Engagement of private health sector in communicable disease and immunization programmes in Pakistan

Ghada Muhjazi[1], Nasir Idrees[1], Hassan Salah[1], Muhammad Naveed Asghar[2], Ali Shirazi[2] and Yvan Hutin[1]

[1]WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt (Correspondence to Ghada Muhjazi: muhjazig@who.int). [2]WHO Pakistan Country Office, Islamabad, Pakistan.

Abstract

Background: In Pakistan, where the burden of communicable diseases remains high, the private sector accounts for 62% of health care provision.

Aim: To describe the role of the private sector in communicable disease management in Pakistan and inform a more effective engagement towards achieving Universal Health Coverage.

Methods: We searched the literature and available documents on policies, regulations and experiences in private health sector engagement in Pakistan. We interviewed policy level experts regarding the formulation of national health policies and plans and a sample of private providers using a structured questionnaire to assess their awareness of and engagement in communicable disease programmes.

Results: Published reports described initiatives to engage the private sector in improving coverage for a package of care and programme-specific initiatives. Pakistan did not have a national policy for structural engagement, and regulations were limited. Policy level experts interviewed perceived the private sector as market-driven and poorly regulated. Thirty-nine percent of private sector providers interviewed were aware or had been trained in procedures or guidelines, and 23% of them had had their performance monitored by government.

Conclusion: We recommend that the Ministry of Health provide overall vision for the operations of the public and private health sectors so that both sectors can complement each other towards the achievement of Universal Health Coverage, including for communicable diseases.

Keywords: Private sector, public sector, communicable disease, health policy, Pakistan, Universal Health Coverage, UHC

Citation: Muhjazi G, Idrees N, Salah H, Asghar MN, Shirazi A, Hutin Y. Engagement of private health sector in communicable disease and immunization programmes in Pakistan. East Mediterr Health J. 2024;30(1):46–52. https://doi.org/10.26719/emhj.24.005

Received: 14/12/22; Accepted: 10/10/23

Background

The United Nations Sustainable Development Goals (SDGs) emphasize the need for partnerships to attain SDG3 (good health and well-being), including the Universal Health Coverage (UHC) target *(1)*. With this in mind, health systems need to find effective ways to engage the private sector. In 2021, the Global Health Observatory (GHO) estimated that the private sector provided 40–62% of all health care services in WHO regions, and that out-of-pocket expenditure comprised 19–40% of current health expenditures *(2)*.

In 2018, the WHO Eastern Mediterranean Region (EMR) prioritized the expansion of UHC as part of the regional Health for All by All vision *(3)*. In 2019, GHO estimated that the private sector accounted for 62% of health care provision in the region *(2)*. However, private sector contribution most often occurred without collaborative planning and this placed limitations on opportunities to address population health needs and achieve financial health protection.

GHO also estimated that out-of-pocket expenditures in the region accounted for 36.2% of the current health expenditure, the second highest among all WHO regions *(2)*. In 2018, WHO endorsed a framework for effective engagement with the private health sector, with the aim of expanding service coverage for UHC. The framework recommended a 5-element strategy for engagement that included developing a policy framework with a financial strategy, identifying strategic purchasing options, securing regulatory mechanisms, improving the quality of care and setting up a monitoring and reporting mechanism.

Pakistan, with a 2020 population of 220.9 million, is the most populated country in EMR. Its National Health Vision 2016–2025 prioritized UHC, and according to the 2019–2020 Pakistan social and living standard survey, private medical providers ensured 58% of the consultations (55% in rural areas and 63% in urban areas) *(4)*. The 2017–2018 survey reported that out-of-pocket health expenditure in the country accounted for 51.7% of the total health expenditure, 81% of which was spent in the private sector *(5)*.

In 2019, communicable diseases as well as reproductive, mother and neonatal child health accounted for 49.9% of the burden of disease in Pakistan *(5)*. Many of the private outpatient visits were for communicable diseases. There is therefore a need to review the private sector

contribution to the provision of communicable disease services and optimize this engagement, as outlined in the WHO framework for action.

