

PRIMARY HEALTH CARE AND UNIVERSAL HEALTH COVERAGE

Introduction and value proposition

Achieving IA2030 goals will depend on high-performing national immunization programmes. Immunization services are also an integral part of **primary health care (PHC)** and can be used as an entry-point to strengthen PHC and to improve service delivery in all settings, particularly where access barriers exist. Integration of services has the potential to contribute to improved and sustained universal health coverage (UHC), and improve prospects for achieving health-related Sustainable Development Goals (SDGs). Integrated and more people-centred care has been shown to improve health outcomes and attainment of UHC.¹

Efficiency gains can be derived from reduced duplication of resourcing through use of common infrastructure, human resources, and financing, service delivery and information platforms. Equity gains can be derived from reduced missed opportunities for immunization through increased contacts with the health care system, including through the private sector.

Implications of Regional Disease Outbreaks or Pandemics

Pathogens for which no medication or vaccination exist (e.g. COVID-19, novel flu virus) may put multiple countries or the global community at risk and place strain on health systems. Having resilient PHC systems delivering essential services can mitigate their impact by providing care for vulnerable populations. The high potential for vaccine-preventable disease outbreaks makes it imperative for countries to maintain continuity of immunization wherever services can be conducted under safe conditions.

Nonetheless, essential services may be disrupted as emergency health services are prioritized by PHC staff. Disease surveillance should be reinforced to identify cases and risks of outbreaks (e.g. of measles). When essential health services are disrupted, PHC staff need to restore provision of immunization services as soon as feasible and accelerate catch-up of those who missed vaccinations.

For more information, see WHO website.

1. WHO. People-centred and Integrated Health Services: An overview of the evidence (Interim Report). 2015. Geneva: WHO. Available at: https://apps.who.int/iris/bitstream/handle/10665/155004/WHO_HIS_SDS_2015.7_eng.pdf?sequence=1

Immunization can also mobilize improved financing and advocacy for PHC, improving access to other PHC services in areas such as reproductive health, nutrition and child health. Conversely, immunization can benefit from more sustainable resourcing of programme operations, through shared financing and human resource allocations for PHC.

Strong leadership and management can drive enhancements in PHC services at all levels of the health system. Improved PHC management will result in greater responsiveness in areas such as adoption of innovation, reducing inequities and tracking of performance. Achieving immunization goals requires effective **coordination and planning** with other departments such as finance, education, social protection and defence (in conflict-affected or difficult-to-reach areas). Investing in cross-cutting functions will therefore benefit all PHC services sharing a common delivery platform.

There are multiple other ways through which closer integration of immunization with PHC management, planning and service delivery can expand capacity of health systems to meet universal health coverage goals. Potential areas for closer integration include health workforce planning, integrated disease surveillance systems, logistics management, information and regulatory systems, disease control initiatives, and health outreach and communication. This has the potential to expand the capability of health systems to reach underserved populations with additional PHC interventions, as well as facilitate more coordinated care pathways for all age groups.

Strategic Priority Goal and Objectives

Goal

Effective, efficient and resilient immunization services are accessible to all people as an essential part of primary health care, and thereby contribute to universal health coverage.

Objectives

- Reinforce and sustain strong leadership, management, and coordination for immunization programmes at all levels.
- Ensure the availability of an adequate, effective and sustainable health workforce.
- Build and strengthen comprehensive vaccine-preventable disease surveillance as a component of national public health surveillance system, supported by strong and reliable laboratory networks.
- Secure high-quality supply chains for vaccines and related commodities, and assure effective vaccine management, within the primary health care supply chain system.
- Strengthen immunization information systems within a robust health information system, and promote use of high quality, and fit-for-purpose data for action at all levels.
- Establish and maintain a well-functioning vaccine safety system involving all stakeholders.

Context and challenges

Achieving IA2030 goals will require strengthening of national immunization programmes and enhanced programme performance. It is important that this strengthening is coordinated with, and contributes to, wider enhancements in PHC to deliver universal health coverage.

