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 work of the Strategic Advisory Group (SAGE) on Immunization within the World Health Organization's (WHO) Immunization Policy Unit

WHO IVB 3: Assessing reported denominator used for immunization programs by WHO member states, 2000-2015

WHO IVB 4: Consideration of preferred product attributes for development of enteric vaccines, for low and middle-income counties

WHO IVB 5: Monitoring the progress of the Global Vaccine Action Plan (GVAP)

WHO IVB 6: Monitoring Middle Income Countries progress of the Global Vaccine Action Plan (GVAP)

WHO IVB 7: Vaccine economic research studies in low and middle income countries (LMICs)

Gavi, the Vaccine Alliance – Geneva, Switzerland

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

PAHO – Washington, D.C.

PAHO 1: Monitoring the reductions of inequities in vaccination coverage in Latin America and the Caribbean

PAHO 2: Supporting capacity development around evidence-based immunization policymaking in Latin America and the Carribbean

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.

CDC Global Immunization Division – Atlanta, GA

CDC 1: Supporting the work of the introduction of rubella containing vaccine into countries.

WHO IVB #1 of 7

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

Supervisors: Adam Cohen, MD MPH, and Fatima Serhan, PhD, Global Immunization Monitoring and Surveillance, Expanded Programme on Immunisation, 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 data to report to the global community through the surveillance bulletin and annual meeting and (2) conducting a discrete research project using the surveillance data to inform global understanding of rotavirus 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:

- Assist in the data analyzis for surveillance and laboratory data for the global surveillance bulletin and annual meeting

- Conduct a discrete research project to inform global understanding of rotavirus epidemiology and surveillance. These projects could include examining risk factors of pediatric rotavirus mortality or exploring whether surveillance data can be used to estimate vaccine coverage.

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 Necessary

- Undergraduate degree, with training in epidemiology, biostatistics and vaccines
- Excellent written and verbal communication skills in English
- Proficiency with Microsoft Excel, email and word processing software
- Experience with literature searches and review on PubMed and preferably other databases
- Basic data analysis skills using statistical software such as Stata, SAS or R

Skills Desired but not Necessary

- Knowledge in surveillance and infectious diseases
- Experience working with large database analysis and data management,
- Experience with molecular biology, microbiology, and/or laboratory research

Period for the internship: Preferably September-December 2017, though we can discuss other time periods

WHO IVB #2 of 7

Supporting the work of the Strategic Advisory Group (SAGE) on Immunization within the World Health Organization's (WHO) Immunization Policy Unit

September-December 2017

Supervisors:

Dr Philippe Duclos, Dr Melanie Marti, Dr Malin Finkernagel

Background:

SAGE is the principal advisory group to WHO for vaccines and immunization. It is charged with advising WHO on overall global policies and strategies, ranging from vaccines and technology, research and development, to delivery of immunization and its linkages with other health interventions. SAGE is further concerned with cross-cutting issues such as pain mitigation during vaccination and vaccine hesitancy. Under the supervision of the Senior Health Adviser of the Immunization Policy Unit, Dr Philippe Duclos, the Medical Officer, Dr Melanie Marti and the Technical Officer, Dr Malin Finkernagel, the intern will contribute to the work of the unit and assist in the formulation of evidence-based policy recommendations for immunization and the improvement of the related processes for the development of such policies. In particular the intern will be tasked to facilitate the functioning of SAGE, its related Working Groups and the development of global vaccination guidelines (WHO vaccine position papers) and potentially to contribute to the strengthening of National Immunization Technical Advisory Groups.

Scope of work:

- Assist with the functioning of the SAGE meeting within period of the internship (October 2017).
- Retrieve, review, summarize and present evidence relevant to SAGE and/or its related Working Groups (Working Groups recently established or in the process of establishment: Working Group on Rabies Vaccine; BCG Vaccine Working Group; Pneumococcal Vaccine Working Group).
- Attend and assist with the functioning of SAGE Working Group and editorial board meetings (the editorial board oversees the production of the vaccine position papers).
- Assist with drafting of WHO vaccine position papers.
- Critically appraise and assess the strength of evidence and assist with the provision of evidence to recommendation tables in support of key recommendations.
- Develop summaries of WHO vaccine position papers: power point presentations and executive summaries to be published on the WHO website.
- Help with improving standard operating procedures for SAGE and its Working Groups.
- Assist with SAGE related communication activities, such as the update or revision of SAGE websites or key documents.

