

HEALTH CAMPAIGN EFFECTIVENESS
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A program of



Building the links between campaigns and PHC: Evaluating serosurveillance and PHC referral during integrated NTD campaigns in two countries of the Western Pacific

Papua New Guinea (West New Britain Province) & Vanuatu
Health Domains: Neglected Tropical Diseases, Malaria, Immunization
Theme: Transition of Campaigns to Health Systems

Project Lead: Julie Jacobson, Managing Partner, Bridges to Development

Project Team:

- Alan Brooks, Managing Partner, Bridges to Development
- Anastasia Pantelias, Associate Partner, Bridges to Development
- Aya Yajima, NTD Focal Point, Western Pacific Regional Office (WPRO) of the WHO

Partners:

- NDOH, Papua New Guinea
- MOH, Vanuatu
- Institute for Medical Research, Papua New Guinea
- Case Western Reserve University, US

Background: Pacific Integrated NTD Elimination (PINE) Project

3-year project (2021-2023) ~\$6M USD, funded by Takeda Pharmaceutical Company Limited, Global Corporate Global Social Responsibility (CSR) Program

Eliminate or control up to 6 Neglected Tropical Diseases (NTDs) in 2 countries: PNG (West New Britain Province) and Vanuatu

Project Goals

- *Innovate by tailoring more comprehensive strategies for island-based populations through **integration of multiple interventions and services targeting disease elimination.***
- ***Systematically document innovations and their validation** to provide proof of concept, contribute to refined WHO guidelines and allow broader roll out and scaling to other settings with unique characteristics and hard to reach populations.*
- ***Utilize a “whole of society approach,”** engaging key national and global partners as well as local stakeholders such as village chiefs, local governments, church leaders/priests, women, union and community members.*
- ***Introduce innovations like ivermectin-DEC-albendazole (IDA) triple therapy for lymphatic filariasis (LF) and new scabies MDA strategies** that have potential for more impact and higher value to the community from each contact.*

PINE Project Disease-Specific Goals

Disease	Papua New Guinea	Vanuatu
Lymphatic Filariasis	Eliminate	Control morbidity / post-elimination surveillance
Yaws	Eliminate	Eliminate
Trachoma	Eliminate	
Scabies	Control	Eliminate
STH	Control	Control
Leprosy	Eliminate	Eliminate
Malaria	Coordinate distribution of LLINs	

Problem and Background to be Addressed

Problem or Gap

- Sustaining strong **surveillance systems in hard-to-reach populations** with poorly resourced health systems is a challenge and **single-disease surveillance** is costly and unsustainable. An **integrated approach** with a less resource-intensive method to collect samples is needed.
- For skin NTDs, there is an **interdependence** between campaigns and facility-based healthcare. Communities affected by skin NTDs may not reach out to the health system and transmission continues. Mass drug administration (MDA) campaigns **reach entire populations and this reach needs to be leveraged as an opportunity** to provide screening and referral for individuals suffering from skin diseases.

Background

Bridges to Development has launched a program in partnership with Western Pacific Regional Office (WPRO) of the World Health Organization and Papua New Guinea and Vanuatu Ministries of Health (MoH) to implement **integrated Neglected Tropical Disease (NTD) campaigns** to address:

- Lymphatic filariasis
- Yaws
- Scabies
- Leprosy
- Soil-transmitted helminths
- Trachoma

This provides an opportunity to embed further operational research on integration of surveillance activities and the link between campaigns and health systems.

Purpose and Intended Application of Findings

Purpose

1. Demonstrate how MDA-related monitoring & evaluation (M&E) can effectively **integrate vaccine-preventable disease (VPD), malaria, SARS-COV2** and other serosurveillance, contributing to improved decision-making related to immunization, malaria, COVID prevention services.
2. Demonstrate mechanisms to **integrate MDA implementation with the primary health care referral** and routine health information systems in hard-to-reach areas of the Western Pacific.