This paper describes private sector initiatives for communicable diseases in Pakistan and the context in which they operate. We expect that our recommendations would support the Ministry of Health in strengthening this engagement to achieve UHC.

Methodology

We reviewed available initiatives and context, including policies, regulations and challenges from the perspectives of the policy experts and the private sector . We used a mix of methods, including document review, key informant interviews and questionnaire-based interviews. The document review provided a description of available initiatives. Interviews with policy-makers revealed their perspective on this engagement, while interviews with private sector providers clarified their engagement and adherence to national guidelines. We triangulated data generated from the 3 sources to validate the results and contextualize this private sector engagement.

Document review

The literature was reviewed using relevant search terms in both PubMed and Google Scholar search engines. We included papers published between 1990 and 2020. Next, we examined national health accounts data and published findings from surveys on the share of services provided through the private sector. We also reviewed policy documents related to private sector engagement in the health sector at national and provincial levels as well as existing laws, enactments and regulations that defined the activities of the private sector.

Key informant interviews

Ten policy-level experts were selected for interview based on their engagement in policy formulation at the national level. We used an open-ended, semi-structured questionnaire with supplementary questions to map the views of respondents about engagement of the private sector in formulating national health policies and plans, and to explore possible mechanisms for facilitating such engagement.

Interviews with private providers

We selected 30 private health care providers distributed across preventive and curative health care services at the national and subnational levels in Punjab and Khyber Pakhtunkhwa provinces. We contacted participants by phone due to COVID-19 restrictions. We excluded private health care providers with dual practice in the public and private sectors to avoid bias related to their engagement in public programmes. We used a close-ended structured questionnaire that addressed awareness of and adherence to national communicable diseases guidelines on HIV, tuberculosis, malaria, COVID-19, and hepatitis B and C.

Data analysis

We described the patterns of engagement of the private providers. From the key informant interviews, we extracted common themes generated from the transcripts. From the questionnaire-based interviews, we estimated the proportion of engagement in different aspects of engagement for diverse communicable diseases and expressed it as a percentage. We then triangulated the elements from the document reviews, stakeholder interviews and provider interviews to determine whether the engagement of the private sector for communicable diseases was consistent with the WHO regional framework. This provided a cross-validation of the results and helped in contextualizing private sector engagement towards the achievement of UHC.

Results

The study identified 2 types of initiatives: initiatives to improve coverage and disease-specific initiatives.

National-level initiatives to improve coverage

Two major initiatives to improve coverage for a package of care in Pakistan were identified. The first was the People's Primary Health Care Initiative 2006 (PPHI), where frontline government basic health units contracted a government-sponsored non-governmental organization (NGO) *(6)*.

The second initiative, the Sehat Sahulat Programme (SSP) launched in 2016 aimed to attain UHC in Pakistan. SSP partnered with the private health sector by enrolling private health facilities in service provision, with the aim of improving access by the underserved population to good quality medical services, with the assistance of a micro health insurance scheme. The priority package of SSP covers chronic infectious diseases, including HIV and hepatitis *(7)*, and only inpatient health services.

Provincial-level initiatives to improve coverage

In Khyber Pakhtunkhwa, in addition to the PPHI that covered 17 districts and that ended in 2016 *(8)*, we identified 2 initiatives. First, the Multi Donor Trust Fund initiative (2012–2015) allowed provincial health authorities to outsource secondary health care services to national and international NGOs in 6 underserved districts. This initiative ended with no formal evaluation *(9)*.

A second initiative aimed to revitalize and improve primary healthcare in the Battagram District of Khyber Pakhtunkhwa (2008–2011). The initiative was based on a tripartite collaboration between the provincial government, the World Bank and an international non-government organization (NGO). The project ended in 2011 due to lack of funding *(8)*.

In Sindh, in addition to the PPHI that covered 22 districts *(10)*, we identified 2 initiatives. First, the health authority contracted an NGO for the management of poorly functioning rural health centres and secondary care in 9 districts to expand access to the underserved

population *(11)*. Second, the Indus Health Network in 2015 managed public hospitals and primary care clinics with a focus on the rural and migratory population of Pakistan.

