

TEPHINET Southeast Asia and Western
Pacific Bi-regional Conference
5th of November 2018
Vientiane, Laos PDR

**Finding our way through the data forest
Workshop REPORT**



RECON



Australian
National
University



TEPHINET
Training Programme in Epidemiology and
Public Health Interventions in ASEAN

Amrish Baidjoe [Imperial College, RECON, EAN]: amrish.baidjoe@gmail.com

Tambri Housen [NCEPH, ANU]: tambri.housen@anu.edu.au

Workshop Synopsis

On the 5th of November 2018 the [R Epidemics Consortium \(RECON\)](#) in collaboration with the Australian National University (ANU) conducted a workshop on data analytics at the 9th Southeast Asia and Western Pacific Bi-Regional TEPHINET Scientific Conference in Vientiane, Lao PDR. The workshop was funded by the Australian Governments, Indo-Pacific Centre for Health Security and supported by [TEPHINET](#) and [SAFETYNET](#). A total of 38 participants attended the workshop with representation from 12 regional field epidemiology training programs.



Introduction

Aim of the workshop

Data analytics has a key role in the strategic guidance of outbreak responses but is often hampered by a multitude of factors ranging from consistency, accuracy and timing around data collection, cleaning, analyses. The aim of this workshop was to discuss what the current challenges are in the arena of data analytics for field-epidemiologists in the Southeast Asia and Western Pacific region and how to incorporate this in a global development agenda for data analytics in outbreaks and other humanitarian medical emergencies. Furthermore, the workshop provided an opportunity to discuss with the participants, in an interactive way, what they perceive as current needs in training on data analytics and what the general pool of participants think that Field-epidemiology programs should be focusing on in the coming years to come.

Synopses of main presentations

Amrish Baidjoe provided an introduction to data analytics in field epidemiology, highlighting the need for consistency in tools used. He then discussed the role of [RECON](#) as a global multi-stakeholder consortium working on developing new tools and [training](#) targeted at field epidemiologists with the aim of improving data efficiency to increase the focus on data driven action (advocacy), and facilitate timely detection and solving of problems. Dr Carl Reddy provided an introduction to data analytics and the challenges from the perspective of the South African FET program. Dr Martyn Kirk presented the changing landscape of data analytics with the introduction of big data, genomics and the advent of novel data analysis techniques. Berry Roper and James Flint provided an introduction to the FET program in Papua New Guinea, highlighting the varying levels of analytical competence fellows bring with them when commencing the program, a factor that needs to be considered when advancing methods and tools in data analytics. The presentations provided context and served as a guide for subsequent group discussions.

Discussion in groups

A total of 38 participants attended the workshop representing field epidemiology training programs in 12 countries including Australia, Philippines, Vietnam, Papua New Guinea, Indonesia, Japan, Taiwan, Pacific Community, Malaysia, South Korea, South Africa, and Cambodia.

Discussions were structured around three questions that explored current practices on data analytics and outbreak analysis in the region, current challenges faced by field epidemiology programs in the region in reference to data analytics and how best to develop and advance a common regional agenda on data analytics.



Irrespective of the heterogeneity among programs there was unanimous agreement that the primary focus of data analytics needs to support and ensure the development of strong skills in basic descriptive epidemiology and accurate interpretation of results. The development of a tool that allows for the importation of an excel spreadsheet, and has the capacity to generate data error reports, descriptive epi reports, epi-curves, maps and basic analytical epi has the potential to have regional uptake. A tool that follows the growth of a trainee through their data analytics capacity from the very basics to the more advanced coding and analysis will promote professional development whilst ensuring that throughout the skill development phase timely reporting is facilitated. This will also help enable the regional uptake of a common tool as it would meet the needs of the most basic programs through to the more advanced programs.

A desire to be exposed to different tools for data collection was expressed in all groups with a variety of tools being mentioned. There is a regional need for train-the-trainer workshops on open-source data collection and mapping tools. A multi-day workshop using expertise within the region on tools already in use in programs and bringing in expertise from outside the region to demonstrate other freely available tools would be well received and appreciated - with a focus on the limitations and benefits of each tool and practical application using trainees own data.

A willingness and desire to share training materials between programs was discussed in all groups. The desire for a repository where FET/P programs can upload their case studies and teaching materials which can then be modified and used by other programs was raised and discussed with many programs supportive of the suggestions.

Future perspectives

After the general discussions within groups a plenary feedback session was organised. There was lot of similarity in the outcomes of the discussion held in the smaller groups indicating that regional challenges and needs between the countries that were present at the workshop are likely to be very similar. The main outcome was that data analytics is an important focus area in building health systems and supporting health emergencies. Participants appreciated the presentations discussions and general workshop but did feel that the workshop deserved a more technical part as well, where data analyses methods in R would could have been demonstrated.

Recommendations

Findings from this workshop identified a need for follow-up discussions and training at future [TEPHINET](#) conferences in order to continue the dialogue and development around data analytics and provide further training and support for programs in this area at all levels.

Follow-up 2/3 day workshop at the Global TEPHINET conference in 2019:

- Conduct a mapping exercise on what tools programs in the region are using for data collection and data analytics.
- Invite programs to demonstrate what tools they currently use for data acquisition with a focus on strengths and challenges.
- Provide a basic introduction to R using a case study approach, based on an outbreak.
- Showcase the data analytical capacity of R.

Repository for Field Epidemiology curricula and training materials:

- Post workshop discussions with Lisandro Torre ([TEPHINET](#)) whom coordinates [TEPHIconnect](#) were very promising with Lisandro suggesting that [TEPHIconnect](#) has the capacity to host a repository for FET/P training materials and could facilitate as an online platform for curriculum developers to exchange materials and facilitate discussions. The

workshop organisers will follow this up in December 2018 at a meeting hosted the [TEPHINET](#) Head Quarters in Atlanta, US.

“Finding our way through the data forest”

Acknowledgements

We would like to thank all participants for their valuable contribution to this workshop, including the presenters and group facilitators

We would specifically like to acknowledge TEPHINET and SAFETYNET for their support and the Indo-Pacific Centre for Health Security who provided the funding for the workshop

This report was written by Tambri Housen and Amrish Baidjoe and finalized on the 15th of November 2018

Amrish Baidjoe [Imperial College, [RECON](#), EAN]: amrish.baidjoe@gmail.com

Tambri Housen [NCEPH, ANU]: tambri.housen@anu.edu.au