Expected Outcomes

Programmatic Outcomes:

1. **Demonstrate the value** of integrated surveillance during M&E activities for MDAs
2. **Provide evidence** for future implementation of integrated MDAs targeting these diseases
3. **Create and test** a natural iterative loop of communication and referral between campaign and health facility centered interventions

Policy & Guidance Outcomes:

1. Pave the way for the **use of serosurveillance** as a tool to strengthen surveillance and health outreach and new pathogen population exposure
2. Guide the design of **operational policies for referral and treatment** of severe skin diseases from the MDA into the primary health care system

Research Questions Addressed

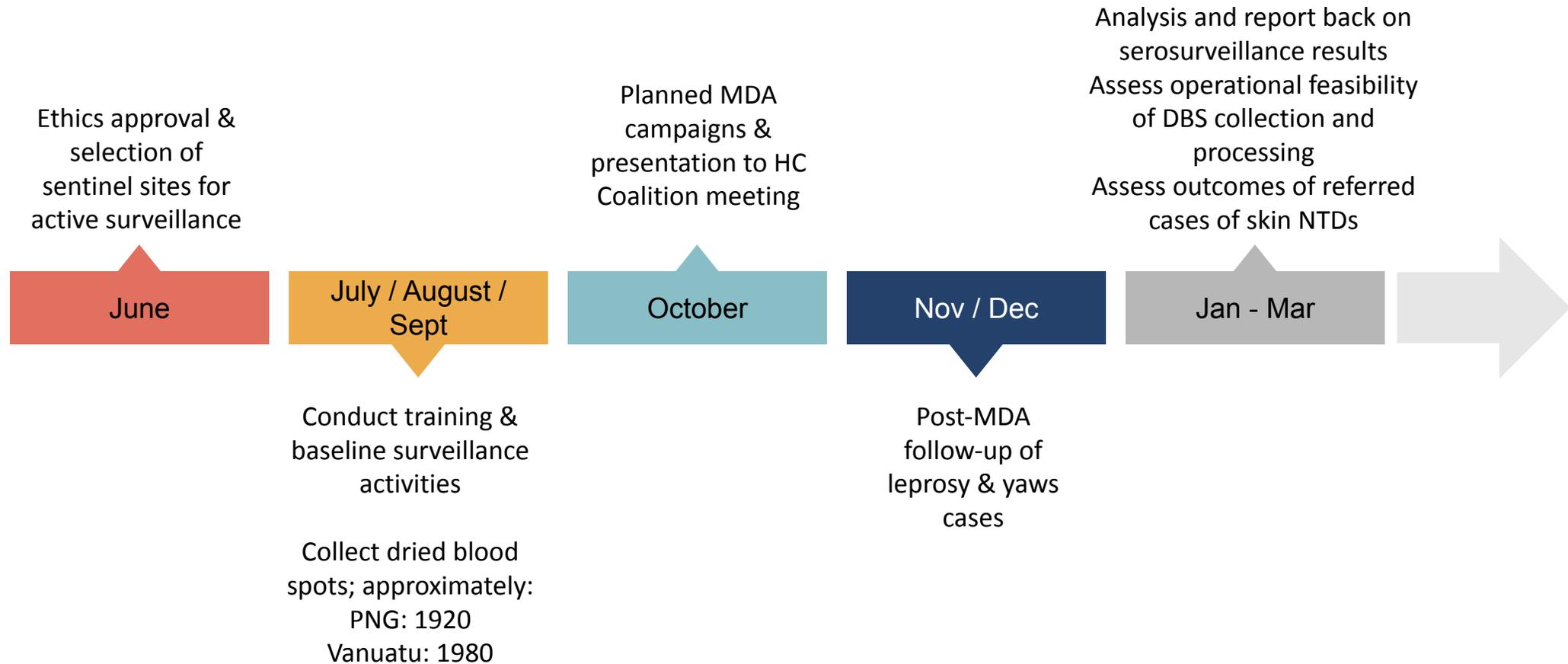
Can routine M&E activities for disease specific programs be leveraged to provide serosurveillance for multiple cross program and emerging health priorities to help inform country level decision making?

