



## GLOBAL SITUATION REPORT ON PHARMACY 2025 WORKFORCE, PRACTICE, POLICY

*Evidence, investment and solutions to strengthen health systems*

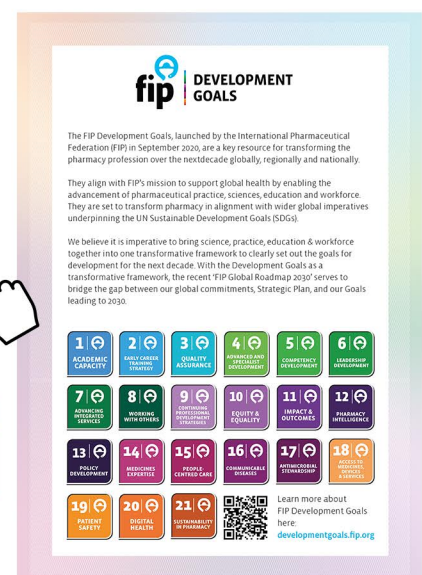
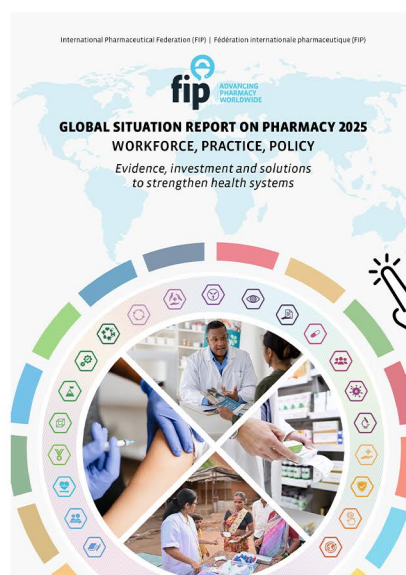
As countries work toward achieving universal health coverage (UHC) and strengthening primary health care (PHC), the strategic expansion of the pharmacy workforce through clear policy, regulatory, and financing mechanisms is essential.

This infographic presents priority actions—**organised by stakeholder group**—highlighting how targeted investments in pharmacy can expand access, improve health outcomes, and strengthen health systems:

STAKEHOLDER GROUP	TARGET AUDIENCE
REGULATION AND POLICY	Policymakers, regulators, health ministries
WORKFORCE DEVELOPMENT	Professional bodies, universities
DELIVERY OF SERVICES	Healthcare providers, employers, patients
PARTNERSHIPS AND FUNDING	Funders, health partners

FIP has been collecting and analysing global pharmacy workforce data through its surveillance programme since 2006. In the 2024 cycle, 79 countries responded—representing 71% of the world's population, offering valuable insights into workforce capacity, education, and regulation.

Detailed analysis, country-specific case studies, and expanded data will be available in the **full FIP Global Situation Report on Pharmacy 2025**.



**ACTION 1****Expand pharmacists' legal scope to authorise pharmacists to:**

1. Administer vaccines (e.g., influenza, COVID-19)
2. Prescribe medications for minor ailments (e.g., colds, allergies, urinary tract Infections)
3. Perform point-of-care testing (**POCT**, e.g., flu tests, cholesterol screening)

**ANTICIPATED IMPACT****EVIDENCE**

**Improved access to primary health care, enhanced patient convenience, and greater opportunities for early interventions**

Community pharmacies are widely perceived as accessible and convenient, with patients often consulting pharmacists through walk-in visits.

One study found that patients visit their community pharmacy nearly twice as often as they see their physician or other qualified health professionals.<sup>1,2</sup>

A meta-analysis found that pharmacist interventions improved vaccination rates by up to 51% compared to usual care.<sup>3</sup>

**Improved public health outcomes**

Symptom resolution rates after pharmacist-led minor ailment services (PMAS) consultations are high, ranging from **68% to 94%**.<sup>4</sup>

**Fewer unnecessary visits to family doctors and emergency rooms for minor conditions and routine vaccinations**

Multiple studies show that pharmacist-led minor ailment services (PMAS) reduce the burden on primary care, with **46% to 59%** of patients reporting they would have otherwise visited a family doctor.<sup>4-7</sup>

**Cost-effectiveness and economic impact**

Estimates indicate that pharmacist-led flu vaccinations in the **USA** have the potential to prevent up to 16 million cases annually, with projected savings of USD 69.5 billion (EUR 63.89 billion) in productivity losses.<sup>8</sup>

