PAVE 2017-2018 Internship descriptions

WHO IVB - Geneva, Switzerland

WHO IVB 1: Leveraging Data to Strengthen Global Sentinel Site Vaccine-preventable Disease Surveillance Networks for Rotavirus and Pneumococcus

WHO IVB 2: Supporting the analysis of global vaccination coverage data

WHO IVB 3: Vaccine economic research studies in low and middle-income countries (LMICs)

WHO IVB 4: Data Validation: Surveys of Missed Opportunities for Vaccination (MOV)

WHO IVB 5: Description pending [malaria]

Gavi, the Vaccine Alliance – Geneva, Switzerland

Gavi 1: Supporting evidence based decision-making at Gavi, The Vaccine Alliance

UNICEF – New York City

UNICEF 1: Analysis of information and secondary data from multiple data sources to inform strategic guidance and position papers to support UNICEF’s contribution towards the implementation of the Global Vaccine Action Plan.

PAHO – Washington, D.C.

PAHO 1: Description pending

CDC Global Immunization Division – Atlanta, GA

CDC 1: Description pending
Leveraging Data to Strengthen Global Sentinel Site Vaccine-preventable Disease Surveillance Networks for Rotavirus and Pneumococcus

Supervisors: Adam Cohen, MD MPH, Fatima Serhan, PhD, and Tomoka Nakamura, MPH, Global Immunization Monitoring and Surveillance, Expanded Programme on Immunisation, Department of Immunizations, Vaccines, and Biologicals, World Health Organization, Geneva, Switzerland

Background:

Pneumonia and diarrhea are the two leading killers of children worldwide. Fortunately, vaccines exist that can prevent the leading cause of pneumonia (pneumococcus) and diarrhea (rotavirus). These vaccines have the potential to save millions of lives globally, but are currently underused globally, although much progress has been made over the past few years as countries have decided to introduce the vaccines into their routine childhood vaccination programs.

The mission of the WHO Expanded Programme on Immunization (EPI) is to make vaccines available to all children worldwide. As part of that mission, the WHO recommends that countries conduct surveillance for pneumococcal and rotavirus diseases to demonstrate the burden of disease and the impact of vaccine when it is introduced. WHO coordinates global sentinel site surveillance networks for meningitis and pneumonia to monitor pneumococcus and for diarrhea to monitor rotavirus. These networks, which currently include more than 200 surveillance sites in more than 60 countries, were started in 2008 and have been used by many countries to guide evidence-based vaccine policy decisions. WHO continually analyses the surveillance data to monitor global disease trends, report results to stakeholders and to improve the surveillance methods used. WHO publishes a surveillance bulletin twice a year (April and November, https://goo.gl/96tF4i.) and convenes an annual global sentinel surveillance meeting in November.

We propose a project to leverage the surveillance data to strengthen the Global Sentinel Site Vaccine-preventable Disease Surveillance Networks for pneumococcus and rotavirus. This would include two parts: (1) analyzing global surveillance and laboratory data to report to the global community through the surveillance bulletin and annual meeting and (2) conducting a discrete research project using the surveillance and laboratory data to inform global understanding of rotavirus and invasive bacterial disease epidemiology and surveillance.

Scope of Work

The WHO EPI is seeking an intern to work under the supervision of WHO technical staff to undertake a project with the following aims:
• Analyze surveillance and laboratory data for the global surveillance bulletin and annual meeting
• Conduct a discrete research project to inform global understanding of rotavirus and invasive bacterial disease epidemiology and surveillance. These projects could include examining risk factors of pediatric rotavirus mortality or exploring whether surveillance and laboratory data can be used to estimate vaccine coverage.
• Assist in writing for the global surveillance bulletin and the global report of the annual meeting

The detailed terms of reference can be tailored to the specific interests and experience of the intern. A peer-reviewed publication and thesis may be developed from this project if the intern is interested. We will support the intern in the literature review, data analysis, and writing.