In Baluchistan, in addition to the PPHI that covered 23 districts *(12)*, 3 major initiatives were operated by international NGOs through a formal agreement with the government. These initiatives extended access to services in 90 basic health units and 4 district hospitals *(13)*.

In Punjab, PPHI covered 12 districts *(14)*. As a sequel of the PPHI, in 2017, Punjab Health Facilities Management Company (a not-for-profit company) was established to manage provincial health care facilities in 14 districts *(15)*. In 2020, Punjab Province was in the process of outsourcing 4 secondary healthcare hospitals to an international trust.

Disease-specific initiatives

We identified 4 initiatives, related to tuberculosis, HIV, immunization and COVID-19. The government purchased HIV services from NGOs through performance-based contracts in 2003–2008 *(16)*.

Since 2014, the National TB Control Programme (NTP) has been engaging the private health sector in the provision of TB service sthrough major NGOs. The 2019 NTP annual report noted that the private non-NTP providers contributed to the notification of 42% of cases, compared with 22% in 2015. Collaboration also included expansion of TB laboratories in the private health sector *(17)*.

In 2018, the national immunization programme signed a memorandum of understanding with the private health facilities to deliver quality immunization services according to the national vaccination schedule *(18)*. The memorandum of understanding allowed provision of vaccines to private providers while they, in turn, would share reports and data on vaccine doses, surveillance and adverse events every month.

In 2020, the government used private health facilities and equipment on loan for the treatment of COVID-19 cases as well as for enhancing daily testing capacity. This was accomplished through formal agreements with private laboratories to offer free or subsidized COVID-19 tests to the public.

National policy, laws and regulations

In 2010, Pakistan issued an act on public-private partnership that aimed to promote inclusive social and economic development through 3 mechanisms: provision of infrastructure; mobilization of private financing for public initiatives; and facilitation of investment by the private sector. There was no focus on health issues *(19)*, nor was there a health-specific national policy with a defined financial strategy for private health sector engagement in Pakistan.

The national health vision 2016-2025 highlighted the lack of private sector regulation and the weak capacity to contract services in Pakistan as challenges for equitable access to services *(20)*. Four acts subsequently established healthcare commissions in Islamabad Capital Territory, Khyber Pakhtunkhwa, Sindh and Punjab provinces, with the goal of regulating the public and private health sectors. The government mandated the commissions to register, license and accredit public and private sector health facilities.

Another key enactment related to communicable diseases and immunization was the West Pakistan Epidemic Diseases Act (1958) *(21)* makes provision for measures during epidemics and the delegation of authority to provincial government.

Key informant interviews

The key informant interviews highlighted the limitations of the regulatory framework for private sector engagement. Most respondents mentioned the lack of regulation or mechanisms to engage the private sector in the planning and provision of communicable disease services. They also mentioned the private sector's lack of interest in reporting on communicable diseases in the absence of a regulatory requirement and government oversight. Some key informants indicated that poor quality private service was a major concern, especially in rural settings.

The private health sector approach aims to maximize profits focusing on specialized care with limited activities in primary and preventive care. Consequently, respondents expressed concern that the private sector was not addressing the population's health needs.

Interviews with private providers

Among the 30 providers interviewed, the proportion of respondents who had or used some of the national guidelines on communicable diseases ranged from 47% for hepatitis B testing guidelines to 80% for HIV testing guidelines (see Table 1).

The proportion of respondents who had copies of communicable disease guidelines ranged between 13% for HIV testing and 53% for hepatitis B. The implementation status of these guidelines differed by disease. The proportion of providers who reported partial implementation of the guidelines ranged from 33% for HIV to 67% for tuberculosis, dengue fever and malaria, and 87% for COVID-19.

Of the respondents, 23% had been monitored on performance by the health authorities and 39% received training on communicable disease procedures and guidelines.