In **Switzerland**, pharmacist-administered flu vaccines prevented 17.6 primary care visits, 0.33 hospitalisations, and 1.1 hospital days per 100,000 people per season, leading to **CHF 143,021 (EUR 148,930) in savings**.<sup>9</sup>

Mean costs per PMAS consultation range from **GBP 1.44 (EUR 1.70) to GBP 15.90 (EUR 18.74)**, compared to much higher costs for GP and ED consultations.<sup>4-7</sup>

A trial in **Australia** showed PMAS led to better outcomes, with patients gaining 0.003 QALYs at an added cost of AUD 7.14 (EUR 4.07), resulting in a **cost-effectiveness ratio of AUD 2,277 (EUR 1,300.9) per QALY** — supporting PMAS as a cost-effective care model.<sup>10</sup>



## ACTION 2

Embed pharmacists in universal health coverage (UHC) and primary health care (PHC) strategies.

This includes:

1. Integrating pharmacists into national workforce planning
2. Adopting collaborative care models where pharmacists complement GP-led services, especially in rural or underserved areas
3. Establishing reimbursed medication review services for chronic disease and polypharmacy management
4. Scaling digital access to patient records to support safe, pharmacist-led interventions

### ANTICIPATED IMPACT

**Improved health outcomes for chronic and long-term conditions**

**Enhanced workforce capacity and team-based care**

**Optimised use of medicines and reduction in medication errors**

### EVIDENCE

Embedding pharmacists in primary care teams leads to better medication management, more comprehensive medication reviews, and improved patient outcomes, especially for those with complex medication needs or chronic conditions.<sup>11-13</sup>

Pharmacist-led interventions typically result in **HbA1c reductions** ranging from **0.7% to nearly 2%** over periods of three to 12 months, with some studies reporting even greater improvements in specific settings or populations.<sup>14-17</sup>

Inhaler technique improves after pharmacist-led education, with intervention group patients being **5 to 7 times** more likely to use their inhalers correctly compared to controls.<sup>18, 19</sup>

Integrating pharmacists into primary health care teams leads to a **reduction in physician workload**, as pharmacists take on responsibilities such as medication management, chronic and long-term condition monitoring, and patient education.<sup>20-24</sup>

Studies report that physicians value pharmacists' contributions, citing improved care coordination and reduced burnout.<sup>23, 24</sup>

Pharmacist involvement leads to **fewer physician visits per patient** and expands access to care, particularly in underserved or rural areas.<sup>20, 21</sup>

**Thailand:** Pharmacist-led medication reconciliation across all care transitions **reduced the risk of medication errors by 75%** compared to usual care.<sup>25</sup>

**South Africa:** A pharmacist-led diabetes medication therapy management programme in a Cape Town clinic identified **453 medication therapy problems across 104 patients** (an average of four per patient), demonstrating pharmacists' role in resolving drug-related issues and optimising treatment.<sup>26</sup>

### ACTION 3

Reform financing models including the introduction of reimbursement for professional services (e.g. medication review, counselling, prescribing)

#### ANTICIPATED IMPACT

**Sustainable delivery of services**

#### EVIDENCE

Consistent and adequate reimbursement allows pharmacists to deliver comprehensive medication management and other clinical services, leading to improved patient outcomes and reduced overall healthcare costs.<sup>27-29</sup>

**Washington State, USA:** A 20-month randomised trial found that offering financial incentives to community pharmacists significantly increased the provision of cognitive services for Medicaid recipients. The rate of interventions rose **from 0.67 to 1.59 per 100 prescriptions**.<sup>30</sup>



**ACTION 1**

Lead continuous professional development (CPD) programmes focused on upskilling pharmacists in telehealth, mobile health (mHealth), AI integration, and real-world data use.

**ANTICIPATED IMPACT**

**An enhanced workforce with a wider scope of practice**

**Improved patient care and access to new services**

**EVIDENCE**

According to the 2024 cycle of the FIP surveillance programme, **56 countries** have established mandatory CPD programmes for registered or licensed pharmacists.