Fragmentation of health services and their management impacts each of the three pillars of PHC: services; community engagement and empowerment; and an effective multisectoral approach to health.

Fragmented health services are less able to respond to the demands of communities and provide universal, equitable, high-quality and financially sustainable care. Parallel or duplicated chains of command, funding mechanisms, supervision and training schemes mean that broader health system approaches of financing and human resources are not being adequately addressed.²

As well as technical challenges, political and institutional barriers to organizational change may need to be overcome in countries and partner organizations.

Challenges facing the PHC workforce include lack of career development pathways, low salaries, high turnover, inadequate numbers of health workers, and nursing being a predominantly female profession. High rates of migration due to climate change, insecurity and urbanization mean that health workers must have the flexibility to adapt to rapidly changing social and environmental conditions. Introduction of vaccines for new age groups, suspicion about the safety of vaccines, and integration of immunization with other services all place new demands on health workers.

The need to achieve universal coverage presents challenges to **supply chain systems**. Demographic changes and disease outbreaks will affect vaccine use, with implications for cold chain storage needs and locations. Stock-outs can undermine community trust in health systems, contributing to vaccine hesitancy. Integration of supply chain management, data and distribution networks for vaccine and other health commodities is made more complex by the refrigeration requirements of most vaccines.

Technological advances have the potential to ensure the **availability of assured quality and potent vaccines, distributed through efficient systems**. Additional key shifts will include adoption of more environmentally sustainable technologies (e.g. solarization) and improved waste management and waste reduction.

Reliable health information and surveillance systems, providing data on disease burden, vaccination coverage, and provision of services to communities, will be required to monitor performance and drive improvements in PHC. Reliable data also provide an evidence base for country-level decision-making, such as on introduction of new vaccines.

2. WHO. Primary Health Care (Now More than Ever): World Health Report 2008. 2008. Geneva: WHO. Available at: <https://www.who.int/whr/2008/en/>

Effective data management and use is undermined by fragmentation of information and service delivery systems, and questionable data quality. Perverse incentives may favour reaching coverage targets rather than accurately measuring performance. On occasion, governments and technical and financial partners have contributed to these issues by creating incentives to over-report, introducing new standalone data systems, and asking for new data without halting the collection of data no longer needed.

"Silver bullet" e-solutions (e.g. electronic health records in some high-income countries) have often not recognized the need for long-term system-wide interventions spanning individuals, facilities and government systems. The introduction of technology needs to consider practitioner and system readiness, to determine where new digital solutions are feasible, timely and appropriate. Inherent uncertainties (e.g. imprecise denominators) must also be considered, requiring thoughtful analysis of the level of accuracy required to support decision-making.

Global trade and travel, as well as urbanization and population growth in previously sparsely populated areas, increase the **risk of vaccine-preventable disease outbreaks**. The spread of antimicrobial-resistant organisms is placing health systems and populations around the world at risk. Comprehensive and integrated surveillance systems are required to capture data on these threats, and effective immunization programmes are key to their prevention (see IA2030 Annex on vaccination and antimicrobial resistance).

Surveillance data will also be required to target use of new vaccines, many of which will be relatively expensive, to areas and populations where they are most needed to minimize unnecessary use of resources.

To address public concerns about safety and ensure public confidence in vaccination, nationwide **monitoring and reporting systems** for adverse events are essential. As middle-income countries transition from internationally funded procurement mechanisms, they will require the regulatory capacity to ensure that vaccines are of assured quality, safety and efficacy.

Disease control initiatives are confronted by several challenges. As of 2020, wild poliovirus has not been eradicated and vaccine-derived virus outbreaks have occurred in multiple countries. Measles cases surged globally in 2019.

It is essential that national immunization programmes and disease control initiatives work together to identify and exploit synergies. Although immunization systems have sometimes built on the strengths of disease control initiatives, such initiatives may also divert health resources away from essential service delivery. Disease-specific initiatives have focused and urgent goals to control, eliminate and eradicate diseases, which may be delayed by a focus on broader efforts to integrate systems and strengthen PHC. On the other hand, investments in PHC services can provide a platform to achieve and sustain disease elimination goals.

