Planning considerations for human and financial resources for COVID-19 vaccination

This document is a tool for WHO country leadership and technical staff to guide Members States in the process of aligning human and financial resources to deliver significant increases in COVID-19 vaccines supply before the end of 2021 and through the half of 2022. This guidance complements the National Deployment and Vaccination Plans (NDVPs)*(1)* and the NDVP toolkit *(2)* by addressing the human and financial resource scaleup implications. It summarizes considerations, options and resources to identify, train, onboard, support and fund the additional personnel needed to achieve the promise of COVID-19 vaccines.

What is the country's national coverage target?

The Access to COVID-19 Tools Accelerator has secured an additional 760 million vaccine doses – a **15-fold increase in supply** – for Advanced Market Countries in 2022. Revised global targets include the objective of reaching 40% of the population in LICs and LMICs by the end of 2021 and 70% global population vaccination by June 2022 (3). Accordingly, Member States are encouraged to revise their target populations, as well as human and financial resource strategies in their COVID-19 NDVPs *(1)*. For those AMC countries applying to GAVI's needs-based window of financial support, updated NDVPs will be a required component of the application.

National country coverage targets, while observing SAGE values framework *(4)* recommendations, should be based on 1) anticipated supply projections and 2) feasible strategies to **rapidly reach those coverage targets**, particularly in densely populated areas and those with higher transmission rates. Strategies should balance high target coverage, transmission reduction and strategically planned delivery to limit vaccine wastage. The WHO SAGE roadmap *(5)* further recommends prioritizing health workers, older adults, others with high-risk conditions and high-risk settings. The roadmap section on gender and equity adheres to an equal respect principle within immunization delivery systems.

To seize opportunities of increased manufacturing capacity and potential additional funding for operational costs, countries must consider human resource implications of accelerated quantity and pace of vaccination, including addressing surge capacity through non-medical and non-traditional personnel as COVID-19 vaccinators.

What is the operational model of vaccination?

Meeting national vaccination targets will entail a combination of vaccine delivery strategies (Annex 1). Available evidence on successful scale-up shows the need to use combinations of fixed-site, outreach, mass campaigns and commissioning/leveraging private sector capacity, including pharmacies. To reach the first 20% population target as quickly as possible (in most countries 3% health workers, 17% elderly and high-risk populations), **fixed site delivery in densely populated urban settings may be one of the most practical options although will not adequately address the goal of achieving equity**.

With an ongoing pandemic and a constrained vaccine supply context, it is essential to ensure that all COVID-19 vaccine doses are optimally utilized, with guiding principles to protect those at the highest risk for severe disease and death and to ensure equitable distribution. To support countries to plan feasible

and practical solutions adapted to context, Guidance on utilization of COVID-19 vaccines before the date of expiry (6) provides a step-by-step approach with a decision framework to support vaccination planning and implementation. Human and financial resources should be considered within strategy development and aligned to the selected approaches.

What is the required "surge" in labour / human resources?

Vaccine delivery requires broadly two types of roles: clinical and support personnel. To date, given constraints in vaccines availability through the COVAX Facility, LMICs have primarily used clinical personnel who already are trained in the basics of vaccination, public health practice and patient care.

Meeting the surge requirement is a key policy consideration that requires weighing whether vaccines delivery will be an *emergency effort* or *integrated within primary health care services* to build recurring capacity to deliver adult vaccinations. Countries must decide whether to risk essential health services delivery by *allocating existing labour*, *recruiting additional capacity*, or *both*.

The **labour requirement can be calculated** using the COVID-19 Vaccine Introduction and Deployment Costing **(CVIC) tool** *(7).* Inputting national health workforce data, vaccines allocation and target population (Annex 2) **generates costed requirement estimates**. Creation or expansion of human resources databases should include information on qualified vaccinators and other skilled personnel, including geographic availability. Aligned with vaccines distribution strategies, funding and human resources requests may need to support geographic redeployment and recruitment of additional health workers in underserved areas. Strategic recruitment also provides an opportunity to build the skilled health workforce needed for longer term health service delivery and primary health care ambitions.

Analyzing labour surge requirements and availability should include a gender lens, as women constitute almost 7 in 10 health workers globally (8). Their ability to work is more likely to be disrupted because of expectations for caregiving at home and in the community, which is socialized as a woman's role in most societies.

