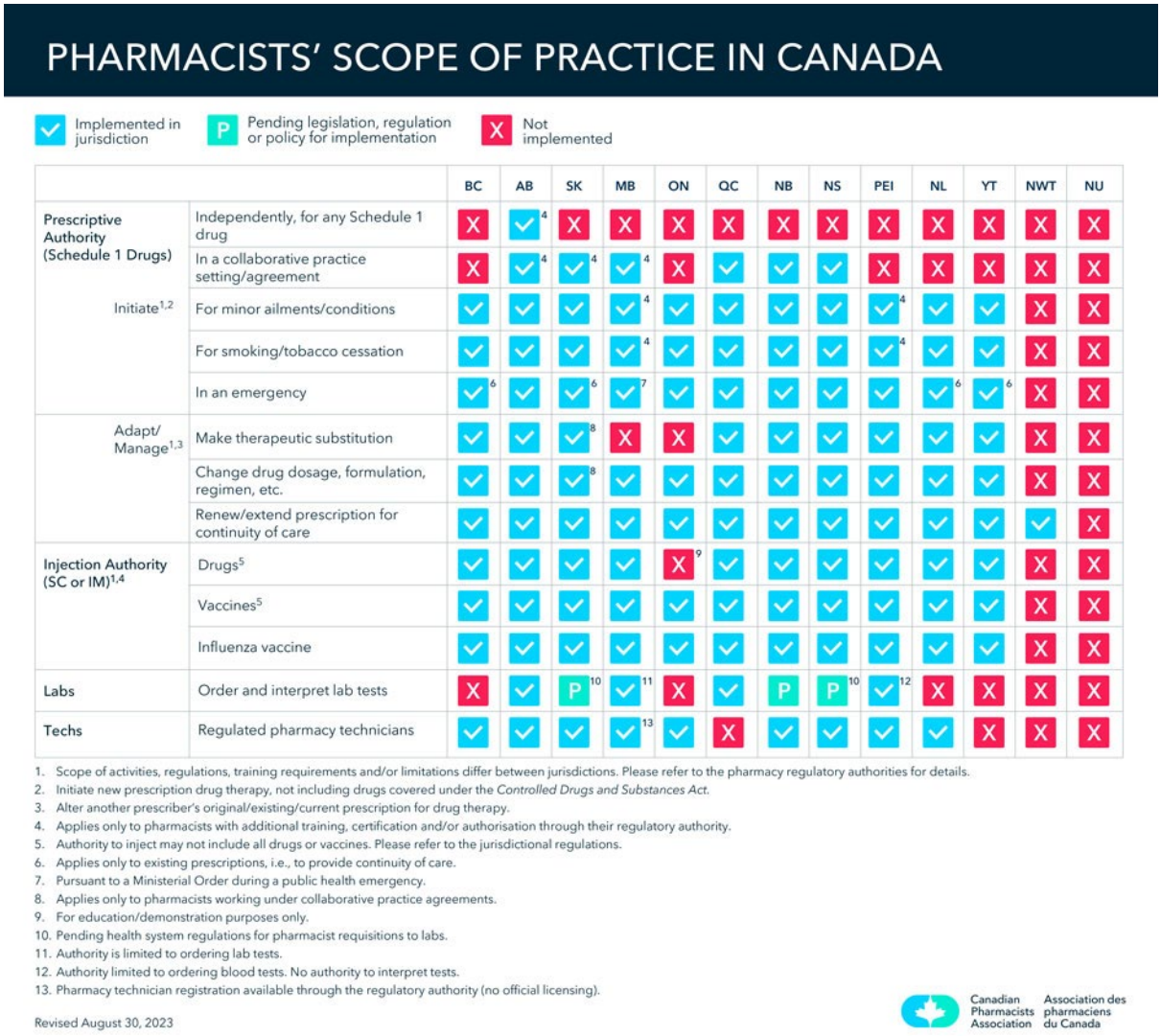
During the pandemic, many countries provided new or additional authorisation for community pharmacists to renew or extend existing prescriptions related to stable chronic conditions.

Prescription extension allows more efficient use of time across primary care

In Australia, as a result of the 2020 bushfire crisis and the COVID-19 pandemic, the pre-existing Continued Dispensing arrangements (which were only applicable for certain lipid-lowering drugs and oral contraceptives) were expanded to include most medicines subsidised for chronic conditions under the country's Pharmaceutical Benefits Scheme. Continued Dispensing is allowed where there is an immediate need for the medicine but where it is not practicable to obtain a valid PBS prescription. As a result, in the 12 months to June 2021, community pharmacists dispensed more than 498,000 items to patients who could not otherwise obtain a new prescription[16], compared to just 14,000 in the year to June 2019. This averted significant disruption in therapy and demonstrated the ability for pharmacists to take a closer role in managing and continuing treatments for chronic conditions on an ongoing basis. This opens up much needed capacity in general practice.