Skills necessary:

- Experience in the field of vaccinology and immunization.

- Background in epidemiology, capacity to analyze data (quantitative).
- Good writing skills.
- Proficiency with literature searches on PubMed and preferably other databases.
- Tact and ability to work with people of different technical and cultural backgrounds.
- Proficiency with email, web and MS Office software (Word, Excel, PowerPoint).
- Fluency in English.
- Working knowledge of either of Arabic/Chinese/French/Spanish/Russian would be an asset.
- Experience in the field of communications, legal or policy/decision making would be an asset.
- An understanding of GRADE methodology and its strengths and limitations and/or skills in the field of communication would be an asset.

The specific activities and project(s) will be agreed with the intern and will depend on period set for the internship, its duration, as well as the skills and interest of the incumbent and evolution of the needs.

WHO IVB #3 of 7

Assessing reported denominator used for immunization programs by WHO member states, 2000-2015

Supervisor: Marta Gacic, Carolina Danovaro

Background

Immunization coverage is a key measure of immunization system performance. Administrative data based on reports from service providers (e.g. health centre staff, vaccination teams, private physicians) and surveys with items on children's vaccination history are the main sources of empirical data on immunization coverage.

Each type of data source has advantages and disadvantages in both design and implementation. Administrative data provide more timely information and are useful for places where surveys may not be practical. In addition to providing information on coverage, such data can reveal service delivery problems (e.g. vaccine shortage, poor session attendance) early on. Coverage estimates based on administrative data are mainly subject to numerator (children vaccinated) and denominator (target population) biases.

WHO developed several tools to assess coverage including a tool for assessing and improving the accuracy of target population estimates for immunization coverage[1].

WHO together with UNICEF collects coverage data form all member states including disaggregated administrative data (administered doses, number in target population and percent coverage) annually since 2000.

Scope of Work

Based on available data reported by member states we propose to analyse the time series of reported target population used calculate national coverage data from 2000 to 2015.

- Assess reported numerator data using the methodology form the document assessing and improving the accuracy of target population estimates for immunization coverage
- Analyse and summarize the findings of the assessment
- Develop visuals to help diagnosing problems with denominator data
- Produce a draft report of findings

Required skills and knowledge:

- knowledge in biostatistics
- advanced skills in data analysis (using excel and statistical software),
- written and verbal communication, including the ability to write quickly and accurately
- Basic knowledge in demography (desired not necessary)

[1] http://www.who.int/entity/immunization/monitoring_surveillance/data/Denominator_guide.pdf?ua=1

WHO IVB #4 of 7

Consideration of preferred product attributes for development of enteric vaccines, for low and middle income counties

Supervisor: Birgitte Giersing

Background: The Initiative for Vaccine Research (IVR) group within the Immunization, Vaccines and Biologicals (IVB) Department is committed to accelerating the introduction of new and improved vaccines, as well as facilitating research and development into the next generation of vaccines and technologies.

ETEC and Shigella are two enteric pathogens that cause significant global morbidity and mortality, particularly in low-income countries. Vaccines against these pathogens are in clinical development, with the most advanced ETEC candidate approaching pivotal efficacy testing within the next three years. Current Shigella vaccine candidates are somewhat earlier in development, with a candidate that may be appropriate for combination ETEC/Shigella vaccine to be tested in a proof-of-concept human challenge trial, planned to begin in 2017.

A positive policy recommendation for introduction of the vaccine, following licensure, will ultimately depend on evidence of cost effectiveness and the impact of these vaccines on disease burden. Although a combination vaccine product would be desirable from this perspective, it is likely to reach licensure some years after the potential availability of a vaccine against ETEC alone.

WHO is developing preferred product characteristics (PPCs) for ETEC and Shigella vaccines. PPCs are guidance documents that describe WHO's preferences for vaccines in the context of low and middle income country needs. These documents help inform key stakeholders such as vaccine developers and funders in the their decision making and product development strategies, so that the vaccine can be licensed and introduced as expeditiously as possible.

