

How to use the WHO vaccination session planner & vaccine wastage calculator- Instruction guide

Background information

The World Health Organization (WHO) has launched a new vaccination session planner, based on a model developed by WHO¹, to provide rational basis for vaccine forecasting in conjunction with session planning. With this new tool, WHO continues its support to all immunization programmes by improving annual vaccine forecasting, monitoring the utilization of vaccines and wastage rates based on their service delivery settings.

This new tool was developed to help national immunization programmes to estimate more accurately the vaccine needs at the service delivery and establish wastage rates for monitoring. Its goal is to contribute with more precision, the estimates of the vaccine need assessment and better planning and management of immunization programmes. It also aims to increase accuracy of the wastage data at country level and improve the overall data quality for vaccine wastage. By providing this accessible and easy - to - use tool, WHO helps to ensure that the estimation of wastage rates becomes standardized and harmonized between partners and national immunization programmes.

The new WHO vaccination session planner and vaccine wastage calculator will effectively support district microplanning exercises and allow accurate estimation of vaccine needs while minimizing wastage rate.

Objectives of the instruction guide

The guide serves as a complete instruction of how to use the new WHO vaccination session planner and wastage rates calculator. It provides further guidance on conducting simulation for validating the suitable facility session plan.

Target audience

This tool is relevant for all members of the health workforce supporting work in the vaccine area, including:

- Immunization programme managers at the national and subnational levels;
- District health officers;
- Partner organizations working at international or local levels, working on improving immunization access.

¹ IPAC meeting report, October 2013:

https://www.who.int/immunization/programmes_systems/policies_strategies/IPAC_2013_October_report.pdf?ua=1. IPAC meeting Report, October 2015. https://www.who.int/immunization/programmes_systems/policies_strategies/ipac_2015_october_report.pdf?ua=1

Using the tool

The WHO vaccination session planner & vaccine wastage calculator is a practical Excel-based tool available at the WHO website:

https://www.who.int/immunization/programmes_systems/supply_chain/resources/tools/en

The tool will support the estimation of the vaccine needs during district microplanning. As the result, each health facility will be guided through simulation exercise for establishing vaccination session plans with anticipated vaccine wastage rates, annual vaccine forecast and safety stocks.

The required data inputs include data on the immunization programmes targets, service delivery settings, and specific vaccine data (doses per vial, status of multidose vial policy (MDVP), etc.).

1. Input parameters

1.1 Cover page

The cover page contains parameters of the identification of the country, administrative level using the tool. The following parameters should be selected:

- Language, country name and year of planning;
- Level (Subnational, District) at which the planning is conducted. Preferably district level is the appropriate level for conducting annual microplanning exercises.

1.2 Prog

The “prog” sheet contains programme data on vaccines used in the national immunization programme. These include the following data:

- Scheduled vaccines: Select the vaccine from the drop-down list of WHO prequalified vaccines. The available vial size(s) for the selected vaccine will automatically be displayed in the results table.
- Activity type: select the type of vaccination activity (routine or SIAs)
- Doses of schedule: Choose the number of doses in the schedule
- Target population: select the target population from drop-down menu (live births, surviving infants, pregnant women, ...)
- Percentage of target: enter the percentage of total population
- Vaccination coverage: Indicate the coverage for the selected vaccine
- Dose per vial: Choose the number of doses per vial for the selected vaccine
- Status of MDVP: indicate the number of weeks opened vial of the selected vaccine can be reused
- Vaccine wastage: indicate the national vaccine wastage rates for each selected vaccine.

2.3 List of facilities

Enter the list of health facilities providing vaccination services. Indicate for each facility the following data:

- Province, if any
- District
- Name of the facility

- Type of facility (SP – service delivery point, LD – district health office/store, SN – subnational health office/store)
- Functionality, indicate if active or not
- Total catchment population for the planning year
- Distance to/from the supplying store.

2. Output data

The output data presents the analysis and results in four (4) sheets. On these sheets, only cells that require data entry are highlighted in yellow.

2.1 Sessions:

The “session” sheet provides the estimations for vaccination session planning and vaccine demand forecast. The frequency of vaccination sessions will be indicated for each scheduled vaccine.

The results from analysis are follow:

- Mean session size: the mean session size is calculated as the annual number of doses to be administered divided by the number of vaccination sessions of the year.
- Estimated annual doses required: the total doses required is calculated based on the number of vials per session (mean session size) multiplied by the number of doses per vial. The result of calculation is adjusted according to the status of MDVP.
- Safety stock: the safety stock level is established at the service delivery to cover fluctuations of demand between vaccine deliveries.

2.2 Simulation:

The “simulation” sheet provides options for conducting additional analyses for a selected health facility to generate annual vaccines needs, safety stock level as well as cold chain, cost and anticipated wastage rates for a given vaccine.

Additional analyses include simulation using different figures, including:

- *Vaccine schedule*: catchment population, doses in schedule, coverage the vaccine presentation values for the selected vaccine;
- *Status of the implementation of the multi-dose vial policy (MDVP)*:
- *Frequency of sessions*: different vaccination session frequencies can be assessed impact of demand and anticipated wastage rates.

2.3 Forecast:

This sheet presents a summary of the vaccine forecast for a selected health facility. The estimations are based on the session plan provided in the sheet sessions.

The following outputs are included in the summary table of the health facility vaccine forecasts:

- The mean session size, represents the average number of doses administered;
- The anticipated wastage rate, for each vaccine;
- The estimated doses needed (annual and monthly).
- The estimated safety stock.