The use of competency frameworks and CPD programmes is associated with improvements in pharmacists' performance, including their ability to integrate digital health tools and real-world data into clinical practice.<sup>31</sup>

Digital literacy and technology-focused training is essential for equipping pharmacists to manage e-prescribing, electronic health records, and data-driven care.<sup>32</sup>

Digital health tools and CPD programmes enable pharmacists to offer services like remote medication management, digital monitoring, and advanced triage, which can reach underserved populations and improve healthcare accessibility.<sup>33, 34</sup>

Digital interventions led by pharmacists, such as telepharmacy, web-based tools, and mobile apps, have shown positive effects on clinical outcomes (e.g., improved lab values, medication adherence, and drug-related outcomes).<sup>35</sup>

**ACTION 2**

Lead, participate in, and contribute to pharmacy workforce data collection, analysis, and surveillance at national and regional levels

**ANTICIPATED IMPACT**

**Identifying workforce gaps and inequalities**

**EVIDENCE**

There is a persistent uneven distribution of pharmacists between urban and rural areas, as well as between more-developed and less-developed countries.<sup>38, 39</sup>

The pharmacy workforce is experiencing increased female participation with the resulting need for greater surveillance of workplace inequality.

Gaps in competency development, advanced and specialist training, and early-career training strategies are common, especially in low- and middle-income countries.<sup>39-41</sup>

Identify regional and demographic imbalances<sup>36-38</sup>

Adjust educational intake and migration policies<sup>37</sup>

Develop targeted retention and distribution strategies<sup>36</sup>

Inform the creation of new service models of practice in response to changing healthcare needs and technological advances

**Australia:** Workforce data analysis showed a **slowing growth rate and aging pharmacist population**, partly due to reduced student numbers and changes in migration policy. These insights led to calls for a national workforce strategy to monitor trends and ensure adequate future supply, directly impacting workforce planning.<sup>37</sup>

**Nigeria:** Analysis of pharmacy workforce data revealed significant regional disparities and **overall low pharmacist density**, especially in the North East and North West. These findings highlighted the need for targeted policies to improve distribution and retention, influencing national workforce planning and policy development to address underserved areas.<sup>36</sup>

Monitoring trends and emerging roles

FIP surveillance data highlights a general increase in pharmacist numbers, a shift toward more clinical and patient-care roles, and an expanding use of pharmacy support staff, but challenges remain in workforce distribution, job satisfaction, and adapting to changing healthcare needs.

### ACTION 3

Diversify pharmacy degrees and post-registration development to acknowledge specialisation tracks (e.g., advanced clinical roles, digital health, research, public health).

#### ANTICIPATED IMPACT

Recognition of advanced and specialised practice to provide a wider scope of practice and levels of service provision

#### EVIDENCE

FIP has developed *the Global Advanced Development Framework (GADF)*, which serves as a foundation for many national frameworks. Countries like **Kuwait** and **Indonesia** have adopted and adapted the *FIP GADF* to create their own advanced competency frameworks, ensuring alignment with global standards while addressing local needs.<sup>42-44</sup>

**Australia** has established the *Advanced Pharmacy Practice Framework (APPF)*, which is integrated with its National Competency Standards Framework. The APPF is designed to be flexible and applicable across various areas of pharmacy practice, and it has been formally endorsed by national pharmacy organisations and the Pharmacy Board of Australia.<sup>45-47</sup>

Credentialing programmes, such as those piloted by the Australian Pharmacy Council, use practice portfolios to assess and formally recognise advanced practitioners.<sup>47</sup>

**Improved alignment  
between education and  
health system needs**

**Competency-based education frameworks** ensure that graduates possess the skills required for contemporary pharmacy practice, including public health emergency response and digital health, aligning with health system demands for adaptable, practice-ready professionals.<sup>48, 49</sup>

**Enhanced career  
pathways and  
retention**

Early-career pharmacists and pharmaceutical scientists report higher satisfaction when they have access to training, autonomy, and opportunities for advancement, which are often features of specialised career pathways.<sup>50</sup>

Professional development opportunities, supportive leadership, and recognition of advanced skills are key drivers for retaining pharmacists and pharmacy technicians across various settings.<sup>51-53</sup>



**ACTION 1**

Support cross-disciplinary learning and promote collaborative practice models and agreements between HCPs, resulting in inclusive health care teams.