The importance of contextualization and agility

The CVIC tool provides a rapid and robust estimation of the workforce needs and gaps and enables countries to define needs over broad periods. This estimation requires a careful contextualization, including defining which workers can take on each vaccination activity (see below), the delivery modality (fixed site, mobile/outreach, mass vaccination) and the population targeted. Vaccine supply and logistics are also important parameters, as available dose quantities will vary over time.

Lastly, health workforce requirements should be revised regularly to reflect actual vaccines rollout and respond to changes in delivery modality. This monitoring requires up-to-date data from all levels and by all stakeholders, therefore data sharing on the redeployment of health workers and on the surge is critical.

While acknowledging unique service delivery requirements for COVID-19 that go beyond routine immunization, many national regulators have already **granted temporary licenses or authorization for general practitioners and pharmacists** to deliver the COVID-19 vaccines. In other countries, emergency legislation can **allow non-medical or non-traditional personnel to administer vaccines**. Annex 3 has governance and health workforce management requirements.

Where can labour be recruited from and who pays the cost?

Most countries have begun COVID-19 vaccination. Peer-reviewed publications on labour solutions are scarce. Anecdotal data and WHO interim guidance on health workforce *(9)* provide some approaches:

- temporarily redeploying existing health workers,
- training workers to take on new tasks and roles (10),
- calling up medically trained retirees and qualified but unemployed health workers, and
- accelerating pathways for students to take on supervised roles.

All labour has a cost. All labour for vaccination teams has financial resource implications, even when this is through deployment of other public sector personnel and internal cost transfer. Annex 4 identifies potential roles by group.

- Internal options are **redeploying health, civil protection or military personnel** to vaccination teams. Health ministry personnel salaries will come from the same budget; defence budgets may subsidize other temporary costs without additional health ministry budget implications.
- **National Red Cross and Red Crescent Societies**
- **Donor grants and bank funds potentially could underwrite service agreements** with CSOs, INGOs and faith-based organizations to manage service delivery for sites or component tasks
- **Private sector health and care facilities** would be practically autonomous
- **Other private sector actors** may be willing to underwrite in-kind support (workplace or stadium facilities and support personnel) with the provision only of clinical personnel.
- **Global emergency capacity support mechanisms** *of short duration* may be available, though they contribute less to needed health system strengthening and national capacity development. These include GOARN, UN Volunteers (UNV), UN peacekeeping, civil defence agencies that have partnership and deployment agreements with humanitarian agencies, and the cluster system. Recruiting and deploying *national/regional workers* within these mechanisms should be prioritized, both for linguistic and cultural capacity and to channel development and economic support at country level.

What are the various modalities under which health workers can be recruited and paid?

A continuum of contracting mechanisms can be considered for recruiting the surge workforce.

Staffing by NGOs/private sector as temporary hire/consultant (on monthly stipend/ per diem)	Recruitment by the govt. as temporary hire/ consultant (on monthly stipend/ per diem)	Recruitment by the govt. as employees with civil service contracts

The first two options, depending on national fiscal capacity, may be used to achieve short term objectives to rapidly surge workforce, with the **understanding and commitment to the latter option as both strategic and necessary to sustain immunization and more importantly for health system strengthening.** The latter strategic approach should be adopted in a phased manner to achieve longer term health systems priorities like boosting the primary health care workforce.

This ambition requires advocacy with policymakers even before the next budgetary cycle begins, to secure political commitment for intentional investments in human resources for health. External assistance should be aligned with national mechanisms and needs. When it is on budget, **external funding can be used to hire and pay civil servants**, thus contributing to national payroll sustainability.

What are the financing implications and opportunities?

There are **two potential resource streams** to fund additional labour needs – **domestic** (general revenue) and **external funds** (World Bank, GAVI and Global Fund grants and bilateral instruments). The pandemic has shrunk domestic fiscal capacities, causing a severe reduction in government revenue ("revenue shock"). Simultaneously, pandemic-related expenditures have caused an increase in government outlays ("expenditure shock") *(11)*. Some countries are **increasing their borrowing** to meet financial needs; the ability of others is limited ability, given pre-existing deficit and debt levels *(12)*. While it will be difficult to rely heavily on new revenue measures, potential areas for mobilizing additional domestic resources include increasing high-income bracket tax rates, capital gains, property and wealth, along with stronger global coordination on **international corporate taxation**. In some contexts, **pro-health taxes** (whether earmarked or not) on tobacco, alcohol, and sugar-sweetened beverages can also boost revenues *(13).*