Scope of Work: The WHO IVR seeks an intern to work under the supervision of WHO technical staff of the vaccine development group to support development of PPCs for ETEC and Shigella vaccines. Tasks may involve preparing a briefing document on certain product development aspects, and/or working with topic specific working groups composed of subject matter experts. This scope of work will require thorough literature review as well as synthesis of proposed areas of research and/or development, and rationale for the developmental approach. The documents produced will be used to support development of the PPC, and may be published.

Skills Necessary:

- Undergraduate degree in sciences, with some training in epidemiology/immunology and infectious diseases.
- Solid organizational experience, the ability to plan and work independently and prioritize tasks.
- Excellent written and verbal communication skills.

WHO IVB #5 of 7

Monitoring the progress of the Global Vaccine Action Plan (GVAP)

Supervisor: Kamel Senouci, Thomas Cherian

Background

The Global Vaccine Action Plan (GVAP)[2] — endorsed by the 194 Member States of the World Health Assembly in May 2012 — is a framework to prevent millions of deaths by 2020 through more equitable access to existing vaccines for people in all communities.
GVAP aims to strengthen routine immunization to meet vaccination coverage targets; accelerate control of vaccine-preventable diseases with polio eradication as the first milestone; introduce new and improved vaccines and spur research and development for the next generation of vaccines and technologies.

In May 2013, the Sixty-sixth World Health Assembly noted the Secretariat's report with its proposed framework for monitoring, evaluation and accountability[3] as well as the process for reviewing and reporting progress under the independent oversight of the Strategic Advisory Group of Experts on immunization.[4]

Scope of Work for GVAP Monitoring and Evaluation

- Participate to the data analysis for GVAP Indicators, prepare graphs, tables and maps for the secretariat report
- Collaborate with Technical Focal Points to develop a narrative report based on data analysis
- Develop innovative visual data representation to facilitate the understanding of the weaknesses and challenges countries are facing in the immunization area
- Review and finalize GVAP secretariat report
- Present an analysis to the internal weekly scientific workshop

Required skills and knowledge:

- knowledge in basic epidemiology,
- advanced skills in data analysis (using excel and statistical software),
- written and verbal communication, including the ability to write quickly and accurately

Period for the internship: **May-June-July-August**

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.

[2] http://www.who.int/immunization/global_vaccine_action_plan/en/
[3] http://www.who.int/entity/immunization/global_vaccine_action_plan/GVAP_Annex6.pdf
[4] http://www.who.int/immunization/sage/sage_wg_decade_vaccines/en/index.html

Monitoring Middle Income Countries progress of the Global Vaccine Action Plan (GVAP)

Supervisor: Tania Cernuschi, Patrick Lydon

Background

The Global Vaccine Action Plan (GVAP)[5] — endorsed by the 194 Member States of the World Health Assembly in May 2012 — is a framework to prevent millions of deaths by 2020 through more equitable access to existing vaccines for people in all communities.
GVAP aims to strengthen routine immunization to meet vaccination coverage targets; accelerate control of vaccine-preventable diseases with polio eradication as the first milestone; introduce new and improved vaccines and spur research and development for the next generation of vaccines and technologies.

In this context, at the request of the Strategic Advisory Group of Experts on Immunization (SAGE) in June 2014, WHO convened a Middle-Income Country Task Force composed of eight immunization stakeholders to develop a coordinated strategy and plan of action to enhance sustainable access to vaccines in MICs to meet the GVAP targets. According to the World Bank poverty and inequality database, two thirds of world poor lived in MICs. 64% of vaccine-preventable deaths occur in MICs and approximately 74% of unvaccinated children for DTP3, MCV1 and PCV3 live in MICs. Despite important progress, MICs are not on track to meet the Global Vaccine Action Plan (GVAP) targets.[6]

The Task Force has developed a Strategy aiming at addressing both immunization coverage and new vaccine Introductions. On the grounds of complementarity and global equity, the MIC Strategy intends to support all middle income countries not eligible to receive support through Gavi and over time, those countries having transitioned out of Gavi support.