Key Areas of Focus

Immunization in PHC

Ensure that sustainable immunization programmes are an integral part of national PHC strategies and operations, as well as national strategies for UHC.

Key evidence and gaps

Sustaining high and equitable vaccination rates requires a strong support system. Collaboration and integration across public health and PHC strengthens the capabilities of each to deliver critical services. Conversely, fragmented health systems are less able to provide universal, equitable and high-quality care. In addition, limited intersectoral collaboration and coordination of care reduces access to comprehensive, quality services, particularly for prevention and health promotion. A narrow focus on disease control also contributes to inefficiencies in health systems, such as parallel chains of command and funding mechanisms, and duplicated supervision and training schemes, and may divert resources from investment in PHC.³

Strategic Interventions and Operationalization

An increased focus on strengthening governance and accountability at all levels is required to deliver a comprehensive health care package. A reorientation towards integrated care will require improved coordination across care settings and sectors and beyond health to include social services and education. Increased engagement and empowerment of people and communities is also required so that they can take an active role in the development of health services in which immunization forms part of a comprehensive health and/or social care package.

The interventions can be operationalized through four main approaches, according to each country's context.

1. *Engaging and empowering people and communities* to promote community input into planning and design of the delivery of care.
2. *Tailoring the model of care* towards a more community-engaged and integrated service delivery approach. This will be enabled through provision of immunization services within a comprehensive package of PHC services, which will be brought closer to communities through use of family health and community-based strategies, e-health and closer monitoring of population health.
3. *Improving coordination of care across settings and sectors*, facilitated by integration of vertical programmes into national health systems, expansion of intersectoral partnerships and development of sub-national service delivery networks.
4. *Creating an enabling environment* for integration of immunization with PHC. Change management and workforce training will help to broaden the service delivery platform, align regulatory and scope of practice frameworks, and provide integrated quality assurance and safety and information systems.

3. WHO. Primary Health Care (Now More than Ever): World Health Report 2008. 2008. Geneva: WHO. Available at: <https://www.who.int/whr/2008/en/>

These interventions are most critical for low- and middle-income countries, which have the largest numbers of hard-to-reach or unreached populations, but are also important for high-income countries, which contain socially marginalized and socioeconomically disadvantaged populations.

Assumptions and risks: These approaches assume that there will be sufficient political, financial, health workforce and institutional support to ensure the integration of immunization services into comprehensive care packages. Implementation will also require the active involvement of civil society organizations (CSOs) and the private sector, particularly given the shortage of public sector PHC workers in some settings.

For low- and middle-income countries, development partners with focused priorities may perceive integration as a threat to the achievement of their objectives. Health care workers with heavy workloads may question the feasibility of integration. Governments may be concerned that integration interferes with the activities of immunization programmes and require additional resources or development partner support.

Leadership, governance and management

Create an environment for effective coordination, financial management and performance monitoring at every level of the immunization programme.

Key evidence and gaps

National immunization programmes face an ever-growing range of challenges. The complexity of immunization schedules is increasing, integration of services may pose new organisational challenges, and disease outbreaks, political instability and other factors may disrupt service delivery. Countries may have to contend with the impact of transitions from Gavi and polio support or shifts in health system organisation, such as decentralization. Financial resourcing may be under pressure and human resources may be suboptimal or subject to high turnover.

Under these pressures, it is essential that national immunization programmes are led and managed effectively to maximize performance and ensure optimal use of resources.⁴ Effective leadership is vital for establishing a culture committed to continuous quality improvement and ensuring that the structures and processes are in place to support this goal. Effective leadership calls for a strong focus on performance management, including clear goal setting, clarity in roles and responsibilities and accountability, a commitment to use of data, and team-building and empowerment of staff. Programmes also need to be nimble enough to accommodate sudden challenges, not least the COVID-19 pandemic, emphasizing the importance of strategic problem-solving skills among those in leadership positions.