Skills Required

• Undergraduate degree, with some training in epidemiology
• Excellent written and verbal communication skills in English
• Proficiency with Microsoft Word, Excel, PowerPoint, and email
• Experience with literature searches on PubMed and preferably other databases
• Basic data analysis skills

Skills Desired but not Necessary

• Experience in surveillance of infectious diseases, epidemiology, laboratory science (bacteriology, molecular biology, and/or virology), and global health
• Experience with large database analysis, using statistical software such as Stata or R

Period for the internship: Preferably September-December 2018, though we can discuss other time periods
Supporting the analysis of global vaccination coverage data

Supervisor: Dr Carolina Danovaro, Scientist, Global Immunization Monitoring and Surveillance, Expanded Programme on Immunisation, Department of Immunizations, Vaccines, and Biologicals, World Health Organization, Geneva, Switzerland

Background

One of the core functions of the World Health Organization (WHO) is to monitor and use data for analytics and to inform policy-making. In collaboration with Member States and partners, WHO plays a critical role in consolidating, analysing and disseminating global data and information across all immunization and vaccine-preventable disease (VPD) areas. WHO promotes the collection and use of quality of data and provides guidance Member States on immunization monitoring, including the use of data routinely collected and coverage surveys to monitor immunization coverage and other related indicators. The mission of the WHO Expanded Programme on Immunization (EPI) is to make vaccines available to all children worldwide.

The Strategic Advisory Group of Experts (SAGE) on Immunization was established by the Director-General of the World Health Organization in 1999 to provide guidance on the work of WHO in the area of vaccines and immunization. SAGE has emphasized the importance of improving the availability, quality and use of data for decision-making on immunization. To this end, in August 2017, a “SAGE Working Group on Quality and Use of Global Immunization and Surveillance Data” was created to review the current global immunization and surveillance data collection, its use and impact as well as limitations and needs and propose recommendations to improve quality, access to, and use of immunization data for enhancing immunization programme performance at national and subnational levels. These recommendations will then be presented for review by SAGE in April 2019. The full Terms of Reference (TOR) of this SAGE Working Group (WG) are available here: http://www.who.int/immunization/policy/sage/sage_wg_quality_use_global_imm_data/en/. The Secretariat for this WG on Data is the Global Immunization, Monitoring & Surveillance Group at the Expanded Programme on Immunization (EPI), within the Department of Immunization, Vaccines and Biologicals (IVB), within the Family, Women and Children’s Health (FWC) cluster.

The EPI team has four functional groups, namely: Programme Operations; Policies and Strategies; Vaccine Supply and Demand, and the Global Immunization Monitoring and Surveillance Group. The intern will be in the Global Immunization, Monitoring & Surveillance Group (GIMS) supporting the Secretariat work to the SAGE WG on Immunization Data.

The two main objectives for the intern will be:

1. to complete the intern’s education by learning about WHO, the work on monitoring and evaluation (M&E) for immunization, and on global health data, and
2. to use his/her education background in a professional environment, especially to provide support to the area of immunization monitoring, mainly as it relates to the SAGE Data working group.

Scope of work

The intern will be responsible for the following activities:

- Support the preparation of 6 documents, one per TOR of SAGE WG, along with supporting data and documentation, for presentation to SAGE in April 2019
- Conduct (or support conduction of) secondary analysis, i.e., analyses beyond the estimation of vaccination coverage rates, using data from immunization and household surveys (for example, Demography and Demography and Health Surveys (DHS) and UNICEF’s Multiple-Cluster Indicator Surveys (MICS)). Some of these analyses may be included in the WHO Global Health Observatory.
- Other related tasks or analyses, as needed.

The intern will be strongly encouraged to extend his/her area of work by participating in seminars and other activities related to immunization and/or M&E.

Deliverables

1. An updated set of 6 documents, with supporting files, for each area of work of the SAGE WG on Immunization Data
2. A detailed listing of secondary survey analyses done, along with the documented analytic code used.
3. Regular (weekly or other agreed-upon frequency) progress reports with the activities done.