Additional costs also may be covered by approving new budgetary allocations by **issuing supplementary budgets**. However, countries that have a budget cycle aligned with the calendar year are unlikely to be able to activate this option in Q4, while focus is on preparing the next budget proposal for the next fiscal year. The most feasible option is **reprogramming existing expenditures** by reprioritizing budgetary allocations in existing 2021 budgets to create space for the extra needs and pre-positioning budgets to prepare for 2022 requirements. These reallocations could include temporary postponement of low-priority activities and/or of major capital spending *(14).* These reprioritization exercises should however be supported by gender analyses to prevent undue and unforeseen impact of budget reallocation on specific groups (15).

Many countries have created **dedicated extrabudgetary funds** (EBFs) to mobilize resources and streamline emergency spending measures. A central motivation behind creating EBFs has been to simplify procedures and accelerate spending. Countries could be tempted to channel extra funding for labour costs through COVID-19 EBFs. Yet for valid reasons, EBFs are often regarded as suboptimal. In the absence of strong safeguards, funds with independent spending authority that bypass normal budgetary and expenditure controls *can dilute accountability and weaken fiscal control*, creating significant fiscal risks and corruption vulnerabilities *(16).*

Surge capacity effectiveness is not only a matter of funding levels. The quality of public financial management (PFM) systems and processes is a critical enabler of fast and well-directed spending. The **how** of channeling funds towards the extra needs is as important as determining the cost itself *(17).* Preliminary country evidence indicates that PFM bottlenecks normally found in the health sector are also affecting vaccination plan implementation *(17)*. Input-based budgeting may create rigidities for resource management, with separate line-items for COVID-19 vaccines, cold chain and personnel. To

reduce budgetary fragmentation and provide more flexibility in resource use, several countries have created temporary programme lines that **group all COVID-19 vaccination inputs together** *(18)*. [1]

Post-budgetary approval bottlenecks like cumbersome and multilayered spending authorization processes across administration levels can hamper efficient spending. Countries should ensure that budgets mobilized for COVID-19 vaccination are **effectively, timely and comprehensively disbursed** to realize the **surge capacity needed for vaccine rollout**. Expenditure management rigidity should be relaxed to ensure the funds align with vaccination requirements, including to pay health worker expenditures, including salaries *(18, 19)* (see Annex 5).

Direct access to operational funds, along with lifting cumbersome authorization and reporting rules, will improve the health workforce management effectiveness. Several countries are updating their PFM frameworks to allow health workforce managers to receive and manage public funds directly for vaccines rollout and COVID-19 related goods and services, while strengthening accountability systems. [2] The table below describes health workforce groups, potential funding sources, considerations for using these workforce groups for surge capacity, and potential budget implementation challenges *(11, 12, 13).*

Table 1. Labour hiring modalities and financing implications

Type of worker	**Source**	**Strengths/weaknesses (divide)**	**Financing mechanism/ funding sources**	**Budget implementation challenges**
Temporary direct hire / contractor	-individuals (students, retirees, unemployed) - general day labour	+ Easily scalable + Progression to additional roles + Limited financial obligation important during times where government revenue is constrained	Domestic revenue Bi-lateral and multilateral donors; multilateral development banks; foundations	Overall government hiring freeze may be mandated by macro-fiscal conditions MoH often with limited ability to develop, monitor or enforce contract
		- Limited roles specified by contract - Limited capacity development - Longer term financial obligation with resultant impact on multi-year expenditure frameworks		

[1] In Georgia, for instance, costs related to vaccination are included in the state budget as part of a new COVID-19 budgetary programme to make resource management for COVID-19 vaccination more flexible (re-allocations are made possible within the program envelope) and to provide a clear audit trail.