**ANTICIPATED IMPACT****EVIDENCE**

**Improved continuity and coordination of care**

Including pharmacists in multidisciplinary teams leads to **lower mortality rates, shorter hospital stays, and fewer adverse drug events**, especially in critical care and chronic disease management.<sup>54, 55</sup>

**Improved clinical outcomes**

Collaborative care models lead to significant improvements in chronic disease management, such as better control of diabetes (**lower HbA1c**), hypertension (**lower blood pressure**), and **hyperlipidaemia (improved cholesterol levels)** compared to usual care.<sup>56-58</sup>

**Increased acceptance of pharmacist recommendations by physicians**

Physician acceptance rates typically range from about **40% to over 90%**, with higher rates seen when pharmacists are integrated into care teams.<sup>59-62</sup>

**ACTION 2**

Incorporate pharmacists' accessibility and expertise in care protocols for climate-related health risks (e.g., managing patients during heatwaves, disaster response, air pollution, extreme weather-related medication needs)

**ANTICIPATED IMPACT****EVIDENCE**

**Increased health system capacity in climate-related emergencies**

Disadvantaged communities, particularly rural, low-income, and minority neighbourhoods, are disproportionately affected by reduced pharmacy access during emergencies, worsening health disparities.<sup>63</sup>

**Improved medication continuity and risk mitigation**

In disaster settings, pharmacists triage evacuees, assess immunisation needs, and provide clinical advice, often serving as the first point of contact for displaced or vulnerable individuals.<sup>64-66</sup>

**Enhanced public health communication and education**

Pharmacists are often on the frontlines during public health emergencies, providing essential services such as education, screening, and risk communication to the public on, for example, toxic chemical exposure and medication safety during crises.<sup>67-69</sup>

### ACTION 3

Champion pharmacy-led public health awareness campaigns to highlight pharmacy's contribution and involvement.

#### ANTICIPATED IMPACT

**Increased patient awareness and health literacy**

**Strengthened trust in pharmacists as public health professionals**

**Improved uptake of health interventions**

#### EVIDENCE

Pharmacy campaigns and counselling can promote responsible self-care, such as appropriate use of over-the-counter medications and adherence to preventive health behaviours.<sup>70, 71</sup>

Educational interventions, such as videos demonstrating pharmacist-patient counseling, increase public understanding of pharmacists' education, scope of practice, and the value of their counseling. After exposure to such materials, people report much higher levels of knowledge and more positive perceptions of pharmacists as healthcare professionals.<sup>72, 73</sup>

Targeted awareness campaigns have been shown to improve both perceptions and use of expanded pharmacy services, especially in rural communities. Increased knowledge and urgency were the strongest predictors of intent to use these services, and post-campaign data showed a significant rise in service use rates.<sup>74</sup>

Community pharmacy initiatives, including those promoted through awareness campaigns, have demonstrated positive effects on health outcomes in areas such as smoking cessation, weight management, and immunisation uptake.<sup>75</sup>

**ACTION 1**

Ensure pharmacy-specific indicators are included in PHC and UHC monitoring frameworks (e.g., pharmacist density, service availability, health care savings due to interventions).

**ANTICIPATED IMPACT**

**Better informed investment and resource allocation decisions**

**Identification of service-needs gaps and inequities**

**Accountability and performance tracking for pharmacy interventions**

**Strengthened advocacy and policy support for pharmacy investment**

**EVIDENCE**

The use of pharmacist-specific indicators enables health systems to better document and demonstrate the contributions of pharmacists to patient outcomes, chronic disease management, and overall care quality. This evidence can justify and attract sustainable funding for pharmacy services, as seen when clinical outcomes improved and led to expanded, grant-funded pharmacist positions in community health centres.<sup>76, 77</sup>

Data on pharmacist distribution reveal disparities, with rural and remote communities often having the lowest availability of pharmacists and, in some cases, no local access at all. For example, in **Ontario, 72%** of northern rural communities lacked local pharmacist access compared to **24%** in southern communities.<sup>78</sup>

Pharmacy-specific outcome indicators are essential for funders to evaluate the value and impact of pharmacy services. The most useful indicators are those that clearly demonstrate improvements in patient outcomes, cost savings, service quality, and reach. Key indicators include total healthcare cost savings, clinical outcomes (such as reduced hospital admissions), medication adherence, and service use.<sup>79-81</sup>

Systematic metrics provide the evidence base needed for funders and policymakers to advocate for payment reforms, new reimbursement codes, and quality measurement programmes that recognise and reward the value of pharmacy services.<sup>81, 82</sup>

**ACTION 2**

Invest in capacity-building for pharmacy educators and trainers to ensure sustainability, high-quality education systems that produce competent pharmacy graduates, particular in LMIC and fragile settings.

