

Annex C: Modelling Assumptions

Number of doses per year: The Secretariat is basing calculations for the COVID-19 vaccine programme on one booster dose per year based on the assumption that future vaccines will give more durable protection, limiting the need for more frequent vaccination. It is also possible that by 2024 most people globally will have either been infected with COVID-19 at some point and/or been vaccinated, and this hybrid immunity will result in one dose per year being sufficient.

Coverage and demand: The programme should aim to support countries to reach ambitious targets yet be based on realistic assumptions of coverage. We considered comparable rates of coverage to use as proxies for what we may expect for the COVID-19 context. Alliance demand planning groups project overall primary coverage in the AMC 91 to be between 40 and 65 percent by end-2023. A drop off from primary to booster coverage has been assumed using HIC data (~18 percent drop off). The model, therefore, assumes we can expect countries' additional dose coverage rates to be somewhere between 35 and 55 percent for the proposed programme.

Procurement cost per dose: Several factors will determine the procurement cost per dose. For the cost factored into this model, we assume that manufacturing will continue on an ongoing basis, and therefore there will be predictable supply from a diverse range of suppliers. Current vaccine technologies will continue to be used, and fit-for-purpose vaccines, such as variant containing vaccines, will be well-matched against circulating variant strains. As we integrate into established Alliance processes, we will revert to regular tendering processes through UNICEF. Actual future vaccine prices may be influenced by volumes contracted/procured, level of competition, new technologies, product preferences, geographic base of manufacturing networks, and other factors.

Delivery costing: Delivery costing has been calculated with the support of the Delivery Costing Working Group (DCWG) in September 2022. The DCWG has members from CoVDP, UNICEF, BMGF, Harvard School of Public Health, MSH, WHO and Gavi. The costing encompasses several components, including PPE, hand hygiene, per diem for service delivery, transportation for outreach, training, planning & coordination, social mobilization, cold chain maintenance, waste management, vax certificates, pharmacovigilance. Costing excludes ancillaries (syringes and safety boxes), TA and cost of vial.