[2] The Philippines implements the Bayanihan to Heal as One Act which allows for prospective payments by the main purchasing agency, Philhealth, to more than 700 eligible facilities. Other countries that do not rely on separate purchasing agencies are also considering a revision of regular PFM mechanisms to empower those delivering services for COVID-19 and allow them to receive and manage public funds directly. (Philippines Republic Act 10918; Pharmacy Act of 2016 and RA 7392; Philippine Midwifery Act of 1992. https://www.philstar.com/headlines/2021/01/21/2071893/doh-eyes-midwives-pharmacists-covid-19-vaccinators)

Public service	-individuals	+Capacity development +Progression to additional roles - Longer term financial obligation with resultant impact on multi-year expenditure frameworks	Domestic revenue	Overall government hiring freeze may be mandated by current macro-fiscal conditions
Externally-managed contracted staff	-CSOs/ NGOs --Red Cross Red Crescent -Private sector	+Limited financial obligation + Can be bundled into general support contract (either through NGOs/CSOs or private sector) - Danger of parallel system being created (HIV/AIDS precedent)	Bilateral and multilateral donors; foundations; multilateral development banks; domestic revenue	Inefficient for MoH to monitor many single contracts If bundled support contract, MoH often with limited ability to develop, monitor or enforce contract
Civil service redeployment	-From existing civil service rolls	+No additional financing needed - Impact on other government service delivery - Need upskilling	Domestic revenue	If budgets are fixed line item and historically constructed, then "donor" ministry/department will not want to give impression position is not wanted for future budget negotiations

Annex 1: Delivery approaches

NVDP guiding principles include seizing the opportunity to achieve a well-trained and motivated health workforce; safe immunization practices; quality health education and public health and social measures; and high-quality monitoring and evaluation. Countries are encouraged to maximize opportunities to deliver vaccines as **integral components of a package of effective, feasible and affordable interventions** based on national context and to **allocate sufficient human and financial resources** to introduce and sustain the vaccines in harmony with other programme and service delivery.

Phase 1: Initial stages

A variety of delivery strategy approaches exist to reach target populations. For delivery in 2021, in particular to reach the first targets (in most countries 3% health workers, 17% elderly and high-risk populations), **fixed site delivery** may be the most practical and scalable option that leverages existing locations and platforms, with lessons learned then incorporated into additional delivery strategy rollout. Sites include health and care facilities; government offices; urban settings (stadiums, convention centres, hotels, businesses, religious buildings, armories). These sites have the advantage of being located within communities, easily accessible and have sufficient area to define spaces for each vaccination activity, including for necessary physical distancing between vaccination clients. **Pharmacies**, while some are privately operated, also **can be rapidly scaled up** due to their fixed sites, existing competencies and regulatory certification to deliver subcutaneous injections, sharps handling and disposal, and conduct follow-up pharmacovigilance and response for AEFI.

Table 2: Phase 1 delivery approaches

Target group	Potential delivery strategy	Potential sites
Health workers	Fixed sites	Primary or long-term care facilities Hospitals, private clinics
Older people	Fixed & outreach sites Temporary/mobile clinics Mass campaigns	Primary or LTC facilities Adult day care centres Pharmacies Mobile teams for home visits Marketplaces, parks, religious facilities Drive-through
Persons with underlying conditions	Fixed sites Outreach sites Temporary/mobile clinics	Primary or LTC facilities Hospitals, outpatient clinics Workplaces Mobile teams for home visits
Other populations (including humanitarian settings)	Fixed and outreach sites Temporary/mobile clinics Mass campaigns	Any of the above OR Access negotiated, transit points Workplaces

COVID-19 vaccine simulation exercises *(20)* help countries to prepare for strategies, communications, supply and logistics, vaccine safety and regulatory aspects of COVID-19 vaccination. The models assist in step-by-step fixed site organization, with concurrent health worker training and exercise simulation.

Phase 2: Scale-up

Mobile outreach and **mass vaccination campaign** approaches likely will be necessary to deliver services in remote and hard to reach areas. This approach may take months to design, building on existing immunization and PHC service delivery approaches, in strong collaboration with sub-national and district directorates. Within this planning, the same labour and occupational health and safety issues must be addressed, along with specific consideration on ensuring that priority populations can access designated vaccination sites (supported transportation, demand generation, assurance of vaccines gratuity) and that outreach to minority, ethnic and underserved populations is conducted using messengers and language accessible to these communities. Additional guidance is available on leveraging community-based health workers for COVID-19 vaccination *(10)*.