The detailed activities can be tailored to the specific interests and experience of the intern.

Skills required

- A post-graduate degree with training in epidemiology, or in the process of pursuing such degree.
- Excellent written and verbal communication skills in English.
- Excellent inter-personal skills
- Proficiency with Microsoft Excel, email and Word processing software.
- Strong motivation, sensitivity to cultural differences, organizational skills, and proven ability to deliver.

Skills Desired but not Necessary

- Knowledge of French or Spanish.
- Experience working in a multicultural environment.
- Experience working on Knowledge Management.
- Data analysis skills using statistical software such as Stata, SPSS, SAS or R.
Vaccine economic research studies in low and middle-income countries (LMICs)

Supervisor: Dr. Raymond Hutubessy, Initiative for Vaccine Research, Department of Immunization, Vaccines, and Biologicals, World Health Organization, Geneva, Switzerland

Background

Over the next decade several new vaccines will become available against infectious diseases of major public health importance. Public health decision-makers will need to make choices, between vaccines and between other preventive interventions. New vaccines (e.g. pneumococcal, rotavirus and human papillomavirus vaccines) and vaccines in the pipeline (e.g. malaria, dengue, typhoid vaccines) are more expensive compared to the dollar cents traditional vaccines costs (e.g. diphtheria, tetanus, pertussis, polio, measles and tuberculosis) while countries increasingly have to carry the full costs of vaccination programs. Among other things decision makers need information on the relative cost-effectiveness (CE) of vaccines compared to other preventive interventions.

In order to assist countries in the collection of local economic evidence for vaccine introduction decisions WHO is engaged in performing systematic reviews of published costing and cost-effectiveness studies of different vaccines available and the creation of global vaccine economic impact data bases with information generated from WHO vaccine specific analytic economic tools in low and middle-income countries. These reviews and global data bases are a crucial and integral part of various work packages ongoing within the WHO Initiative for Vaccine Research (IVR) under the guidance of Immunization and Vaccines related Implementation Research (IVIR) Advisory Committee[1]. Tools included are the WHO Cervical Cancer Prevention and Control Costing Tool (C4P)[2] and WHO Papillomavirus Rapid Interface for Modelling and Economics (PRIME)[3] and other Vaccine Economic Value Chain on influenza vaccines[4], cholera and typhoid vaccines. The WHO Guide on standardization of economic evaluations of immunization programs[5] is a generic key document in WHO IVR’s work on vaccine economics.

Scope of Work

The WHO IVR seeks an intern to work under the supervision of WHO technical staff of the implementation research group to undertake a project with the aim to perform systematic reviews of published cost-effectiveness and costing studies and/or to assist in the development of economic impact databases from low and middle income countries for various vaccine preventable disease such as cervical cancer, influenza, typhoid, cholera, malaria, dengue and others.

The detailed terms of reference can be tailored to the specific interests and experience of the intern. It is intended that a review publication will arise from this project.

Skills Required

- Fluency in English
- Proficiency with quantitative research
- Proficiency with Microsoft Excel, email and word processing software
- Proficiency with literature searches on PubMed and preferably other databases
- Training and experience in health economics
Data Validation: Surveys of Missed Opportunities for Vaccination (MOV)

Supervisors: Stephanie Shendale, Ikechukwu Ogbru, and Laura Lochlainn, Policy & Strategies Team, Expanded Programme on Immunization, Department of Immunizations, Vaccines, and Biologicals, World Health Organization, Geneva, Switzerland

Background

Missed opportunities for vaccination (MOV) include any contact with health services by a child (or adult) who is eligible for vaccination, which does not result in the individual receiving all the vaccine doses for which he or she is eligible. Estimates indicate that reducing missed opportunities for vaccination by making better use of existing vaccination services can result in up to 14% gain in immunization coverage. The WHO Expanded Programme on Immunization (EPI) has developed a set of updated tools to assist countries in planning and conducting MOV assessments. An MOV assessment can help a country identify the magnitude and causes of MOVs and develop tailored interventions to address these issues. Since 2015, 11 countries – mainly in the African Region – have completed MOV assessments using the updated methodology, with support directly or indirectly from the Immunization Policy and Strategies team in EPI.