Leaders need to be aware of the potential for innovation to enhance performance but also of the need for robust evidence and the importance of change management for effective implementation.

4. Traicoff D, Pope A, Bloland P, Lal D, Bahl J, Stewart S et al. Developing standardized competencies to strengthen immunization systems and workforce. *Vaccine*. 2019;37(11):1428-1435. doi: 10.1016/j.vaccine.2019.01.047.

Strong leadership and excellent communication skills are required to ensure senior figures are effective advocates for immunization within and beyond ministries of health. Coordination with other health departments and other national stakeholders, for example through interagency coordinating groups and health sector coordinating committees, is also essential.

Strategic interventions

Countries need to commit to developing the leadership and management competencies of key staff within national immunization programmes. As well as instilling a culture of continuous quality improvement, programme leaders should develop plans for the development of management competencies at all levels of a programme, and ensure that structures and processes are established that support strong performance management and accountability.

It is also important that the leaders of the future are identified at an early stage and their skills developed so that they are empowered to take on leadership roles. Special attention should be paid to gender equity in staff development.

Regional and global stakeholders should support the development of leadership and management skills within national immunization programmes, drawing on the latest evidence on organizational performance. As well as leadership and management training, this could also include opportunities for mentoring or placements to promote the dissemination of good practice and collaborative learning.

Assumptions and risks: The development of well-led and well-managed national immunization programmes depends on a national commitment to identify, appoint and empower programme leaders, and to recognize the importance of developing management capacity throughout the programme. Without effective leadership, management and coordination, programmes will be less able to achieve the performance levels or instigate the changes required to achieve IA2030 goals, or address and overcome emergent challenges over the next decade.

Health workforce

Develop health workers who are motivated, skilled, available, knowledgeable and well-resourced to plan, manage, implement and monitor the performance of immunization programmes at all levels and locations.

Key evidence and gaps

The global needs-based shortage of health care workers is projected to exceed 14 million by 2030.^{5,6} Creating career development paths and promoting the provision of living wages for health workers, particularly at the service delivery level, needs to be a high priority. Innovations will place new demands on workforce development, with potential for blurring of practice lines with community health workers. Technology will play an increasing role in capacity building, supportive supervision, and

5. WHO. Global Strategy on Human Resources for Health: Workforce 2030. 2016. Geneva: WHO. Available at: https://www.who.int/hrh/resources/global_strategy_workforce2030_14_print.pdf?ua=1

6. WHO. The State of The World's Nursing Report 2020. 2020. Geneva: WHO. Available at: <https://www.who.int/publications/i/item/nursing-report-2020>

mentoring/coaching of the health workforce. The focus on building job-based skills will drive increased use of adult-learning strategies in health workforce training. There will also be greater emphasis on building the capacity of managers to provide supportive supervision, on-the-job training, coaching and mentoring.

Strategic Interventions and Operationalization

At the country level, in-service and pre-service training will continue to be required. New collaborations will need to be forged with the medical educational sector and academic institutions to update and refresh in-service curricula on vaccinology, vaccination service delivery across the life-course, new vaccines, and engaging community support for vaccination.

Performance will need to be reinforced through supportive supervision including on-the-job training, coaching, and constructive feedback. Recruitment and retention issues need to be addressed through payments and incentives that are commensurate with duties, establishing career development pathways, ensuring clear delineation of roles and responsibilities, and ensuring adequate operational finance for supervision.

Building and sustaining health workforce capacities will require integrated training at national and subnational levels. At the global and regional levels, technical and advocacy resources need to be mobilized to support countries and provide guidance on capacity building, and design of strategies and metrics to measure progress. Support to countries will be operationalized through immunization partners as well as partners with expertise in capacity building of the wider health workforce.