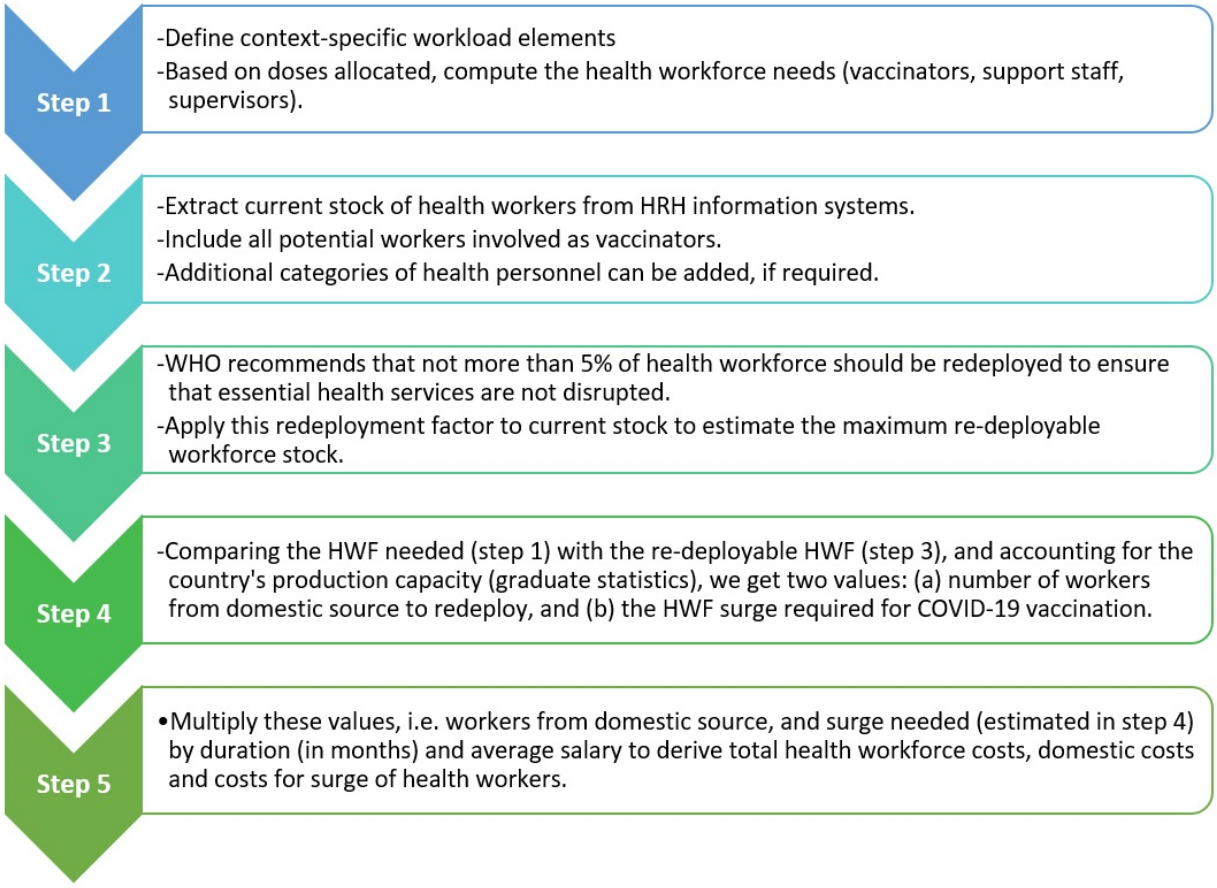
Vaccines delivery in **humanitarian contexts** *(21)* will be challenging. The impacted populations, especially women and girls, represent an important target, due to often crowded conditions with sub-optimal water and sanitation and low baseline health. In camp environments, there may be the possibility to leverage existing registration, mass distribution and congregate shelter mechanisms to facilitate vaccines distribution, using targeted integration of clinical care workers to administer vaccines, supervise vaccines delivery, and respond to AEFI. Additionally, where there are health practitioners within migrant, IDP and refugee populations who are licensed in other jurisdictions and countries, regulatory consideration should be made for temporary waivers to enable these individuals to be contracted and paid to deliver vaccines.