Even before the pandemic, some countries had advanced much further than this Australian example and in doing so had established more adaptability and resilience in the health system prior to the COVID-19 pandemic. A much more complete pharmacist scope of practice is in place in most provinces of Canada (see chart below).[17] While a nationally (and internationally) consistent approach is preferred, the fact that major jurisdictions such as Alberta have – for over a decade - successfully implemented full, or near full, scope of practice provides a model for others to follow.

[16] Australian Government Department of Health, https://www.pbs.gov.au/info/statistics/expenditure-prescriptions/pbs-expenditure-and-prescriptions-report-30-june-2021 (Table 16(c)).
[17] Canadian Pharmacists Association, https://www.pharmacists.ca/advocacy/scope-of-practice/



Many studies support the safety and effectiveness of allowing pharmacists to initiate treatment or to adapt existing prescriptions (such as through a change in dosage or therapeutic substitution). For example, findings support the effectiveness of direct pharmacy access to contraception and in encouraging pharmacist contraception prescribing policies and widespread implementation.[18] These findings are being acted upon in some countries and jurisdictions, such as in England where a new Pharmacy Contraception Services is being introduced (this is covered further in Section 5).

Pharmacist prescribing of COVID-19 therapeutics was also vital to the treatment of patients in the USA, especially those in lower socio-economic circumstances.

The community pharmacy response to COVID-19 in the USA has included expanded roles in prescribing and providing COVID-19 therapeutics such as Paxlovid® and monoclonal antibody subcutaneous infusions[19]. Through collaboration with healthcare

[18] Rafie S, et al. " Patient experiences with pharmacist prescribed hormonal contraception in California independent and chain pharmacies". Journal of the American Pharmacists Association, Jan-Feb 2022, https://doi.org/10.1016/j.japh.2021.11.002, https://www.sciencedirect.com/science/article/pii/S1544319121004635.

[19] https://ncpa.org/covid-19-therapeutics

Expanded prescribing roles allow greater coverage for COVID-19 treatments	partners, pharmacy networks, and the federal PREP Act, pharmacists have helped provide COVID therapeutics to the most socially vulnerable patients during the Public Health Emergency.

Example 4: Public Health & Prevention

In many countries community pharmacists are the most accessible and most frequented health professional[20]. As shown in the previous examples in relation to vaccination and testing, the pandemic has demonstrated the vital importance of population-wide preventive health and community pharmacy has established its pivotal place in application of effective measures to prevent and contain the spread of infection. Community pharmacies have a long history of adapting to address new health challenges.

These include participation in programs for influenza and other vaccinations, services for drug misusers, smoking cessation, sun protection and prevention of skin cancer, and many others. These are important roles as the principal local provider of public health services, but it is frequently not fully recognised, valued or adequately remunerated.

 **Opioid dependence treatment programs in Australia**	Australia's Take Home Naloxone (THN) Program makes the medicine naloxone free and available without a prescription to people who are at risk of, or who may witness, an opioid overdose or adverse reaction. The program was initially piloted in New South Wales, South Australia and Western Australia between 1 December 2019 and 30 June 2022 before being expanded nationally from 1 July 2022. Additionally, in the Australian state of Victoria, administration by pharmacists of long-acting injectable buprenorphine (following completion of relevant training) is allowed as part of an Opioid Treatment Program[21]. This has also been trialled in the state of New South Wales and is being considered by other states.
 **Pharmacists are key to implementing national HIV/AIDS strategy**	The United States' National HIV/AIDS Strategy (2022-2025) emphasises the role of pharmacies in increasing access to a variety of HIV prevention and care services such as testing, initiation of pre-exposure prophylaxis (PrEP), education and medication adherence counselling, and playing a key role in the re-engagement of patients who have fallen out of care. Recent studies have demonstrated the key role that pharmacies play in delivering HIV prevention and care services to people in communities, by improving patient access and PrEP usage rates.

[20] Berenbrok, Lucas A et al. "Evaluation of Frequency of Encounters With Primary Care Physicians vs Visits to Community Pharmacies Among Medicare Beneficiaries." JAMA network open vol. 3,7 e209132. 1 Jul. 2020, doi:10.1001/jamanetworkopen.2020.9132

[21] https://www2.health.vic.gov.au/public-health/drugs-and-poisons/pharmacotherapy/pharmacotherapy-policy-in-victoria

Example 5: Transfer of the dispensing of hospital-only medicines to community pharmacies

There is inconsistency between countries in terms of what types of medicines are restricted to being dispensed only through hospitals and what is available through the much more easily accessed community pharmacy channel. With hospital resourcing stretched and repurposed, the pandemic highlighted the inefficiencies of some of these arrangements from the point of view of both the health care system and patients. Evidence during the pandemic, following changes to some of these arrangements, showed benefits not only in patient satisfaction but also in adherence to medication, as described below in the Spanish and Portuguese examples.