Decentralization of health systems, widespread human resource shortages in PHC, and moves towards integrated service delivery platforms and a more people-centered model for PHC will all require innovations and flexibility in human resources management, planning and development. Closer alignment of immunization training with National Health Plans and National Workforce Development Plans will facilitate more integrated training strategies.

Assumptions and risks: Adequate political and financial commitment to financing of the PHC workforce will be essential, to address the challenges of inadequate career development pathways, low salaries for government health staff, high staff turnover and insufficient numbers of health workers.

Supply Chain and Logistics

Strengthen supply chains to ensure that high-quality vaccines are always available in the right quantity and form, at the right time, and in the right place. Promote integration with other supply chains for more effective delivery of primary health care.

Evidence and Gaps

WHO–UNICEF Comprehensive Effective Vaccine Management (EVM) scores⁷ have generally remained stagnant in recent years and often fall short of the

7. Lee BY, Schreiber B, Rao R. Building Next Generation Immunization Supply Chains. *Vaccine*. 2017;35(17): 2101-2278

80% target.⁸ In 2016, a Gavi-sponsored study found that 80% of cold chain technology was inadequate in the poorest countries. Accidental exposure of vaccines to freezing or high temperatures remains an issue, and poor stock and temperature management at all levels continues to affect service delivery. Every year on average, one in every three countries experiences at least one stockout of at least one vaccine for at least one month.⁹

Strategic Interventions and Operationalization

Immunization supply chains provide a platform on which to build strengthened health system logistics infrastructure, through use of integrated transportation, procurement, warehousing and storage, integrated logistics management and national health information systems, solarizing of health facilities, and private sector collaborations. The immunization supply chain should be positioned as a resilient, agile and reliable platform to better serve PHC and strengthen health systems.

Interventions to improve supply chain systems will need to focus on the five fundamentals of leadership, data for management, a comprehensive EVM approach, cold chain systems and system optimization, ensuring that these are strengthened as part of overall health commodity supply management systems. Increased use should be made of innovative and cutting-edge solutions and technologies, such as visualization of supply chain data, drones, blockchain technology, and cloud-based and mobile information systems.

The WHO–UNICEF comprehensive EVM approach should continue to be used to create development plans, with bodies such as national logistics working groups tracking implementation and aligning partners around key priorities. Managerial capacity needs to be developed at all levels. In line with wider PHC and UHC developments, the private sector can contribute services such as maintenance of cold chain, distribution and storage capacity.

At the national level, targeted investments are needed across all the five fundamentals according to national needs. At the global level, support will require alignment across major stakeholders, resource mobilization, and provision of practical tools and guidance. In Gavi-eligible countries, Coordination Forums (ICC/HSCC or equivalent) are accountable for the implementation of the Gavi-funded supply chain strategy. In non-Gavi-eligible countries, WHO and UNICEF will provide guidance and technical assistance where required, with national governments leading implementation. Regional working groups on immunization supply chain management will also provide technical support to countries.

Assumptions and risks: Implementation will require political will to ensure commitment of resources and application of proven approaches that can be taken to scale.

8. WHO and UNICEF. Effective Vaccine Management (EVM): Global data analysis 2009–2018). 2018. Geneva: WHO. Available at: https://www.who.int/immunization/programmes_systems/supply_chain/EVM-Global-Data-Analysis-2010-2018-EN.pdf

9. Lydon P, Schreiber B, Gasca A, Dumolard L, Urfer D, Senouci K. Vaccine stockouts around the world: Are essential vaccines always available when needed? *Vaccine*. 2017 Apr 19;35(17):2121-2126. doi: 10.1016/j.vaccine.2016.12.071.

Vaccine-preventable disease surveillance

Enhance the efficiency, responsiveness, and comprehensiveness of disease surveillance (including epidemiology and laboratory capacity) in order to: support the introduction of vaccines; optimize immunization programmes; measure vaccine impact; monitor disease control, elimination and eradication; and detect, investigate and respond to outbreaks. These efforts should build on existing surveillance infrastructure, such as that for polio and measles.