Annex 2: Workforce requirements calculator

The CVIC tool *(3)* helps **identify costed HRH surge requirements** by applying the Workforce Indicators of Staffing Needs *(22)* approach by inputting national data, vaccines allocation and target population:

- Based on the allocated doses for the country's target population, the need for health workers involved in vaccination including vaccinators, support staff and supervisors can be computed by defining the time to deliver each dose, the time for administrative support, the working hours, resting periods, and any relevant element of workload.
- The current stock of health workers active in the country is extracted from HRH information systems, like the National Health Workforce Accounts *(23)*. This includes potential workers involved as vaccinators: medical doctors, nurses, midwives and pharmacists.
- To avoid essential health services disruption, WHO estimated the maximum redeployment capacity for countries, based on their UHC service coverage index and health workforce density. This capacity is expressed as a percentage of health workers that can be redeployed; it ranges from 0% to 5%. Countries with low UHC and low health workforce density, like those on the WHO Health Workforce Support and Safeguards List 2020 *(24)*, are assigned a 0% redeployment capacity. Applying the redeployment factor to current stock provides the maximum re-deployable workforce stock.
- Comparing the health workforce needed (*step 1*) with the available workforce that can be redeployed (*step 3*), and accounting for the production capacity of the country using graduate statistics, two values emerge: the number of re-deployable workers from domestic sources, and the gap in health workforce (the surge in health workforce required for COVID-19 vaccination).
- These figures - workers from domestic sources and needed surge (estimated in *step 4*) - can be multiplied by the duration in months and the average salaries for nursing personnel applied to supervisors and vaccinators and clerks for support staff to derive total health workforce costs, domestic costs and costs for surge of health workers.

Figure 2: Process flow for using the CVIC tool to estimate health workforce requirements & costs



Annex 3: Governance and Health workforce management requirements

Governance

Vaccines delivery, prioritization, regulatory waivers, emergency measures and overall management must be led by ministries of health. Effective **civil society and private sector engagement** may yield additional resources, including administrative support, site selection and management, and logistics/supply chain. National Red Cross and Red Crescent Societies, who have a legislated auxiliary role to government, manage existing **community-based volunteers** who can be mobilized for a variety of support and, in some cases, limited clinical roles.

In their **public stewardship role**, governments must ensure that all health workforce contracting and management follow labour laws, decent work principles and occupational health and safety requirements. All actions must be guided by principles of equity, including gender and other social stratifiers; non-discrimination; access and free access to vaccines and their delivery.

Gender issues must be addressed comprehensively and proactively. UN-collated data in early pandemic outbreak countries (USA, Spain, Italy) show that more than 70% of COVID-19 infections in health workers were in women. Causal attribution included the absence of necessary resources provided to these workers, including PPE and training. Female health workers also face the downstream

impacts, including mental health issues, increased physical violence, obligations to create alternative arrangements for their families to reduce exposure risk, and physical exhaustion *(25)*.

Selection

Once the legitimacy of using non-medical or non-traditional personnel as vaccinators has been established countries may want to define a **set of criteria for screening appropriate vaccinators**, including minimum level of education required. A benchmark could be the national entry requirement for general nursing school *(26)*. In addition to formal **education**, other qualifications required may include number of years' **experience** in a care or client-facing role, or an age limitation (e.g. between 18-65 years old). Additional screening criteria used in other countries include identification of individuals as **low risk** of transmission or infection and **willingness** of the individuals to undergo a reference check.

Training

Competency-based pre-deployment training (between 2-3 days) for non-medical and non-traditional personnel should include fundamentals of vaccination, COVID-19 specific vaccine administration, COVID-19 disease, IPC, communication in health care, and proper PPE use and disposal. They should understand their role and its limitations and action to take if unsure of their role. Additional should be presented or adapted to health personnel, retirees, students and recent medical graduates taking on clinical roles, including on COVID-19 vaccines administration, assessment and managing AEFI.

Blended learning approaches encompass competency-based online learning and instructor-led in-person training. Considerations for successful online learning include experience and motivation of learners, as well as ensuring available support for technical problems. Annex 4 of the NDVP *(1)* can support designing and selecting training modalities. In addition to existing national tools, a range of **online global learning material** is available through OpenWHO *(27, 28, 29)*, the WHO Academy COVID learning app *(30)*, as well as additional instructor-delivered modules. Partners, like civil society organizations, implementation partners and private sector learning organizations, can be rapidly contracted to deliver, assess and certify learning. Some international financing institutions and development partners are willing to accommodate budget reallocation or grant requests to finance training delivery required for scale-up.

