Infectious Disease Epidemiologist with Modelling & Simulation Background
Terms of Reference for Consultancy

Post Summary	
Job Title:	Epidemiologist
Reporting to:	Oriole Global Health Ltd
Contract Type:	Consultancy – 10 months
Location:	Remote
Starting Date:	June 2022
Application deadline:	31 March 2022
Send CV and cover letter to :	info@orioleglobalhealth.com

Background and Summary of the job posting

Oriole Global Health (OGH) is a global health consultancy headquartered in London, United Kingdom, with regional offices in Halifax, Canada and Nairobi, Kenya. Our team and global network of internationally renowned academics and technical specialists help define current and future health challenges and formulate robust and scalable solutions in developed and developing contexts.

OGH intends to submit a proposal for the development of an evaluation framework for vaccine use in outbreak response. To support our team in this assignment we are looking to hire an infectious disease epidemiologists with a background in vaccines or outbreak response and experience in modelling & simulations. The appointment will be conditional to a successful bid.

Role

The Epidemiologist will support the team in developing the evaluation framework for GAVI investments in vaccines for Outbreak Response Interventions (ORI). This will include conducting a review and landscape analysis of existing epidemiological models and evaluation frameworks, developing the new framework for GAVI, validating the framework as part of a proof-of-concept study, and contributing to dissemination of results.

Main tasks and responsibilities

- Conduct literature review and landscape analysis of
  - existing quantitative epidemiological models that have been used to plan or evaluate outbreak response immunisation (ORI) for five priority diseases (cholera, ebola, meningococcal disease, typhoid, yellow fever).
  - reports and evaluation of previous outbreaks and interventions for the five priority diseases and compile an overview of lessons learned.
  - the economic and societal impact of previous outbreaks of the five priority diseases

- Conduct a structural comparison of existing models and define their applicability to different outbreak/intervention scenarios and research questions
- Conduct interviews with global experts in vaccine manufacturing and supply chains and with country experts to establish the feasibility of different intervention scenarios
- Define key indicators for the impact of ORI that can be used in communication with stakeholders
- Develop a framework that will allow GAVI to quantify the impact of investments in vaccines for ORI for the five priority diseases and across the GAVI portfolio
- Prepare a manuscript for publication in a peer-reviewed journal and a report for dissemination of the framework

Essential Selection Criteria (Person Specification)
Academic Qualifications: • Masters/PhD level degree in epidemiology, infectious disease or vaccines with a background in mathematical modelling Experience: • 3+ years of experience in applying mathematical models to real-world public health questions • Experience in working on vaccination strategies or outbreak response • Experience in evaluating the impact of interventions in a public health context (epidemiological, economic, societal) • Experience in conducting systematic literature reviews • Experience in working with national/international public health organisations Skills and Competences : • Ability to understand and formulate mathematical models of infectious disease transmission and intervention and apply them to real-world questions • Ability to communicate with a variety of stakeholders – understand their needs and conceptualise them in a way that is amenable to quatitative evaluation, explain abstract concepts to non-experts in a way that conveys their relevance to practical implementation • Competent in using maximum likelihood/Baysian methods for fitting models to data • Competent in at least one programming language (Python, R, Julia) • Fluent in English and excellent communication skills – verbal and written • Strong organizational and interpersonal skills and ability to work in a team-oriented setting with individuals from a variety of cultural backgrounds and skillsets