Scope of Work

The Immunization Policy and Strategies team is seeking an intern to work under the supervision of WHO technical staff to assess the accuracy of data collected electronically during recent MOV country assessments.

During the assessments, field teams are trained to collect data electronically through use of handheld tablets installed with a data collection platform called Zegeba. The teams who interview mothers or caregivers collect a variety of information about vaccine knowledge, satisfaction with the vaccination services and also the vaccination status of their children. To confirm the vaccination status of the children, vaccination dates are transcribed from vaccination cards or registries into the electronic data collection form. A photo is also taken of the vaccination card or registry and stored electronically.

To validate the accuracy of this data collection process, we would like to cross-check dates entered into the data collection platform with those on the vaccination cards. This project is an important component in the validation of the data we collect. We expect that the findings of this validation exercise will be published.
If time allows, there will also be opportunities for the intern to be involved in other aspects of the MOV stream of work, including literature reviews and possible analyses of data from upcoming assessments.

Below is a link to the MOV page for further information:


**Skills Required**

- Knowledge of the basic principles of epidemiology
- Proficiency with Excel
- Basic data analysis skills
- Experience with literature searches (PubMed and other databases)
- Good written and verbal communication, including the ability to document findings quickly and accurately
- Analytical thinking to explore the significance of any findings

**Period for the internship**: Preferably September-December 2018, though other time periods can be discussed
Description pending [malaria]
Supporting evidence based decision-making at Gavi, The Vaccine Alliance

Supervisors: Dr. Hope Johnson, Director Monitoring and Evaluation

Background:

Gavi, The Vaccine Alliance, has a strategic framework for the 2016-2020 period which includes a strong focus on data. Both for driving decisions at Gavi and the countries we work within.

Looking externally, the strategic framework for 2016-2020 includes a strong emphasis on data availability, quality, and use at the sub-national, national and global levels. The three focus areas for data are: immunisation delivery, coverage and equity, vaccine preventable diseases (VPD) surveillance and vaccine safety.

Looking internally, the Monitoring, Data Systems and Strategic Information (MDS) team manage indicators and analytics that aim to support the organisation in their decision making.

Under the supervision of the Head of MDS, the intern will contribute to the work of the team, assist in both the implementation of the Gavi 2016-2020 data strategy with relation to VPD surveillance and management of strategic information.

For more information on the Gavi 2016-2020 strategy please see: http://www.gavi.org/About/Strategy/Phase-IV-2016-20/

Scope of Work:

- Update and disseminate key strategy and Alliance indicators and analytics
- Support specific sets of analysis – includes working with stakeholders to define analysis, performing analysis, generating presentation materials and presenting. Examples of analysis include: use of data to generate hypotheses for development of the Gavi strategy for post-2020, analyses to inform the Gavi midterm review with the Board and Donors, analyses to inform the Gavi vaccine investment strategy, and analyses for country missions and Senior Management keynote speeches. Analysis can be agreed shortly before internship starts.
- Support refinement and implementation of the Gavi data strategy for VPD surveillance investments.
- Compiling information and preparing documentation and presentations for Technical Consultation Group meetings, workgroup sessions, internal and external meetings, etc.
- As and when required, the intern may be asked to provide support to other activities/projects or to help out on day-to-day operational work.
Note: Discussions would be held with the selected candidate to determine a mutually agreeable and specific scope of work that draws from the above points.

**Necessary skills:**

Languages: Fluency in English. Working knowledge of French or other UN language is desirable.

Computer skills: Proficiency with Microsoft Excel (Advanced preferable), Word, PowerPoint and e-mail. Experience with database software such as Microsoft Access and statistical software such as Stata is desirable.