A **competency assessment tool** *(31)* helps to ensure that surge capacity vaccinators administer COVID-19 vaccines safely. Procedures and mechanisms to monitor the quality of the training, especially at the service delivery levels, will need to be established. Administering pre- and post- knowledge, attitudes, and practices (KAP) tests at all trainings is one commonly used method to do this. Furthermore, the use of short videos can help ensure that the quality of the content is maintained across different levels of training. To reinforce skills and deal with potential problems as they arise, countries can consider setting up a hotline to respond to questions from vaccinators.

Supervision

Close, regular and direct on-the-job **supervision** of non-medical or non-traditional vaccinators until confident and competent, will be **required**. A checklist *(32)* can help focus on potential areas of weakness related specifically to COVID-19 vaccination. For patient and vaccinator safety, intensified supervisory support is recommended for the first two months following COVID-19 vaccine introduction or any substantial change in vaccination strategy. Where supportive supervision is not already practiced regularly, COVID-19 introduction presents an opportunity to establish a system *(33).*

Occupational health & safety

- **Infection prevention and control** *(34)*: facility IPC measures including sufficient PPE (regular functions, AEFI and screening exposure), WASH, hand and respiratory hygiene, screening for symptoms of COVID-19, (vaccinators and public) mask use by the public, physical distancing and waste management strategies.
- **Occupational health and safety** *(35)* measures to protect health workers: reducing risk of exposure to pathogens and diseases; zero-tolerance measures of violence in all delivery locations, including incident reporting of verbal, physical violence and sexual harassment. Introduction of security measures, including guards, panic buttons, cameras *(36);* site-specific occupational OHS officers for preventive design, practice surveillance and rapid response to adverse events.
- **Decent work**: contracts that outline working conditions, expectations, shifts and working hours and fair remuneration should be established regardless of hiring modality or management body (public sector, CSO, private sector).
- **Working hours**: time schemes for different categories of health workers involved, including maximum working hours per work shift (five eight-hours or four 10-hour shifts per week), frequent rest breaks (e.g. every 1-2 hours during demanding work) and minimum 10 consecutive hours of rest between work shifts.
- **Adequate staffing levels** to prevent excessive individual workloads and minimize the risk of unsustainable working hours. Where extra hours are necessary, consider compensatory measures such as overtime pay or compensatory time off. Where necessary, and in a gender-sensitive manner, consideration should be given to mechanisms for hazardous duty pay.
- **Work-related exposure & infection**: adequate compensation, including when quarantined. Priority treatment of COVID-19 infection in the event of scarcity of treatment *(37)*.
- **COVID-19 vaccination**: priority access to protect health workers and their patients; paid sick leave in case of adverse vaccine effects.

Annex 4: Potential roles by group

Functions	Group	Service delivery benefits
Clinical, including vaccination & screening	Retired medical practitioners	Experience vaccinating in other settings
	Medical students, recent medical graduates	Some clinical training Work experience
	Unemployed, but qualified, health workers; including those licensed in other jurisdictions (migrants, IDPs)	Clinical training
	Private sector (private health and care facilities, pharmacies)	Clinical training, fixed site
Support & some clinical capacity	Redeployment of active health workers (associate nurses, pharmacists, midwives, dentists, veterinarians, medical technologists) and/or CHWs *(10)*	Experience in community and patient-facing roles Health and medical training Pharmacists and midwives already vaccinate in some countries
	Active duty or reservists from military services, including military medical	Some personnel with medical experience
	National Red Cross and Red Crescent Societies staff and volunteers	Some have medical expertise Direct training, management and supervision Logistics & supply chain

	CSOs, INGOs that administer existing health programmes, in-country/local representation of UN agencies (WHO, UNICEF, UNDP, UNHCR)	Some have medical expertise Training, management and supervision Logistics & supply chain Existing PHC roles
Primarily support functions	Private sector (employers, tourist or entertainment industries including those with large venues)	
	Civil servants from other ministries	
	Faith-based organizations	
	Non-medical personnel (volunteers, youth, youth groups)	HICs like USA and UK St. John's Ambulance have trained surge volunteers
Internationally-recruited, time-limited expertise	Global Outbreak and Response Network (GOARN) - technical partnership established by WHO to engage resources of agencies beyond the UN for rapid identification, confirmation and response to PHEICs	Can deploy technical expertise, including laboratory & operational logistics, tools and equipment to reinforce field teams
	UN Volunteers (Cost borne by UN partner host; limited donor-funded assignments)	Can be deployed to support UN entities, governments, public institutions, CSOs Medical & health service cadre Some home country professionals