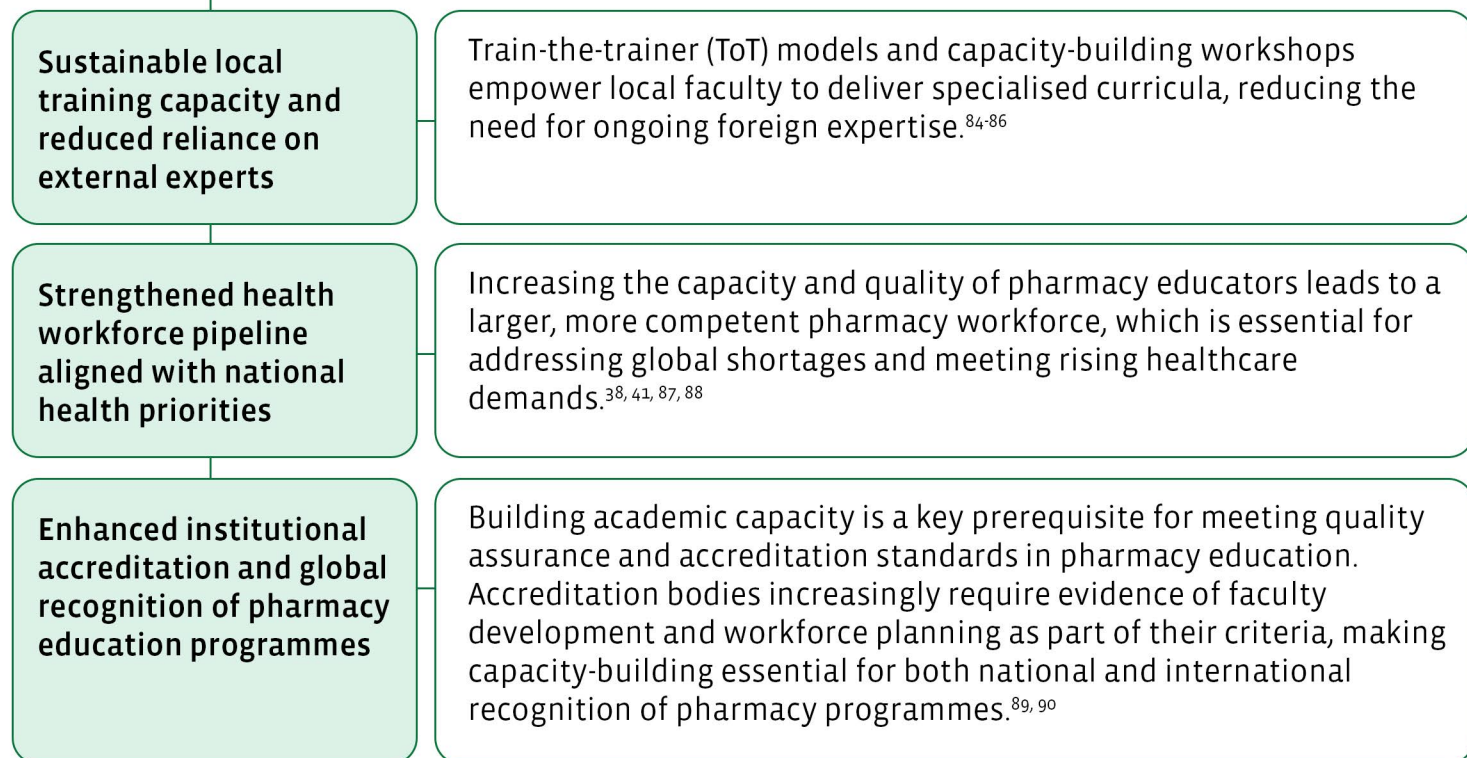
**ANTICIPATED IMPACT**

**Improved quality of pharmaceutical education and training**

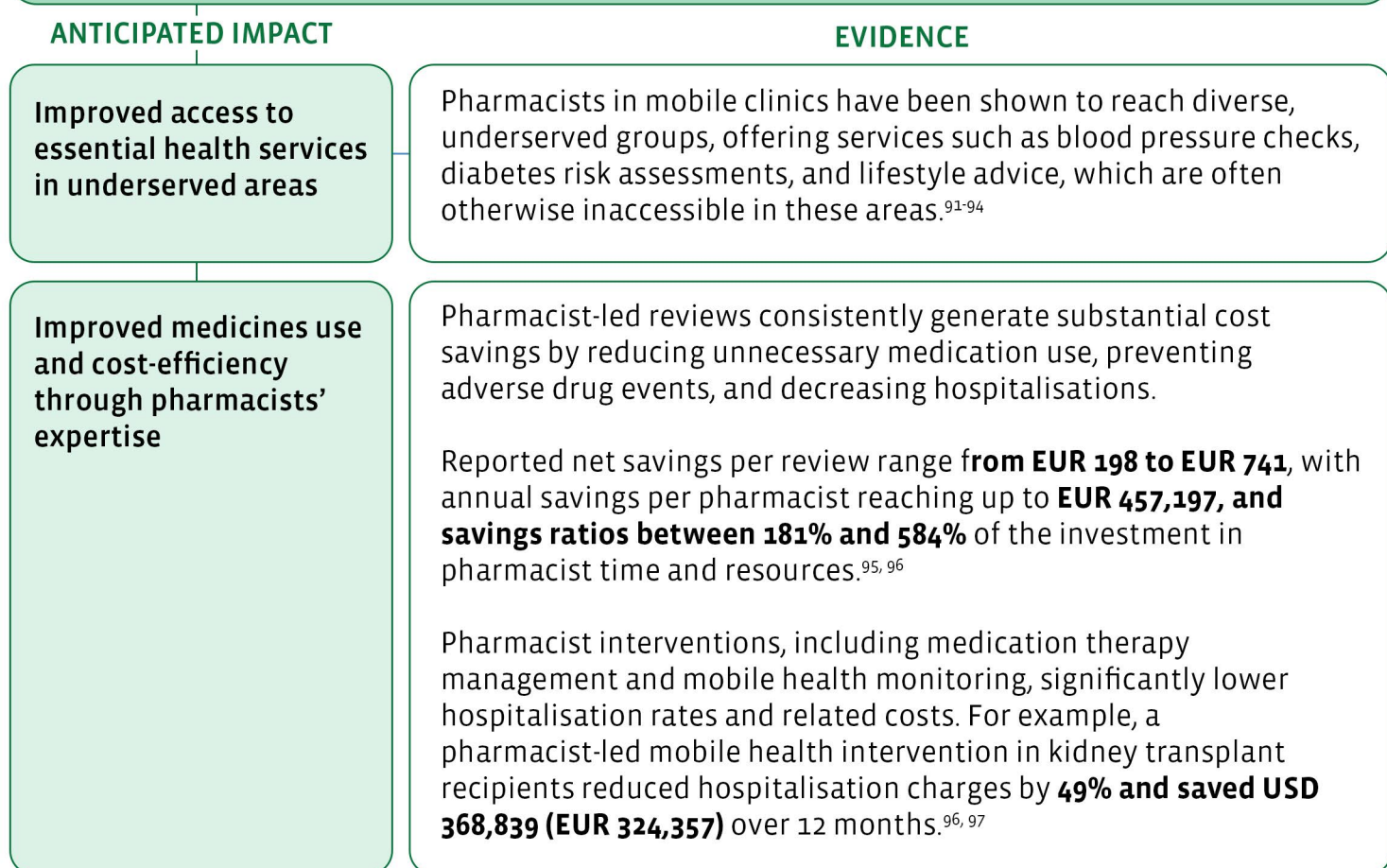
**EVIDENCE**

Studies suggest that investments in competency-based education frameworks can improve pharmacy graduates' clinical skills, work readiness, and cultural competency.<sup>31, 83</sup>





**ACTION 3**  
Support and fund the development and scaling of collaborative care models — where pharmacists and pharmacy technicians are part of health teams, community clinics, and mobile care units.



**Cost-effective delivery  
of integrated primary  
care services**

**Better chronic disease  
outcomes and  
continuity of care**

Pharmacist integration into healthcare teams for polypharmacy patients leads to significant cost reductions. Reported savings range from approximately **USD 3 (EUR 2.64) to USD 4,966 (EUR 4,367)** per patient per year in various studies, primarily due to fewer emergency visits and hospitalisations, and optimised medication use.<sup>98-101</sup>

A randomised controlled trial found that a collaborative pharmacist-physician medication therapy management programme for elderly patients resulted in a total medical expenditure reduction of about **USD 127,015 (EUR 111,697)** over 16 months compared to usual care.<sup>99</sup>

Collaborative care models consistently show greater improvements in clinical outcomes, such as blood pressure, cholesterol, and glycosylated hemoglobin (HbA1c) levels, compared to physician-only teams.<sup>56, 57, 102</sup>

These improvements translate into fewer hospitalisations and better chronic disease control, with some studies reporting a **return on investment exceeding 500%**.<sup>56</sup>

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