Evidence and Gaps

Globally, disease surveillance data are critical for allocating vaccine supplies according to national needs. Nationally, such data can inform disease-control campaigns, support monitoring of programme performance, and inform country decision-making on new vaccine introductions. There is a need to strengthen and expand public health laboratory networks at global, regional and country levels, and to develop a workforce appropriately trained in surveillance core competencies, including data analysis, especially at country level. There is also a need to develop sustainable interoperable vaccine-preventable disease surveillance information system platforms to support data analysis, sharing and programmatic use at global, regional and country levels.

Operational research is needed to gather evidence on best practices, new strategies, and use of technology. Addressing these research gaps will enhance the capability of health systems and programmes to monitor the quality of surveillance systems and their ability to adapt to new data needs, such as for new vaccines.

Strategic Interventions and Operationalization

Comprehensive vaccine-preventable disease surveillance systems are needed, integrated into wider disease surveillance systems. This will require a workforce trained in surveillance core competencies and surveillance information systems. Public health laboratory networks need to be expanded at global, regional and country levels.

Operational research needs to be conducted to generate evidence on best practices, new strategies, and use of technology to enhance and monitor the quality of surveillance. Disease surveillance data will help prioritize the allocation of vaccines to ensure that the individuals most at risk of disease are protected. Tracking the spread of antimicrobial-resistant organisms causing vaccine-preventable diseases should allow the targeting of vaccination efforts to contain them (see IA2030 Annex on vaccination and antimicrobial resistance).

Operationalization of these interventions will require coordination across programme areas and immunization partners. Accountability for performance of surveillance systems will be clarified through delineation of the roles and responsibilities of national governments, multilateral agencies (such as WHO and CDC) and manufacturers at national, regional and international levels.

Additional details can be found in the IA2030 Annex on comprehensive vaccine-preventable disease surveillance.

Assumptions and risks: The success of these interventions will require adequate resource mobilization and cooperation across technical partners, countries and international organizations. Countries need to be willing to share disease surveillance information and act on disease surveillance data in a timely manner.

Health information systems

Ensure that health information systems enable collection and use of high-quality, fit-for-purpose data at all levels of immunization programmes and are integrated into national information systems.

Evidence and Gaps

It is essential that data are used to guide strategic directions and corrective actions.¹⁰ The more that data are used, the more likely it is that data quality will improve. Interventions are more likely to be successful over the long term if data use is institutionalized through dedicated staff positions for data management and training and guidelines for front-line staff. There is also a need to extend use of data from reactive retrospective reviews to focus on more prospective and proactive approaches.

Use of digital tools such as integrated health management information systems (HMIS), electronic immunization registries (EIR), logistics management information systems (LMIS), and geographical information systems (GIS) continues to grow but many have not been taken to scale in low-income countries. The appropriateness of these tools depends on the readiness and priorities of each country. There is need for a phased development approach for digital systems, ensuring data use infrastructure, human resource capacity and skill building are in place before a full digital transition.

These challenges will require coordinated efforts, data sharing, investments in human resources, harmonized systems, country-level governance and leadership, and evidence-based continuous improvement cycles in countries.

Strategic Interventions and Operationalization

All countries need to continuously improve the performance of their immunization programmes through the strategic use of relevant, fit-for-use information across all levels of the system. Interventions need to move from a focus primarily on improving data quality to ensuring that data meet the needs of communities, health workers, managers and policymakers.

To operationalize this approach, countries and partners should invest in the fundamentals of information systems, including governance, tools, people and processes for continuous improvement. As each country has its own programmatic priorities, operates in a different context, and has health information systems with varying degrees of maturity, these interventions will vary from country to country. There is an urgent need to develop the evidence around approaches that work in different contexts.

