



Background

Pneumonia is the major cause of death among children under 5 years. According to UNICEF, (2019), for every 24 hours that passes, more than 2,200 children under 5 years, dies from pneumonia, thereby accounting for 15% of all death cases among under-five years’ children globally. In 2017 and 2018, the total number of children under -five years that died from pneumonia alone was 808,694 and 802,000 respectively (UNICEF, 2019; WHO, 2019). When compared with other childhood infectious diseases, the number of deaths caused by pneumonia alone was higher than the deaths caused by diarrhoea, malaria and measles combined together in 2018 (fig 1).

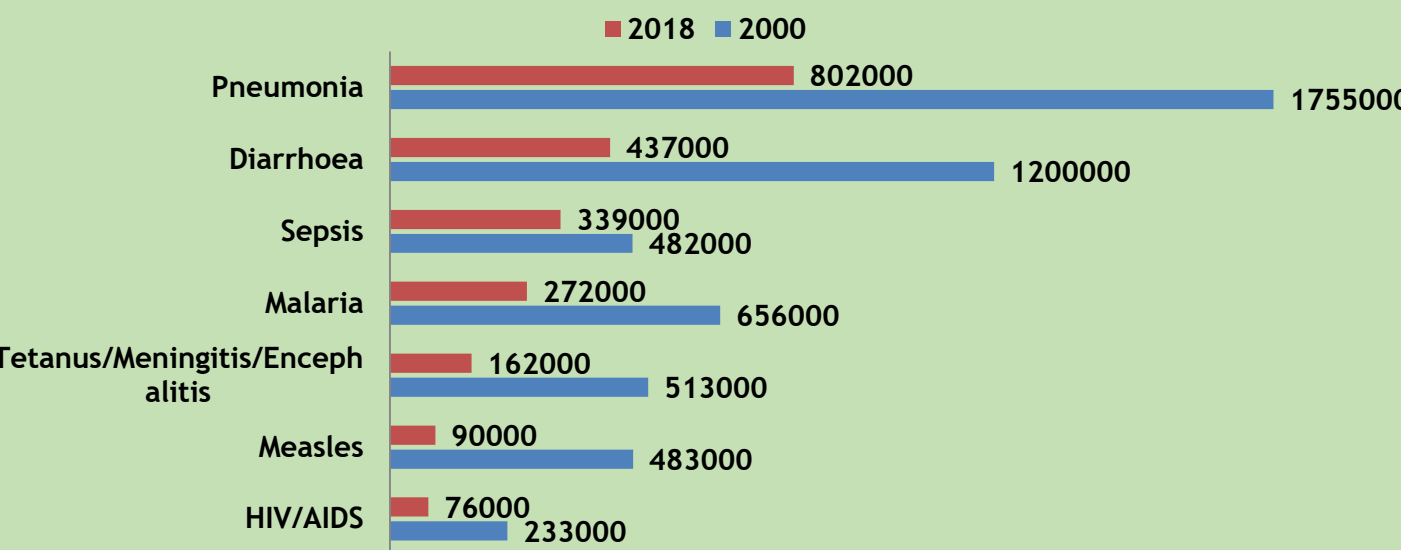


Figure 1: Deaths among under 5 years children from infections

Childhood Pneumonia in Nigeria

Childhood pneumonia infections and deaths disproportionately affect regions in sub-Saharan Africa and South Asia (WHO, 2019). Nigeria accounts for more than 20% of global cases of pneumonia deaths (fig 2) and is currently the country with highest childhood pneumonia deaths worldwide (UNICEF Nigeria, 2019).