The MIC Strategy focuses on the following main areas:

- Strengthening evidence-based decision-making;
- Enhancing political commitment and ensuring financial sustainability of immunization programmes;
- Enhancing demand for and equitable delivery of immunization services; and
- Improving access to timely and affordable supply.

As the MIC Strategy is implemented with limited resources, WHO commits to continue monitoring MICs targets against GVAP as well as to tracking current global and regional activities to provide support. WHO also commits to develop relevant advocacy documentation to foster international attention to the MIC's cause.

[5] http://www.who.int/immunization/global_vaccine_action_plan/en/
[6] WHO. IVB. SAGE Yellow Book – October 2015, pages 45-46.

Scope of Work for MIC GVAP Monitoring

- Participate to the data analysis for MIC progress against GVAP Indicators and development of advocacy documentation, prepare graphs, tables and maps for the secretariat report
- Collaborate with Technical Focal Point to develop a narrative report based on data analysis
- Develop innovative visual data representation to facilitate the understanding of the weaknesses and challenges countries are facing in the immunization area
- Review and finalize the relevant documents on the MIC issue
- Present an analysis to the internal EPI Clinic (internal information sharing forum).

Required skills and knowledge:

- knowledge in public health, development economics or related fields
- advanced skills in data analysis (using excel and statistical software),
- written and verbal communication, including the ability to write quickly and accurately

Period for the internship: June-July-August

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.

WHO IVB #7 of 7

Vaccine economic research studies in low and middle income countries (LMICs)

Supervisor: Raymond Hutubessi

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[7]. Tools included are the WHO Cervical Cancer Prevention and Control Costing Tool (C4P)[8] and WHO Papillomavirus Rapid Interface for Modelling and Economics (PRIME)[9] and other Vaccine Economic Value Chain on influenza vaccines[10], cholera and typhoid vaccines. The WHO Guide on standardization of economic evaluations of immunization programs[11] 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.

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[7] http://www.who.int/immunization/research/committees/ivir_ac/en/index2.html

[8] Hutubessy R et al. A case study using the United Republic of Tanzania: costing nationwide HPV vaccine delivery using the WHO Cervical Cancer Prevention and Control Costing Tool.
BMC Med. 2012 Nov 13;10:136

[9] Jit M et al. Cost-effectiveness of female human papillomavirus vaccination in 179 countries: a PRIME modelling study. Lancet Glob Health. 2014 Jul;2(7) and www.primetool.org

[10] See http://who.int/immunization/research/development/influenza_maternal_immunization/en/index2.html

[11] See http://whqlibdoc.who.int/hq/2008/WHO_IVB_08.14_eng.pdf.who.int/immunization/

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 Necessary:

- 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

Gavi – The Vaccine Alliance #1 of 1

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

Objectives:

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;

PAHO #1 of 2

Monitoring the reductions of inequities in vaccination coverage in Latin America and the Caribbean

Background

In May 2012, the 194 Member States of the World Health Assembly endorsed the Global Vaccine Action Plan (GVAP). This plan has six key targets and has an ambitious aim to provide immunization to all. The global level goals and objectives are currently in the process of being adapted to regional and national levels. The Pan American Health Organization, the World Health Organization's Regional Office of the Americas, will put a special focus on reducing inequities and helping countries to raise their immunization coverage rates in hard-to-reach or vulnerable populations by 2020.

Countries in the Americas have historically achieved coverage rates >95% for all recommended vaccines, including newly added vaccines to national schedules. However, national coverage rates have declined in recent years and sub-national coverage rates at district level are a concern in many countries. In order to better characterize this trend, the Immunization Unit at PAHO will conduct an analysis to assess the coverage rate of key vaccines by income quintile. This work will be prepared for regional dissemination and eventual publication.