10. PATH. Immunization Data: Evidence for Action. 2019. Available at: <https://www.path.org/resources/immunization-data-evidence-for-action-a-realist-review-of-what-works-to-improve-data-use-for-immunization-pr%C3%A9cis/>

Governments and technical partners need to be accountable for establishing clearly defined policies, processes and responsibilities for the collection and use of data and the design of information systems. Countries also need to empower and enable health personnel to collect and use immunization and surveillance data for better decision-making and invest in user-centred and sustainable tools and information systems.

Regional and global partners should create platforms to share resources, training guidance and information concerning use of data. A global research working group could direct, coordinate funding for and publish country research on ways to improve immunization and surveillance data and their use, how immunization data can be complemented with other health programme data, and the impact of better data use on immunization programme performance.

Assumptions and risks: Success of these interventions will depend on the commitment of governments to optimize their immunization and surveillance information systems, adopt new technologies, and integrate immunization data into national health information systems. In addition, countries will need to prioritize accurate reporting over achievement of national and global goals.

Vaccine safety monitoring

Ensure that national immunization programmes are able to detect and respond to potential concerns about vaccine safety through continuous monitoring and coordination among relevant stakeholders.

Evidence and Gaps

Regulatory systems in vaccine safety can promote the availability of quality vaccines and essential medicines to support attainment of UHC goals and build people's trust in health care systems. According to WHO surveys based on independent, peer-reviewed audits, in 2018 only 30% of national regulatory authorities had the capacity to effectively regulate products in their markets¹¹ Since most national regulatory authorities lack the resources and capacity to perform all regulatory functions, and increasing numbers of vaccines are being manufactured, there is a growing trend for national regulatory authorities to work together. The introduction of products exclusively in low- and middle-income countries, such as malaria or dengue vaccines, or simultaneously in low- and high-income countries is putting increased pressure on national regulatory authorities and governments with underdeveloped systems to meet their safety monitoring obligations.

Strategic Interventions and Operationalization

Activities need to focus on strengthening the ability of countries to detect, report, investigate and manage vaccine safety concerns, as well as national regulatory capacities. The Global Vaccine Safety Blueprint provides guidance

11. WHO. WHO Essential Medicines and Health Products Annual Report 2017: Towards access 2030. 2018. Geneva: WHO. Available at: <https://apps.who.int/iris/handle/10665/272972>

on interventions to enhance vaccine safety monitoring. Strategic priorities for national regulatory strengthening are described in the WHO's five-year plan "Delivering quality assured medical products for all 2019-2023".¹²

Interventions will be operationalized by stakeholders under the oversight/umbrella of the Global Vaccine Safety Initiative (GVSII). Global and regional technical support platforms for vaccine pharmacovigilance need to be strengthened, including provision of expert advice on vaccine safety issues at national, regional and global level. Technical guidance also needs to be developed to support monitoring of vaccine safety in conflict-affected and low-resource settings, in addition to support for managing crisis communications during an outbreak.

Accountability for vaccine safety initiatives should be clarified through delineation of roles and responsibilities following dialogue between national governments, multilateral agencies and manufacturers at national, regional and global levels.

Assumptions and risks: Success of these interventions will depend on political and resource commitments by governments, as well as provision of leadership on communication to preserve public trust on issues relevant to vaccine safety.

Disease control initiatives

Ensure that efforts to strengthen national health systems and initiatives for disease control, elimination and eradication are mutually reinforcing.

Evidence and Gaps

The persistence of infectious diseases, despite accelerated disease control efforts, has refocused attention on the interdependence of strong health systems, public confidence in vaccination, and disease-specific control initiatives in achieving disease elimination and eradication goals.

