

## **ABSTRACT**

This study sought to establish the relationship between vaccine Forecasting and Service Delivery at the Uganda National Expanded Program on Immunization (UNEPI). Specifically, the study sought to examine the relationship between financial forecasting and service delivery of vaccines at UNEPI; determine the relationship between demand forecasting and service delivery of Vaccines at UNEPI, and sought to establish the relationship between planned vaccination forecasting and service delivery of Vaccines at UNEPI.

The study adopted case study design. 97 study participants were sampled from a population of 108 respondents. Data analysis involved descriptive and inferential analysis. Findings indicated that financial forecasting was positively and moderately associated with service delivery of vaccines at ( $r=0.585$ ); demand forecasting is positively and highly associated with service delivery of vaccines at ( $r=0.644$ ); planned vaccination forecasting is positively and highly associated with services delivery of vaccines at ( $r=0.606$ ).

Financial Forecasting, Demand Forecasting and Planned Vaccination Forecasting were found to significantly predict service delivery of Vaccines at UNEPI with an Adjusted  $R^2=0.495$ . Demand Forecasting contributes the highest to the unique variations recorded in service delivery of Vaccines at UNEPI ( $\beta=0.379$ ), followed by Planned Vaccination Forecasting ( $\beta= 0.279$ ) and Financial Forecasting ( $\beta=0.182$ ). Demand Forecasting and Planned Vaccination Forecasting were statistically significant while financial forecasting was not.

In conclusion, the study determined that financial forecasting has been shown to have a very small and statistically insignificant contribution to service delivery at UNEPI; demand forecasting contributed in a small and significant manner to improvements registered in service delivery at UNEPI and planned vaccination forecasting contributed to improvements in service delivery at UNEPI in a small but statistically significant manner.

The study recommends UNEPI redesigns the current financial forecasting process in the organisation. This redesigning process can be done by technocrats in the Ministry of Health because the current financial forecasting process fell short of the Global coverage of 90% vaccine service delivery. The study recommends the strengthening of the immunization department with better equipment and manpower at all levels of service delivery to work towards achieving 2030 good health sustainable development goals. The study further recommends the planning function to be supported with more financial resources as it has a strong bearing on outcomes of vaccination campaigns and has cost implications. The implementation should take place before the next budget as the planned vaccination forecasting has budgetary implications.