Collaborative dispensing of hospital medicines in community pharmacy

During the pandemic, collaborative dispensing of outpatient hospital diagnostic (DHDH) medicines was implemented in six Spanish regions to maintain continuity of treatment, quality of pharmaceutical care and reduce the risk of transmission of COVID-19 infection to vulnerable patients. As of October 2022 the service has been maintained in four out of the six regions where it was introduced during the pandemic. One new region incorporated the service and another one is working to implement it.

To date, patients who have chosen this option have received nearly 200,000 medicines, all of them with the assurance that this system guarantees the presence of a pharmacist throughout the process. This service is enabling these patients - most of whom are chronically ill and immunocompromised - to obtain hospital medicines from their nearest pharmacy, thanks to the work and coordination of pharmacists working in 69 hospital pharmacy services, 6,059 community pharmacies and 19 pharmaceutical distribution warehouses.

In October 2021, Spain's General Pharmaceutical Council presented a report prepared with the consultancy firm HIRIS[22] on the impact in the first 6 regions where collaborative dispensing was introduced. This report revealed that:

- a high rate of patient satisfaction, and an experience that brings humanisation to their care.
- patients who are prescribed DHDH medicines also use other dispensing treatments in community pharmacy therefore, it is ideal to carry out pharmacotherapeutic monitoring in collaboration between hospital pharmacists and community pharmacists.
- 100% of respondents would prefer to continue with this new circuit for DHDH medicines and not return to the previous system of collection at the hospital.

[22] https://www.farmaceuticos.com/wp-content/uploads/2021/10/INFORME-HIRIS-20-07-2021.pdf

	• the most valued arguments were convenience and speed (48%), not having to go to the hospital (40%), avoiding annoying journeys (38%), proximity to the pharmacy (24%), savings in transport (22%) and extended pharmacy opening hours (20%).

 **Portuguese initiative generates greater patient satisfaction and savings**	In Portugal, the dispensing of most outpatient specialty medicines is performed exclusively through hospital pharmacies and totally financed by the National Health Service. During the COVID-19 first wave, the government allowed the transfer of the dispensing of hospital-only medicines to community pharmacies. A study published in 2022[23] aimed to measure the value generated by the intervention of community pharmacy in the dispensing of hospital-only medicines. It found a statistically significant (P < .0001) increase in mean adherence score to therapy, annual savings of €262 per person (through reduced travel and absenteeism) and a significant increase in satisfaction levels in all evaluated domains - pharmacist's availability, opening hours, waiting time, privacy conditions, and overall experience.

For the benefit of patients and to reduce the burden on hospital resources, governments should reduce the number of medicines that are restricted to supply and/or administration through hospitals only.

[23] Murteira R, et al. "Real-World Impact of Transferring the Dispensing of Hospital-Only Medicines to Community Pharmacies During the COVID-19 Pandemic" *Value in Health* (2022): ISSN 1098-3015, https://doi.org/10.1016/j.jval.2022.03.004, https://www.sciencedirect.com/science/article/pii/S1098301522001462

Where can community pharmacy add even more value in terms of system resilience?

In addition to expanding community pharmacies' roles in the areas discussed above, there is also great potential in many other areas.

Area 1: Management of Long-Term Conditions

Findings from systematic reviews and meta-analyses show that community pharmacist-led management of hypertension (as one example) significantly reduces systolic blood pressure compared with usual GP care[24]. Further clinical trial evidence has also demonstrated that the benefits of pharmacist intervention, including education, consultation and/or prescribing, can help to reduce blood pressure. A Canadian trial found an even larger 18.3 mmHg reduction in systolic blood pressure associated with pharmacist care and prescribing[25]. For a systolic blood pressure reduction of 18.3 mmHg, the estimated impact is 0.21 fewer cardiovascular events per person and, discounted at 5% per year, 0.3 additional life-years, 0.4 additional quality-adjusted life-years and C$6,364 cost savings over a lifetime. Results of an American trial published in April 2021 also showed the cost-effectiveness of pharmacist-led hypertension management[26].

Hypertension management is only one example of the potential for community pharmacists to take a much greater role in management of long-term chronic conditions, freeing up other health system resources.

Area 2: Minimising the impact on patients of drug shortages

Drug shortages are an ongoing global crisis. The associate director of the US Food and Drug Association's (FDA's) Resilient Supply Chain Program recently stated that "shortages and supply chain issues don't just happen during a public health emergency…we've seen these before COVID, and we're continuing to see these moving into the future. Many of the issues we're facing are becoming much more complex and more systemic."[27]

Community pharmacies are at the end of the supply chain. They are constantly faced with trying to navigate drug shortages to ensure patient treatment is not compromised, or any adverse health outcomes can be minimised. However, due to stringent rules and regulations around altering a prescription in many jurisdictions around the world, pharmacists are often limited in their ability to respond effectively and efficiently.