Discussion

Two types of initiatives engaged the private health sector in Pakistan, either to improve coverage of health services or to focus on programme-specific interventions, for example for tuberculosis diagnosis or vaccination coverage. Parallel initiatives for a package of care offered an opportunity to expand coverage, including

Table 1 Private provider awareness and implementation of communicable disease guidelines, Pakistan 2020

Intervention	Reference to national guidelines				Level of implementation			
Testing persons with signs/ symptoms of:	Some awareness	No awareness	Have a copy of guidelines	Total	Never	Sometimes	Daily	Total
HIV infection	24 (80%)	2 (7%)	4 (13%)	30	20 (67%)	10 (33%)	0 (0%)	30
Malaria, tuberculosis, dengue fever	23 (77%)	0 (0%)	7 (23%)	30	5 (16%)	20 (67%)	5 (16%)	30
COVID-19	22 (74%)	2 (7%)	6 (19%)	30	4 (13%)	26 (87%)	0%	30
Hepatitis C infection	21 (71%)	0 (0%)	9 (29%)	30	2 (7%)	11 (36%)	17 (57%)	30
Hepatitis B Infection	14 (47%)	0 (0%)	16 (53%)	30	1 (3%)	21 (71%)	8 (27%)	30

for communicable diseases, but they were not based on a national policy with a defined financial strategy.

The private sector focused on specialized care, particularly in urban areas, with less interest in prevention and health promotion. Pakistan's policy on public-private partnership defined the general scope of partnership and recognized the need for sector-specific policies to accommodate the needs of individual sectors. However, there was no national policy to engage the private sector towards achieving UHC according to the WHO regional framework.

Regulations for the private sector covered registration, licensing and accreditation. However, the government did not regulate the geographical distribution or coverage of the private sector for preventive and curative services towards achieving UHC. According to WHO, private sector regulations and related financial policy should steer mixed delivery of health services in the public interest *(22)*.

The policy framework provided limited opportunities for partnering with the private sector to make substantial progress towards achieving UHC. Only half of the population in Pakistan has access to essential health services *(23)*.

In Tunisia, the government adopted a robust legal and regulatory norm that addresses population needs and frames licensing *(24)*. The coverage of essential services in Tunisia exceeded 67, according to the World Bank UHC index *(25)*. In contrast, the regulatory norm in Pakistan is inadequate. In the absence of expansion, it could not steer mixed delivery of health services to ensure universal coverage with clear oversight role, incentives for performance and enforcement mechanisms.

In the absence of a regulatory framework in Pakistan, private doctors had no reason to report on notifiable communicable diseases or to adhere to communicable disease guidelines. Disease- or programme-specific initiatives, such as in the case of tuberculosis or immunization, addressed this better. This could be due to focused interventions, better communication or availability of incentives (e.g. training, provision of free vaccines to the private providers, provision of external funding through the Global Fund for AIDS, TB and Malaria). This underlines the importance of creating incentives for engaging private doctors.

Lessons learnt from 6 countries that have successfully engaged the private sector highlight motivation and incentives as the first principle for organizing the private sector *(26)*. Initiatives to purchase selected services from the private sector could be borrowed from immunization and tuberculosis to address more key interventions.

Limitations

This report is subject to some limitations. Only a few publications exist on private sector engagement for communicable diseases. As such, we obtained relevant materials for our review from other sources related to engagement of the private sector in healthcare in general.

The report did not examine the purchasing mechanisms for private services. It focused on describing existing initiatives for engagement that could improve coverage of communicable disease services regardless of purchasing mechanisms. In addition, we interviewed only 10 key informants at the national level and 30 private providers for the questionnaire-based interview. This limited our capacity to generalize our findings. However, the alignment between findings from the interviews with policy experts and the findings from literature indicate some consistency regarding the situation.

Conclusion

Our review led to 3 conclusions. First, the lack of a national policy for private health sector engagement hinders the systematic engagement of the private sector in Pakistan. Beyond ad hoc examples of success, the country struggles to engage private health services in communicable disease control in the context of UHC.