Scope of work

- Assist in literature searches on inequities in immunization coverage – specifically looking to document methods, data sources and results
- Support analysis of sub-national coverage data for basic recommended vaccines
- Provide support to team to develop plans for analyzing immunization coverage data and indicators that may predict timely vaccination

Desired skills and experience

Proficiency in English and Spanish (advanced reading level at very least)

Intermediate skills with data management in Excel and data analysis with standard statistical package software (i.e. Stata)

Strong writing skills, preferably some capability with writing in Spanish

Experience or desire to learn about immunization in low- and middle-income countries

Name of Supervisors

Cara Janusz, Martha Velandia

PAHO, FGL/IM

PAHO #2 of 2

Supporting capacity development around evidence-based immunization policymaking in Latin America and the Carribbean

Background

Vaccines are among the most cost-effective health interventions available. However, resources for health are scarce in many countries and governments must make rational resource allocation decisions to maximize the use of public monies to achieve the most health possible for their populations. Many factors at a national level may influence the degree to which a vaccine is considered 'good value' for money, including extent of the health problem (disease burden), price of vaccine available to the country, cost of healthcare and other epidemiological issues. Therefore, the Pan American Health Organization has developed a capacity-building effort to train Member States on the development and use of cost-effectiveness analyses to inform their own national decisions called the ProVac Initiative.

This Initiative aims to develop tools for economic evaluations and provide training to public health professionals on their use. ProVac developed a tool to estimate the costs, health impact and cost-effectiveness of vaccines recommended for use in routine immunization programs. A new challenge that countries in Latin America and the Caribbean will face is how to make more permissive recommendations for vaccines that are not intended for broad, universal use but may be prioritized for special populations or geographic locations.

Scope of work

- Conduct literature searches on dengue epidemiology and cost of illness in Latin America and the Caribbean
- Develop a database of potential sources of default data for disease burden and cost parameters to a dengue cost-effectiveness model
- Support and participate in technical assistance activities with countries that request capacity building regarding vaccine economic evidence
- Assist in preparing materials and reports for technical meetings on new vaccine policy, potentially including expert consultations on dengue, HPV and meningococcal vaccines.

Desired skills and experience

Proficiency in English and Spanish (advanced reading level at very least)
Experience with literature searches; use of PubMed and other database search resources
Basic understanding of health economics
Experience or desire to learn about immunization in low- and middle-income countries
Name of Supervisors

Cara Janusz, Lucia Oliveira

PAHO, FGL/IM

UNICEF #1 of 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.

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 UNICVEF'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 2nd 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.

Supporting the work of the introduction of rubella containing vaccine into countries.

Background:

Rubella virus usually causes a mild fever and rash in children and adults. However, infection during pregnancy, especially during the first trimester, can result in miscarriage, fetal death, or infants with congenital malformations, known as congenital rubella syndrome (CRS). In 2010, it is estimated that 103,000 infants with CRS were born worldwide. In 2011, WHO updated the rubella vaccine position paper, recommending that countries take advantage of the measles platform of two doses of measles vaccine to introduce rubella-containing vaccine (RCV) as either measles-rubella (MR) or measles-mumps-rubella (MMR) vaccine. Countries are to introduce rubella vaccine by conducting a wide age-range catch-up campaign (up to age 15 years), followed immediately by introduction of MR vaccine in the routine programme. In November 2011, GAVI Alliance Board approved a new window of support for rubella vaccine. Since the availability of GAVI funds in 2013 and revision of the WHO position paper, 18 countries have introduced RCV into their routine programs. As of December 2016, 38 countries still have not introduced RCV. But in early 2017, 4 countries (including India) will introduce RCV. The remaining countries are at different phases in their introduction of RCV. Some countries need the data/information to support the introduction of RCV while others have planned RCV introduction but need to monitor the success of the campaigns and then the documentation of the coverage.

Scope of work*:

- Assist in the review and analysis of data to support the introduction of RCV
- Assist in collection and analysis of data as part of retrospective study on CRS
- Assist in the establishment of congenital rubella syndrome surveillance including protocol development and training
- Assist in monitoring RCV campaigns
- Assist in conducting post MR campaign surveys including analysis of coverage data
- Assist in the analysis of rubella serosurveys to assess immunity

Skills necessary:

- Languages: fluency in English
- Computer skills: Proficiency in Microsoft word, Excel, PowerPoint and email.
- Experience in the field of vaccinology and immunization
- Background in epidemiology, capacity to analyze data (quantitative)
- Good writing skills

*The exact project will depend on the status of countries in the introduction of RCV and the needs of the countries in relationship to the timing and duration of the internship and the interest and skill set of the intern.