

## Case study



# Trends of diphtheria-tetanus-pertussis (DPT3) vaccination coverage in Afghanistan 2016-2017, changes and comparisons: a teaching case-study

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## Abstract

If all countries are to reach at least 90% DTP3 vaccination coverage, 9.9 million additional children would need to be vaccinated in 64 countries. Of these children, 7.3 million live in "fragile states", that is, those countries affected by conflict and/or humanitarian crises; 4 million of these children live in just three countries – Afghanistan, Nigeria and Pakistan – where access to routine immunization services is critical to achieving and sustaining polio eradication as well. According to 2016 data, of these 64 countries, 23 are non-Gavi eligible lower-middle-income countries (representing 1.2 million infants), 39 are supported by Gavi (with 8.6 million un- and under-vaccinated) and two are high-income countries. By the end of 2014, 18.7 million children under the age of 1 year had not received three doses of diphtheria-tetanus-pertussis (DTP3). Three-quarters of children who have not received DTP3 coverage are living in Afghanistan. In Afghanistan, the DPT showed low coverage in 2017 compared to 2016. In this case study, we are going to compare vaccination coverage in 2017 with that in 2016 in Afghanistan. This case study aims to simulate the analysis of vaccination coverage and identifying reasons for low vaccine coverage.

## How to use this case study

**General instructions:** this case study should be used as adjunct training material for novice epidemiology trainees to reinforce the concepts taught in prior lectures. The case study is ideally taught by a facilitator in groups of about 20 participants. Participants are to take turns reading the case study, usually a paragraph per student. The facilitator guides the discussion on possible responses to questions. The facilitator may make use of flip charts to illustrate certain points. Additional instructor's notes for facilitation are coupled with each question in the instructor's guide to aid facilitation.

**Audience:** this case study was developed for novice field epidemiology students. These participants are commonly health care workers working in the county departments of health whose background may be as medical doctors, nurses, environmental health officers or laboratory scientists who work in public health-related fields. Most have a health science or biology background.

**Prerequisites:** before using this case study, participants should have received lectures on disease surveillance and outbreak investigation.

**Materials needed:** Flash drive, flip charts, markers, computers with

MS Excel

**Level of training and associated public health activity:** Novice – Vaccination coverage Epidemiological profile

**Time required:** 2-3 hours

**Language:** English

## Case study material

- Download the case study student guide
- Request the case study facilitator guide

## Competing interest

The authors declare no competing interests.

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