Regulations to coordinate provision of services by the private sector are limited and do not align with the comprehensive governance vision. The lack of an appropriate set of incentives for the private sector limits its engagement, including for reporting of communicable diseases.

Therefore, the Ministry of Health and provincial health authorities may consider increasing their capacity for stewardship and formulating a national policy that has a defined strategy as well as active market management and district-level work plans, with the involvement of all relevant stakeholders. Mapping existing private

providers across the country in terms of distribution and scope of services and providing targets on primary health care services (including communicable disease and immunization related care) could inform this strategy.

The Pakistan health authorities need to review relevant regulations to ensure that they provide a legal basis for the vision of public-private partnership towards UHC and to strengthen the role of the private sector in communicable disease prevention and health promotion activities.

Health authorities need to explore and institute the right motivations that, along with regulations, can optimize private sector engagement in communicable disease control and adherence to guidelines and reporting. Implementation of these recommendations could lead to progress in private sector engagement and make key contribution to communicable disease control and towards achieving health for all by all as indicated in the WHO guidelines.

Funding: None.

Competing interests: None declared.

Participation du secteur privé de la santé aux programmes concernant les maladies transmissibles et la vaccination au Pakistan

Résumé

Contexte : Au Pakistan, où la charge des maladies transmissibles reste élevée, le secteur privé est responsable de 62 % de la prestation de soins de santé.

Objectif : Décrire le rôle du secteur privé dans la prise en charge des maladies transmissibles au Pakistan et favoriser une meilleure participation de ce dernier afin de parvenir à la couverture sanitaire universelle.

Méthodes : Nous avons effectué des recherches dans la littérature et dans les documents disponibles sur les politiques, les réglementations et les expériences relatives à la participation du secteur privé dans le domaine de la santé au Pakistan. Nous avons interrogé des experts de la prise de décision sur la formulation de politiques et de plans nationaux en matière de santé ainsi qu'un panel de prestataires privés à l'aide d'un questionnaire structuré pour évaluer leur connaissance des programmes concernant les maladies transmissibles et leur degré de participation à ces programmes.

Résultats : Les rapports publiés décrivaient des actions visant à inciter le secteur privé à élargir la couverture à un ensemble de soins et d'initiatives spécifiques à des programmes. Le Pakistan ne disposait pas de politique nationale en matière de participation structurelle et les réglementations dans ce domaine étaient limitées. Les experts interrogés considéraient que le secteur privé était soumis aux lois du marché et était peu réglementé. Trente-neuf pour cent des prestataires du secteur privé interrogés connaissaient les procédures ou les lignes directrices ou avaient été formés à cet égard, et 23 % d'entre eux avaient été contrôlés par le gouvernement pour leurs performances.

Conclusion : Nous recommandons que le ministère de la Santé fournisse une vision globale des opérations des secteurs public et privé de la santé, afin que les deux secteurs puissent se compléter mutuellement en vue de réaliser la couverture sanitaire universelle, y compris pour les maladies transmissibles.

مشاركة القطاع الصحي الخاص في برامج الأمراض السارية والتمنيع في باكستان

غادة محجازي، ناصر إدريس، حسن صلاح، محمد نافيد أصغر، علي شيرازي، إيفان أوتين

الخلاصة

الخلفية: يقدم القطاع الخاص 62٪ من خدمات الرعاية الصحية في باكستان، حيث لا يزال عبء الأمراض السارية مرتفعًا.

الأهداف: هدفت هذه الدراسة الى وصْف دور القطاع الخاص في تدبير الأمراض السارية في باكستان، والتوجيه بمشاركة أكثر فعالية صوب تحقيق التغطية الصحية الشاملة.

طرق البحث: بحثنا في المؤلفات والوثائق المتاحة عن السياسات واللوائح والخبرات في مجال مشاركة القطاع الصحي الخاص في باكستان. وأجرينا مقابلات مع خبراء على مستوى السياسات بشأن صياغة السياسات والخطط الصحية الوطنية، و مع عينة من مقدمي الخدمات من القطاع الخاص باستخدام استبيان مُنظَّم لتقييم وعيهم ببرامج الأمراض السارية ومشاركتهم فيها.