Disease control programmes can have a positive impact on national immunization programmes through investments in areas such as surveillance, microplanning, registration, defaulter tracing, supervision and communication.^{13 14 15} System-strengthening impacts have also been achieved through school immunization, integration with other services during disease control

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12. WHO. Delivering Quality-Assured Medical Products for All (2019–2023): WHO's five-year plan to help build effective and efficient regulatory systems. 2019. Geneva: WHO. Available at: https://www.who.int/medicines/news/2019/WHO_ActionPlan.pdf?ua=1
 13. van den Ent MMVX, Swift RD, Anaokar S, Hegg LA, Eggers R, Cochi SL. Contribution of Global Polio Eradication Initiative-Funded Personnel to the Strengthening of Routine Immunization Programs in the 10 Focus Countries of the Polio Eradication and Endgame Strategic Plan. *J Infect Dis.* 2017;216(suppl. 1):S244-S249. doi: 10.1093/infdis/jiw567.
 14. Anya BM, Moturi E, Aschalew T, Carole Tevi-Benissan M, Akanmori BD, Poy AN et al. Contribution of polio eradication initiative to strengthening routine immunization: Lessons learnt in the WHO African region. *Vaccine.* 2016;34(43):5187-5192. doi: 10.1016/j.vaccine.2016.05.062.
 15. Zuo S, Cairns L, Hutin Y et al. Accelerating measles elimination and strengthening routine immunization services in Guizhou Province, China, 2003–2009. *Vaccine.* 2015;33(17):2050–2055.

campaigns,¹⁶ and reaching the most underserved populations.¹⁷ On the other hand, disease control programmes may divert resources away from PHC services, including immunization.^{18 19}

The drive for UHC will require closer collaboration between disease control initiatives and broader PHC systems, to sustain disease control gains as well as to extend a wider package of services to populations. At the same time, a continued focus on accelerated disease control will be required to ensure that global health goals of elimination and eradication are achieved.

Strategic Interventions and Operationalization

Disease control programmes provide an opportunity to strengthen PHC delivery systems, particularly for hard-to-reach populations. Disease control initiatives can specifically target communities in high-income countries with low take up of vaccination, as well as the hardest to reach through microplanning and mapping, social mobilization, and targeted communication. In addition, lessons learned from supplementary immunization activities can help to improve the quality of planning, supervision, micro-planning and communication strategies of national immunization programmes.

Mutual reinforcement of accelerated disease control and health systems strengthening needs to take place through integration of additional services into supplementary immunization activities. Closer alignment will also mean that disease control initiatives will be better able to make use of PHC resources. Given the trends towards UHC and revitalized PHC, disease control interventions will be increasingly operationalized through a single PHC management, planning and service delivery platform.²⁰

Assumptions and risks: Delaying investments in PHC strengthening could mean that the gains from disease control initiatives will not be sustained. These risks can best be managed by health systems, immunization programmes and disease-specific initiatives working through shared management, planning and service delivery platforms to achieve shared goals.

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16. Vince JD, Datta SS, Toikilik S, Lagani W. Integrated package approach in delivering interventions during immunisation campaigns in a complex environment in Papua New Guinea: a case study. *Vaccine*. 2014;32(36):4614-9. doi: 10.1016/j.vaccine.2014.04.056.
 17. Sissoko D, Trottier H, Malvy D, Johri M. The influence of compositional and contextual factors on non-receipt of basic vaccines among children of 12-23-month old in India: a multilevel analysis. *PLoS One*. 2014;9(9):e106528. doi: 10.1371/journal.pone.0106528.
 18. Haddison EC, Abdullahi LH, Muloiwa R, Hussey GD, Kagina BM. Comparison of school based and supplemental vaccination strategies in the delivery of vaccines to 5-19 year olds in Africa – a systematic review. *F1000Res*. 2017;6:1833.
 19. Oku A, Oyo-Ita A, Glenton C, Fretheim A, Ames H, Muloliwa A et al. Communication strategies to promote the uptake of childhood vaccination in Nigeria: a systematic map. *Glob Health Action*. 2016;9:30337. doi: 10.3402/gha.v9.30337.
 20. WHO. WHO'S Vision and Mission in Immunization and Vaccines 2015–2030. 2015. Geneva: WHO. Available at: http://www.who.int/immunization/documents/general/WHO_Mission_Vision_Immunization_Vaccines_2015_2030.pdf?ua=1

Resources

Primary Health Care and Universal Health Coverage

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