- Leverage already planned integrated M&E activities for the MDA campaigns for baseline assessment to collect dried blood spots (DBS) from individuals for multiplex serology on the Luminex platform
- Conduct serological analysis of the DBS samples for NTDs (LF, yaws, leprosy, trachoma, strongyloides) and other diseases of public health importance to the countries such as vaccine preventable diseases (measles, rubella, tetanus), malaria and SARS CoV2
- Results will be reported back to the MoH, including the incremental direct costs of providing non-NTD data to demonstrate feasibility and support MoH decision-making

Can campaigns provide an effective means to refer individuals with severe skin diseases into primary health care and health information systems for diagnosis, treatment, and surveillance?

- Conduct training of health workers on diagnosis and treatment of skin NTDs including use of a smart-phone-based application (SkinApp) to support decision-making
- Develop skin disease questionnaire and train health workers conducting MDA to identify individuals self-reporting with skin diseases during MDA and to refer or flag for follow-up by the local health center cases of leprosy and yaws
- Develop and test systems to ensure follow-up by the health centers in communities reporting cases of leprosy or yaws to 1) conduct post-exposure prophylaxis for leprosy and 2) see if yaws lesion are resolving or require further treatment

Anticipated Project Timeline



Challenge in next 6 months

The Challenge(s)

1. COVID situation in PNG and vaccine roll-out in Vanuatu.

2. Balancing the data collection efforts and related costs across different interests (scientific, disease-specific, MoH, communities, health workers, etc.)

Strategy for Mitigation

1. In PNG, MDA is still scheduled for October with a compressed planning timeline. If MDA needs to be delayed, active surveillance activities will move ahead this year which includes: 1) collection of DBS for serosurveillance and 2) testing the referral system for skin diseases during school-based and community-based surveillance activities. In Vanuatu, vaccine roll-out will be done province by province and the project is in discussion with the National MoH to confirm whether MDA can happen in provinces following the vaccination campaigns to allow MDA to occur this year or Q1 2022.
2. The PINE project has constituted a Technical Advisory Group to transparently weigh trade-offs aligned with the fact that the overall project is an implementation project supporting MoHs and, therefore, it is necessary to prioritize programmatic data related to implementation over complete scientific investigation.