Other skills and experience:
- Strong analytical skills
- Excellent written communication and presentation skills;
- Ability to work independently and demonstrate initiative and flexibility;
Analysis of information and secondary data from multiple data sources to inform strategic guidance and position papers to support UNICEF’s contribution towards the implementation of the Global Vaccine Action Plan.

Background:

Immunizations are among the most effective public health interventions. In addition to saving lives, protecting children from preventable illnesses and preventing outbreaks among communities it also give a high return on investment, relative to other public health interventions. Despite substantial progress in the last few decades, immunization programmes have largely stagnated and approximately one in five children do not receive the full complement of vaccinations to prevent them from contracting a vaccine preventable disease. In most cases, the children who do not receive vaccinations are among the most marginalized and vulnerable and are those who need vaccinations most.

UNICEF works with governments to enhance their vaccination coverage with a focus on achieving equity and quality of services. This is done through a comprehensive approach involving policy advocacy; influencing vaccine production and supply; vaccine procurement; market shaping; providing technical support in identifying and resolving supply side and demand related bottlenecks; community engagement and leveraging of resources. This multipronged approach is adopted to address complex problems that may not be resolved through a single approach. In addition, UNICEF sees immunization as a platform to deliver other proven child survival interventions in addition to vaccines. Therefore, UNICEF’s efforts to strengthen immunization systems provides an entry point for its overall health system strengthening approach – the primary focus of UNICEF’s new Health Strategy.

UNICEF’s immunization programmes focus on:

• Expanding immunization coverage and vaccinating the hard to reach
• Purchasing vaccines for more than a third of the world’s children
• Improving the cold chain to keep vaccines at the recommended temperature to retain potency
• Engaging communities to enhance awareness on child vaccinations
• Supporting the eradication of polio
• Working towards a world without measles, rubella and neonatal tetanus
• Introducing new vaccines

Scope of work:

The UNICEF immunization team seeks interns to work under the supervision of UNICEF technical staff to undertake a number of analytic and strategic projects which are aimed at improving global evidence as well as inform UNICEF’s future directions in immunization.
A list of potential projects may include, but are not limited to the following:

- Literature review on strategies to improve vaccination coverage and equity in different contexts, populations and subpopulations.
- Secondary analysis of DHS/MICS data on the equity dimensions among the unvaccinated in different contexts.
- Analysis and reviews of the process of polio transition as a part of the polio end game strategy.
- Review of current GAVI Strategy and approaches to ensure sustainability in immunization financing.
- Documentation of UNICEF/WHO supported equity assessments in selected countries and recommendations to improve the impact on coverage.
- Primary qualitative and quantitative data collection and analysis to assess the effectiveness of UNICEF’s support to both vaccine supply and demand promotion.
- Conduct primary data analysis to determine UNICEF’s contribution to increasing coverage on the first does of measles containing vaccine (MCV1).
- Develop case studies on UNICEF’s efforts to enhance 2\textsuperscript{nd} dose MCV coverage in selected countries in order to inform future efforts in this areas of UNICEF’s work.
- Support comparative economic benefit analysis in selected GAVI supported versus countries using UNICEF procurement services / pooled procurement vs countries procuring directly.
- Comparison of impact and cost-effectiveness of supplementary and routine immunization in a complex humanitarian emergencies – development of case studies.
- Data analysis and documentation of UNICEF’s approaches to use immunization as an entry point for Health Systems Strengthening and how these approaches may be applicable to different contexts and the implications for replication at scale.
- Review UNICEF approaches towards integrated service delivery and the potential for the immunization platform to contribute to raising the coverage of other child survival interventions.
- Support the review of evidence to guide UNICEF’s approaches to support immunizations beyond the traditional infant immunization platform, notably maternal and adolescent immunization.

Skills & Qualifications

- Commitment to the field of international public health.
- Some experience in international public health & basil epidemiology.
- Ability to work independently and demonstrate initiative and flexibility.
- Strong verbal and written communication skills.
Description pending

Description pending