النتائج: وصفت التقارير المنشورة المبادرات الرامية إلى إشراك القطاع الخاص في تحسين التغطية بمجموعة من مبادرات الرعاية والمبادرات الخاصة ببرامج محددة. ولم تكن لدى باكستان سياسة وطنية للمشاركة الهيكلية، وكانت اللوائح محدودة. ورأى الخبراء على مستوى السياسات الذين أجريت

معهم مقابلات أنَّ القطاع الخاص تحركه احتياجات السوق ويعاني من سوء التنظيم. وكان 39٪ من مقدمي الخدمات من القطاع الخاص الذين أجريت معهم مقابلات على علم بالإجراءات أو المبادئ التوجيهية أو تلقوا تدريبًا عليها، وكانت الحكومة ترصد أداء 23٪ منهم.

الاستنتاجات: نُوصي بأن تقدم وزارة الصحة رؤية شاملة لعمليات القطاعين الصحي العام والخاص، حتى يمكن للقطاعين أن يكمل أحدهما الآخر والتعاون نحو تحقيق التغطية الصحية الشاملة، بما يشمل مكافحة الأمراض السارية.

References

1. WHO, Engaging the private health service delivery sector through governance in mixed health systems: strategy report of the WHO Advisory Group on the Governance of the Private Sector for Universal Health Coverage, 2020. file:///C:/Users/muhjazig/Downloads/9789240018327-eng%20(1).pdf, last accessed 22 April 2021.
2. WHO, Global Health Observatory, https://www.who.int/data/gho/data/themes/topics/indicator-groups/sources-of-care-in-mixed-health-systems, last accessed 13 May 2022.
3. WHO, EMRO, Vision 2023 Eastern Mediterranean Region, 2018. https://applications.emro.who.int/docs/RD_Vision_2018_20675_en.pdf?ua=1&ua=1, last accessed 5 November 2022.
4. Pakistan Bureau of Statistics, Pakistan Social and Living Standards Measurements Survey, 2019-2020. https://www.pbs.gov.pk/sites/default/files//pslm/publications/pslm_district_2019-20/PSLM_2019_20_District_Level.pdf, last accessed 26 July 2021.
5. Ministry of National Health Services, Regulations & Coordination, 2021 Monitoring Report Universal Health Coverage. https://phkh.nhsrc.pk/sites/default/files/2022-08/Universal%20Health%20Coverage%20Monitoring%20Report%20Pakistan%202021.pdf, last accessed 1 June 2023.
6. Martinez J, Pearson M, England R, Donoghue M, Lucas H, Khan MS et al. Third-Party Evaluation of the PPHI in Pakistan: Findings, Conclusion and Recommendations, 2011. http://www.pphisindh.org/TPE.pdf
7. Sehat Sahulat Programme. https://www.pmhealthprogram.gov.pk/about-us/, last accessed 15 May 2023.
8. The Technical Resource Facility and related initiatives (TRF+), Public private partnership in health: the experience of Khyber Pakhtunkhwa: Technical Paper, 2019. https://www.mottmac.com/Download/AdminFileWithFilename?id=37732&cultureId=127&-filename=technical-paper---public-private-partnership-in-health---the-experience-of-kppdf file:///C:/Users/muhjazig/Downloads/Technical%20Paper%20-%20Public%20private%20partnership%20in%20health%20-%20the%20experience%20of%20KP.pdf, last accessed 26 July 2023.
9. WHO, Role and contribution of the private sector in moving towards universal health coverage, 2016 https://apps.who.int/iris/bitstream/handle/10665/249567/EMROPUB_2016_EN_18890.pdf?sequence=1&isAllowed=y, last accessed 3 February 2023.
10. Health Department of Sindh, PPHI Sindh. https://sindhhealth.gov.pk/PPHI-Program, last accessed 15 May 2023.
11. Department of Health Government of Sindh, operational plan to implement phase 1 (2014–2017) of the health sector strategy Sindh. https://phkh.nhsrc.pk/sites/default/files/2019-06/Phase%201%20Operational%20Plan%20Health%20Strategy%20Sindh%202014-17.pdf.
12. PPHI Baluchistan, PPHI- Baluchistan Annual Report, Baluchistan, 2016. https://pphib.org/pphi-b/wp-content/uploads/2019/10/PPHI-B-Annual-Report-2016.pdf, last accessed 1 June 2023.
13. Zaidi S, Salam R, Bhutta ZA, Ansari S, Rizvi SS, Zehra BF et al. 2013. Public private partnerships for improving maternal and neonatal health service delivery a review of the evidence. Research and Advocacy Fund, British Council Islamabad, 2013:1–70. http://ecommons.aku.edu/pakistan_fhs_mc_chs_chs/207.
14. Technical Resource Facility, Third Party Evaluation of the Peoples' Primary Healthcare Initiative (PPHI) in Pakistan, Islamabad, 2014. https://phkh.nhsrc.pk/sites/default/files/2019-06/Evaluation%20Peoples%20Primary%20Healthcare%20Initiative%20PPHI%202010.pdf, last accessed 26 July 2023.
15. Government of Punjab, Punjab Health Sector Strategy 2019-2028. https://phkh.nhsrc.pk/sites/default/files/2021-06/Health%20Sector%20Strategy%20Punjab%202019-2028.pdf, last accessed 26 July 2023.
16. Zaidi S, Mayhew SH, Cleland J, Green AT, Context matters in NGO–government contracting for health service delivery: a case study from Pakistan, Health Policy and Planning, 2012;27(7):570–581, DOI: 10.1093/heapol/czr081, last accessed 26 July 2023.
17. Pakistan National TB Control Programme, Annual Report, 2019, unpublished report.
18. National Immunization Programme, Pakistan, Memorandum of agreement for delivery of immunization services at private healthcare facility, 2018.
19. Pakistan Economic Coordination Committee (ECC) of the Cabinet, Pakistan Policy on Public Private Partnerships, Pakistan, 2010. https://ocd.lcwu.edu.pk/cfiles/City%20and%20Regional%20Planning/CRP-45/Lec5PPPPolicyFINAL14-May-2010.pdf, last accessed 26 July 2023.
20. Ministry of Health of Pakistan, National Health Vision, Pakistan 2016-2025. https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/pakistan/national_health_vision_2016-25_30-08-2016.pdf, last accessed 26 July 2023.
21. The West Pakistan Epidemic Diseases Act, Pakistan, 1958. https://www.healthkp.gov.pk/public/uploads/acts/1958_36_The_West_Pakistan_Epidemic_Diseases_Act_1958.pdf