THANK YOU



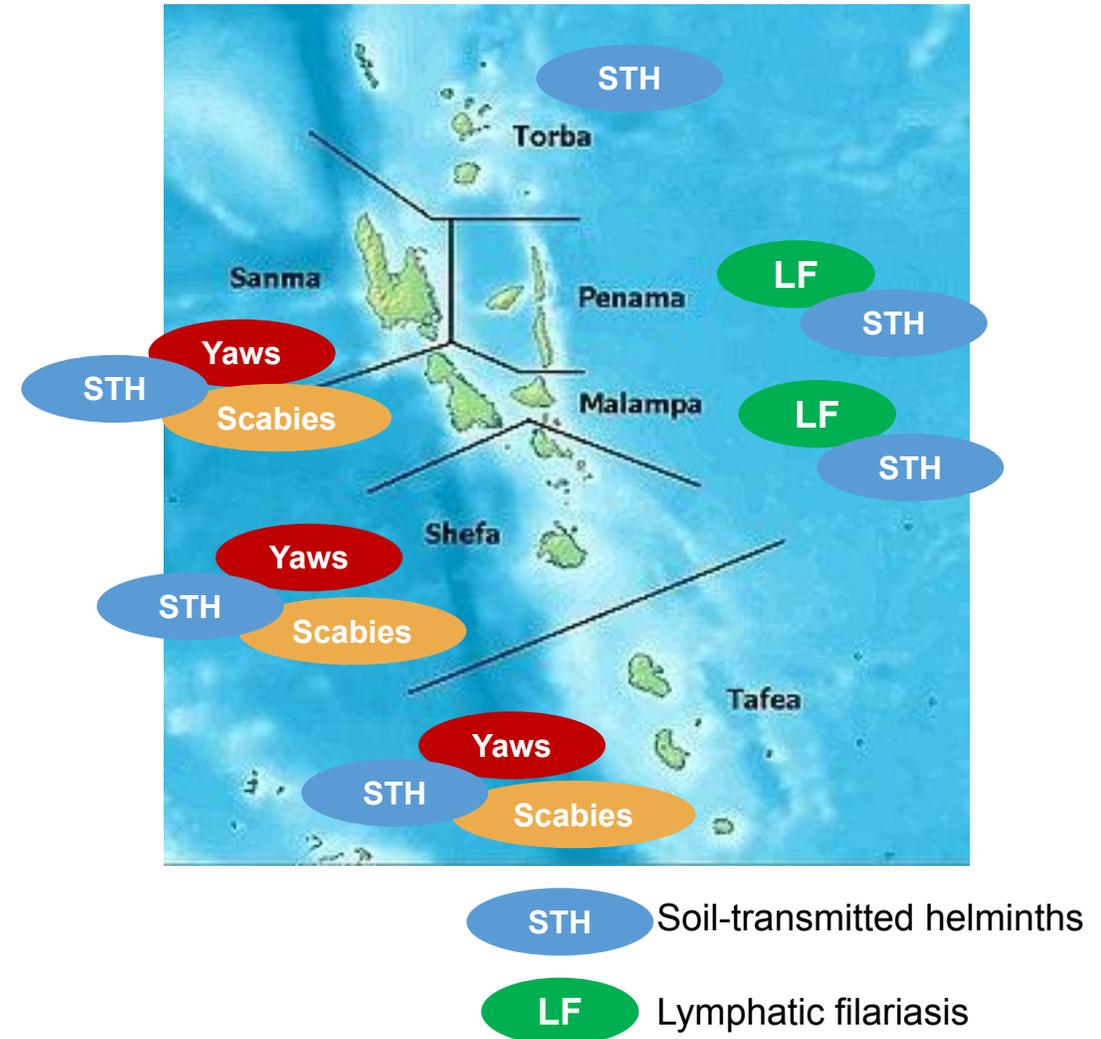
Background – Papua New Guinea

- **Highest NTD burden** in the WPR and in the world – LF, yaws, scabies, STH
- With support of JICA and WHO, **lymphatic filariasis triple therapy with IDA (ivermectin, albendazole and DEC) was implemented** in New Ireland Province in 2018 and further scaled up in **East New Britain Province** in 2019 with high coverage.
- A pilot research of **integrated mass drug administration (MDA) for LF IDA and yaws azithromycin** in New Ireland Province led by Oriol and NDOH **proven safety and efficacy** of integrated MDA
- **Biggest needs to integrate** delivery of multiple interventions and services for programme efficiency, cost-effectiveness and rapid impacts
- **West New Britain Province** – known burden of multiple NTDs, adjacent to East New Britain province and higher chance of success due to its island province context



Background – Vanuatu

- Vanuatu is one of **the first countries that achieved elimination of lymphatic filariasis** in the world, with shortest duration of the programme with effective MDA rounds; also achieved the target for elimination of trachoma
- **Strong national and provincial capacity** to implement community outreach activities for NTD and malaria (both interventions and surveillance)
- Elimination of yaws and control of scabies **high national priority** - **Yaws mass drug administration done in 2019** (in Shefa and Tafea, integrated with NCD screening)
- **Highly committed and capable NTD team** at WHO CO and MOH



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Targeted NTDs and their drug intervention

Disease	Intervention	Comments
Lymphatic filariasis (LF)	Ivermectin, DEC, albendazole co-annual administration to entire population above the age of 5 years, DEC and albendazole to children 2-5 years of age	All drugs for this program are donated
Soil-transmitted helminths	Albendazole administered to all school age and preschool children once or twice a year based on prevalence	Drug is donated for these age groups
Yaws	Azithromycin administration to entire population	Drug is donated
Trachoma	Azithromycin administration to entire population or children 1 to 9 depending on prevalence	Drug is donated
Scabies	Ivermectin given to entire population over the age of 5 and topical treatment for younger children	Drug is not donated but is low cost, donation through LF will decrease costs
Leprosy	All contacts of active case treated with single dose rifampicin	Drug for patient treatment is donated but treatment of contacts is not donated but is low cost