Annex 5: Public financial management bottlenecks for COVID-19 vaccine roll-out

BUDGET CYCLE STAGE	PFM ISSUES		POLICY OPTIONS
BUDGET PLANNING AND FORMULATION	**Budget estimates**	• Disconnect between costing for COVID-19 vaccination and budgeting processes • Under-estimated costs for non-vaccine items and delivery costs	• Updating cost estimates and budget proposals to include comprehensive spending needs for vaccination plans • Protecting spending needs for essential health services
	Budget planning	• Lack of vision over the medium term for budget planning and for aligning allocations with longer-term vaccination deployment needs • Fragmented budget planning and budget provisions (e.g. provisions in a health ministry budget, and an extra-budgetary fund.)	• Revising multi-year expenditure frameworks to provide a rolling horizon over two to three years and a consolidated vision on spending needs • Ensuring budgetary coordination across several ministries and/or entities, and between central and subnational levels
	Budget structure	• Rigidities in resource allocation due to input-based budgeting (e.g. vaccine, cold chain, and other immunization support services all exist as separate line items)	• Creating temporary programme-type lines within a budget • Exploring extra-budgetary funds and their potential pros and cons • Accelerating the transition to programme-based budgeting to improve priority-setting and accountability and to make allocations more flexible
	Budget holders	• Uncoordinated allocations to multiple budget holders • Complex execution and poor tracking system	• Transparent budget split between budget holders involved in COVID-19 vaccination • Consolidated operational and performance plan

BUDGET CYCLE STAGE	PFM ISSUES		POLICY OPTIONS
BUDGET EXECUTION AND SPENDING MODALITIES	**Spending authorisation rules**	• Cumbersome and multilayered spending authorization processes • Delayed transfers to sub-national levels and purchasing agencies	• Adjusting modalities to allow funds to be disbursed more easily upon appropriation (e.g. fast-track authorization for vaccine-related expenditures) • Simplify spending procedures for budgetary transfers to entities in charge on vaccination delivery • Adjusting and/or introducing budget formulas to account for variations in regional or community health needs
	Procurement rules	• Cumbersome procurement procedures • Insufficient provisions in emergency procurement rules to allow direct contracting and advance payment to manufacturers for COVID-19 vaccines	• Refining regulation to allow fast-track procurements procedures for the purchase of vaccines and non-vaccine items • Maintain financial transparency requirements
	Provider contracting modalities	• Rigid personnel recruitment and contracting policies (eg for temporary vaccinators) • Rigid or non-existent frameworks for contracting private providers	• Revising regulatory frameworks to make it easier to contract temporary and/or private providers for vaccine deployment and to ensure that private providers are held accountable for outputs
	Payment and incentives to providers	• Inconsistent incentives to providers for effective vaccine roll-out	• Revising payment methods to support effective service delivery (e.g. introducing an additional fee to capitation payment rate)
	Rules for resource use by health service providers	• Lack of access by front-line workers to operational funds • Cumbersome authorization and reporting rules against resource use	• Updating PFM frameworks to allow front-line workers to receive and manage public funds directly (e.g. for operational costs linked to the vaccine roll-out)

BUDGET CYCLE STAGE	PFM ISSUES		POLICY OPTIONS
EXPENDITURE REPORTING AND ACCOUNTABILITY	**Tracking expenditure**	• Weak reporting systems • Multiple reporting processes • Narrow or incomplete view of spending	• Adjusting FMIS to include new codes for COVID-19 expenditure related to vaccinations • Introducing a budget tagging system within an existing programme structure, where relevant • Considering the introduction of output-based tracking mechanisms • Publicly releasing expenditure and performance data on vaccinations
	Large volume of spending not accounted for in Financial Management Information Systems (FMIS)	• Spending on external resources monitored through separate processes, verification systems and audits	• Streamlining reporting modalities to avoid duplications and parallel reporting processes • Strengthening domestic financial information systems and audit functions
	Lack of incentives for accountability by health service providers	• Poor accountability systems • Tracking the consumption of inputs instead of performance	• Refining contracts with service providers and performance agreements

Annex 6: References

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