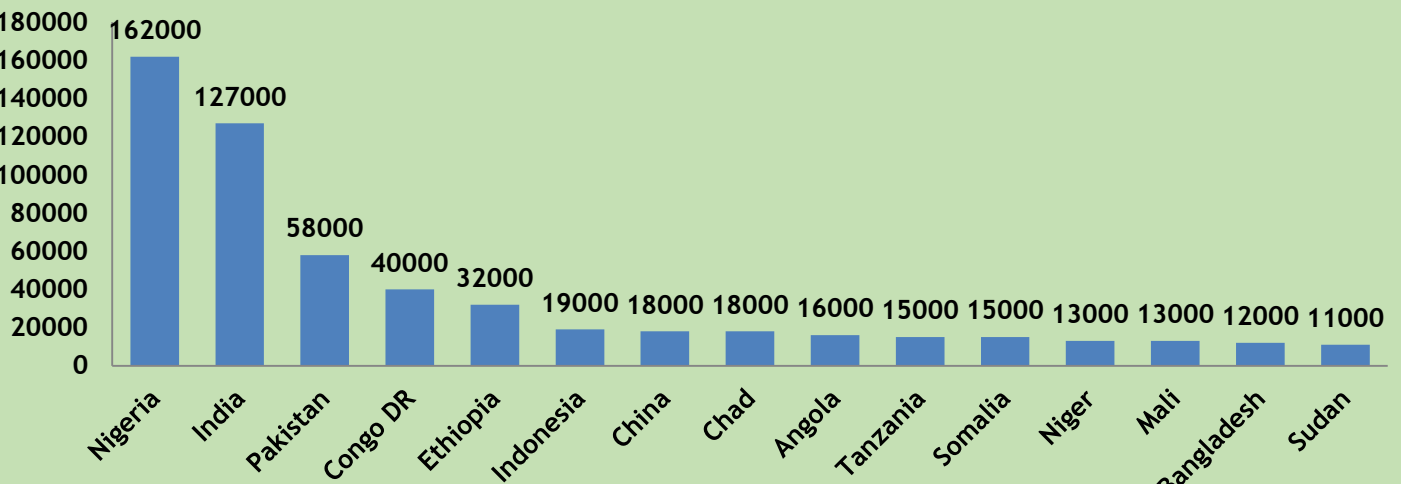


Fig 2: Deaths from pneumonia among under 5 years children in 2018

Childhood Pneumonia Influencing Factors in Nigeria

- Malnutrition: In Nigeria, 50% of children under five years are malnourished (UNICEF Nigeria, 2019^b) and according to the World Health Organisation, undernourished children have a higher risk of suffering from pneumonia (WHO, 2019)
- Poor healthcare: Pneumonia is a treatable disease (WHO, 2019). However, Nigerian’s fragile healthcare systems and poor health care delivery (Adeloye *et al.*, 2017), may lead to more children under five years, dying from pneumonia.
- Vaccine hesitancy: Pneumonia is a vaccine preventable disease (WHO, 2019). Active pneumonia preventable vaccines like Pneumococcal Conjugate vaccine (PCV), Haemophilus influenzae type B vaccine (HIB) and others (Madhi *et al.*, 2008), are available in Nigeria. However, vaccine hesitancy remains a challenge in the country (Ogundele *et al.*, 2020) due to misconceptions and concerns around vaccine safety.

Methods

Understanding the impact of vaccine hesitancy, through the evaluation of immunisation coverage in Nigeria, is crucial in tackling childhood pneumonia in the country. Hence, the Immunisation coverage of pneumonia preventable vaccines; Pneumococcal Conjugate vaccine (PCV) and Haemophilus influenzae type B vaccine (HIB) in Nigeria, were examined from 2015 to date, in comparison with other countries using the "2019 UNICEF Immunisation data (UNICEF, 2019^b)