22. WHO, Technical series on Primary Health Care: The private sector, universal health coverage and primary health care, 2018. https://www.who.int/docs/default-source/primary-health-care-conference/private-sector.pdf, last accessed 26 July 2023.

23. MNHSRC, 2021 Monitoring Report Universal Health Coverage Pakistan, 2021. https://phkh.nhsrc.pk/sites/default/files/2021-12/Universal%20Health%20Coverage%20Monitoring%20Report%20Pakistan%202021.pdf, last accessed 20 December 2022.

24. WHO, Analysis of the private health sector in countries of the Eastern Mediterranean: Exploring unfamiliar territory, 2014. https://applications.emro.who.int/dsaf/EMROPUB_2014_EN_1790.pdf?ua=1, last accessed 1 June 2023.

25. The World Bank, UHC service coverage index 2019. https://data.worldbank.org/indicator/SH.UHC.SRVS.CV.XD?locations=TN, last accessed 2 May 2023.

26. USAID, Callahan S, Nakhimovsky S, Sparks S, Gitonga N. Organizing the Private Sector to Support Universal Health Coverage Goals, 2017. https://shopsplusproject.org/sites/default/files/resources/Organizing%20the%20Private%20Sector%20to%20Support%20UHC%20Goals.pdf, last accessed 2 August 2023.