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[24] By between –6.1mmHg (95% confidence interval [CI] –8.4 to –3.8) and –7.2mmHg (95% CI –5.8 to –8.7) - https://pharmaceutical-journal.com/article/research/effective-detection-and-management-of-hypertension-through-community-pharmacy-in-england

[25] Tsuyuki RT, Houle SK, Charrois TL, et al. "Randomized trial of the effect of pharmacist prescribing on improving blood pressure in the community: the Alberta Clinical Trial in Optimizing Hypertension (RxACTION)" Circulation 2015;132(2):93-100.

[26] Schultz BG, et al. Cost-Effectiveness Analysis of a Pharmacist-Led Medication Therapy Management Program: Hypertension Management. Value In Health April 2021 https://doi.org/10.1016/j.jval.2020.10.008, https://www.sciencedirect.com/science/article/pii/S109830152034451X

[27] https://www.cidrap.umn.edu/resilient-drug-supply/drug-shortages-have-worsened-and-may-only-increase-future-experts-say

The Australian Government – and some others – have implemented changes to allow community pharmacists to substitute specific medicines that are deemed to be in serious shortage, without prior approval from the prescribing doctor.

Allowing flexibility for pharmacists to function at full scope of practice, by appropriately altering prescriptions and substituting therapeutically, relieves pressure on doctors and allows patients to receive medicines from their pharmacist without delay. This not only reduces the risk of adverse health outcomes that may arise from any disruption of treatment, but also reduces the burden that drug shortages can place on prescribers.

Area 3: Addressing medication non-adherence

The high prevalence of medication non-adherence is associated with increased morbidity and mortality, disease progression and increased utilisation of health care resources and accompanying expenditure. *OECD Health Working Paper No. 105*, published in 2018, concluded that investing in medication adherence not only improves health outcomes but also increases health system efficiency[28]. It also reported that "the problem of poor adherence has rarely been explicitly included in national health policy agendas". Community pharmacists, as the medicines experts, are in the best position to address this problem.

New Medicine Service expansion

The OECD's 2018 Working Paper described several pharmacy-delivered programs aimed at addressing non-adherence, including England's New Medicine Service (NMS), which was highlighted as being cost-effective[29]. The service provides support for people with long-term conditions newly prescribed a medicine to help improve medicines adherence. It is focused on specific patient groups and conditions. The NMS commenced in 2011. As a result of the ongoing success of this service, the NMS was expanded in September 2021 to include 13 additional conditions[30].

Area 4: Triage and treatments for common conditions

Community pharmacies are being recognised as a first port of call for advice and treatment for minor health issues and common clinical conditions. Some countries have established formal schemes encouraging patients to visit pharmacies first. These schemes reduce unnecessary visits to doctors and emergency departments – allowing those healthcare resources to be used in managing cases that are more urgent and require

[28] Khan, R. and K. Socha-Dietrich (2018), "Investing in medication adherence improves health outcomes and health system efficiency: Adherence to medicines for diabetes, hypertension, and hyperlipidaemia", OECD Health Working Papers, No. 105, OECD Publishing, Paris, https://doi.org/10.1787/8178962c-en.

[29] Elliott, R.A., Tanajewski, L., Gkountouras, G. et al. Cost Effectiveness of Support for People Starting a New Medication for a Long-Term Condition Through Community Pharmacies: An Economic Evaluation of the New Medicine Service (NMS) Compared with Normal Practice. PharmacoEconomics 35, 1237–1255 (2017). https://doi.org/10.1007/s40273-017-0554-9

[30] https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/dispensing-contractors-information/nhs-community-pharmacy-new-medicine-service-nms-expansion-pilot-inclusion-depression-therapeutic

higher level clinical oversight. The result is a more efficient and resilient health system, with faster accessibility to treatment for all patients.

Pharmacy First in Scotland

NHS Pharmacy First Scotland allows community pharmacies to give people expert help for treating conditions such as sore throats, earache and cold sores, along with common clinical conditions such as urinary tract infections (UTIs). Pharmacy teams offers advice, treatment or referral to other healthcare teams if required[31].

In Scotland, a country with a population of 5.4 million people, more than 1.2 million people accessed the Pharmacy First service at least once in the 12 months to March 2022[32]. In more than 85% of patient contacts, the pharmacist was able to dispense an item to treat the condition. Just 4% of the consultations resulted in a referral to another health care practitioner, which shows that the program has successfully reduced unnecessary visits to doctors.

[31] https://www.nhsinform.scot/campaigns/nhs-pharmacy-first-scotland
[32] https://publichealthscotland.scot/publications/nhs-pharmacy-first-scotland/nhs-pharmacy-first-scotland/