Result

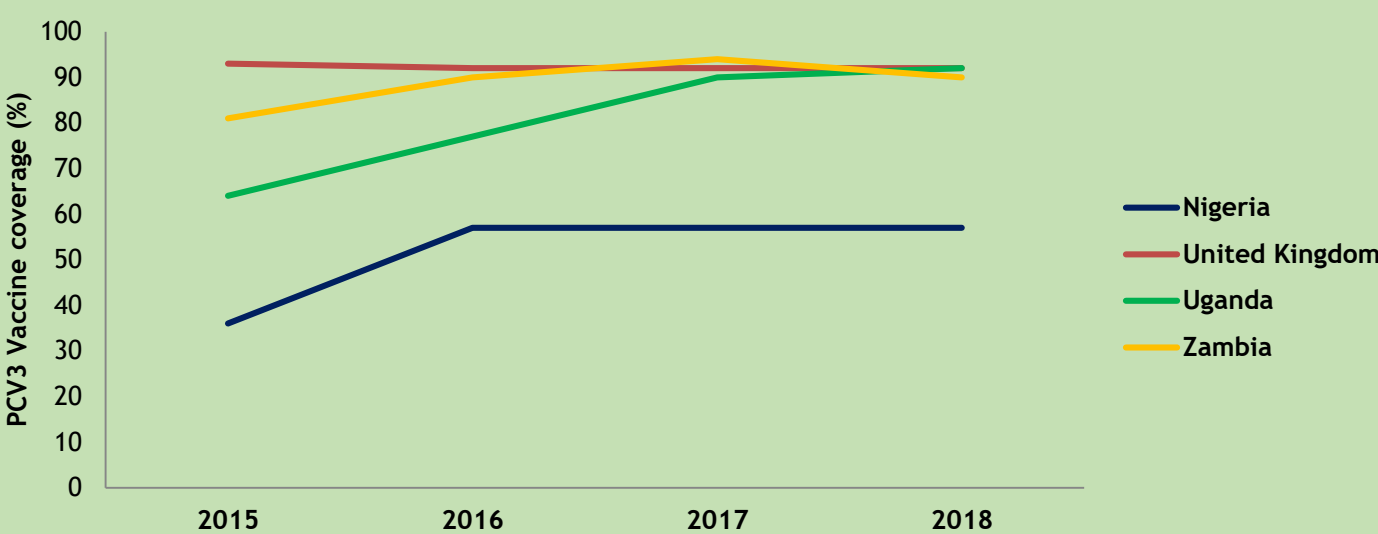


Fig 3: Trends in PCV Vaccine coverage (%) between Nigeria and others countries

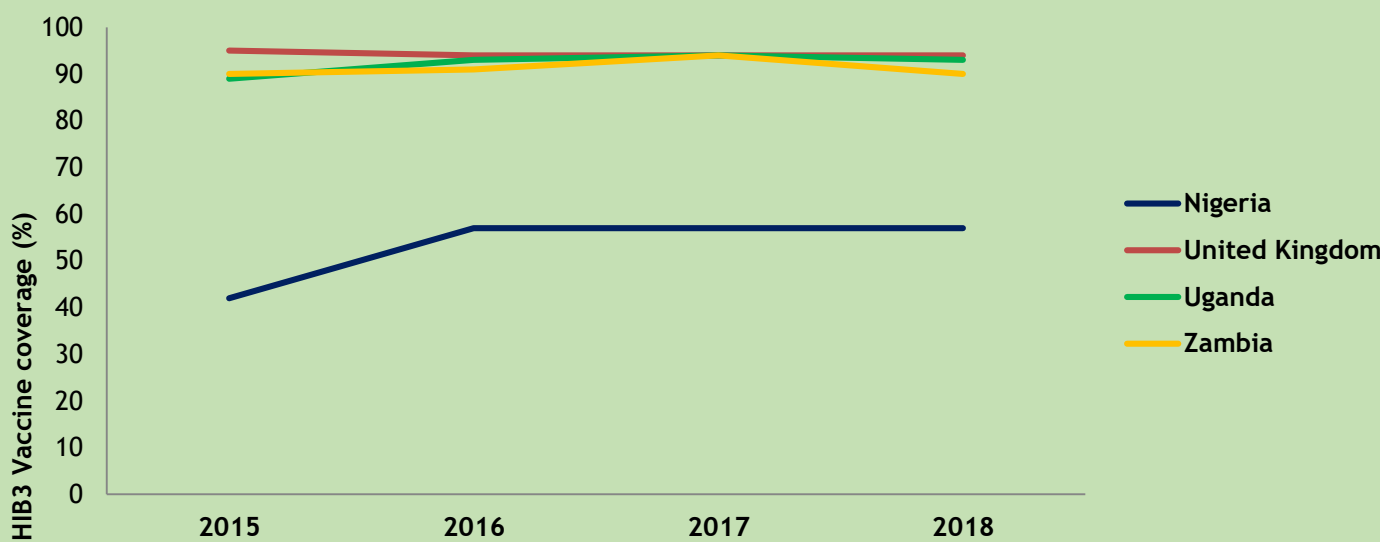


Fig 4: Comparing trends in HIB Vaccine coverage (%) between Nigeria and others

Immunisation coverage of PCV and HIB antigens were all time low in Nigeria. In 2015, PCV3 and HIB vaccine coverage in Nigeria were 36% and 42% respectively. From 2016 to 2018, the coverage level (%) for PCV and HIB vaccines both stood at 57% each, lower than what was obtainable in countries like Uganda, United Kingdom, Zambia and others.

Conclusion

The suboptimal vaccination coverage in Nigeria, coupled with the prevailing childhood undernourishment and poor quality of healthcare, predisposes children under five years to pneumonia infections and deaths. Therefore, there is a burning need to improve the uptake of pneumonia preventable vaccines in the country, to halt the ever-rampaging pneumonia disease and deaths among children under five years.

References

(1) Adeloye D., David R.A., Olaogun A.A., *et al.* (2017): Health workforce and governance: The crisis in Nigeria. *Hum Resour Health*, 15:32. Available [here](#), accessed December 8, 2019

(2) Madhi S.A., Levine O.S., Hajjeh R., *et al.* (2008): Vaccines to prevent pneumonia and improve child survival. *Bulletin of the World Health Organisation*, 86(5):321-416

(3) Ogundele O.A., Ogundele T., Beloved O. (2020): Vaccine hesitancy in Nigeria: Contributing factors way forward. *Niger. J. Gen. Pract.* 18:1-4

(4) UNICEF (2019): Pneumonia. Available [here](#), accessed December 8, 2019

(5) UNICEF (2019^b): Immunisation: Immunisation coverage by antigen (country, regional , and global trends). Available [here](#), accessed December 8, 2019

(6) UNICEF Nigeria (2019): Nigeria contributing highest number to global pneumonia child deaths. Available [here](#), accessed December 7, 2019

(7) UNICEF Nigeria (2019^b): Poor diets damaging children’s health worldwide, including in Nigeria, warns UNICEF. Available [here](#), accessed December 8, 2019

(8) World Health Organisation (2019): Pneumonia. Available [here](#), accessed December 8, 2019