

Pacific Public Health Surveillance Network (PPHSN)

Response and Analysis for Pacific Infectious Diseases (RAPID)

Global Climate Change Alliance: Pacific Small Island States (GCCA:PSIS)



Outbreak Surveillance and Response Workshop

Kiribati

October 28 – November 1, 2013

Meeting Report

Prepared by: Damian Hoy, Adam Craig, Kate Hardie, Viema Biaukula, Mark Durand, Keith Eastwood, Rokho Kim, and Adam Roth

1.0 Background to workshop

Climate change poses significant threats to the health of the people of the Pacific. Common climate-sensitive health risks identified across the 14 Pacific Island countries and territories (PICTs) include: vector-borne diseases; food and water safety and security; the potential spread of food- and water-borne diseases; exacerbation of non-communicable diseases; injuries and deaths from extreme weather events; increasing cases of ciguatera; and disorders of mental health.

Strengthening capacity for outbreak surveillance and response is a common area identified by PICTs for adaptation to the health threats of climate change. Related to this, at the Pacific Health Ministers' meeting in 2011, one of the key recommendations was *"to address the lack of trained and experienced epidemiologists in the region..... development of comprehensive training programmes to develop core competencies in "data techs", "epi techs" and epidemiologists"*.

In response, the Pacific Public Health Surveillance Network (PPHSN) regional partners (World Health Organization – WHO; Fiji National University – FNU; US Centers for Disease Control and Prevention – CDC; The Pacific Island Health Officers Association – PIHOA; and the Secretariat of the Pacific Community - SPC) have revitalised the existing PPHSN-FNU collaboration to deliver a tailored workforce development course, called the data for decision-making (DDM) course. Partners are currently exploring ways to broaden this program to strengthen essential public health functions and services in the PICTs. The DDM is delivered in four modules comprising: outbreak investigation; surveillance; data analysis; and basic epidemiology. It has been accredited by FNU. Participants who elect to do a supervised project related to the course material will be able to claim credit towards a post-graduate qualification. Participants can accredit each individual module as they are delivered and, and may use this to add up to the full (four unit) DDM program in due time.

Module 1 (outbreak investigation) of the four DDM modules was conducted in Kiribati from October 28 to November 1, 2013. The module was delivered in a workshop format by a collaboration between: 1) PPHSN regional partners; 2) the AusAID-funded *Response and Analysis for Pacific Infectious Diseases (RAPID)* project, which is a collaboration between Hunter New England Population Health (HNEPH), SPC and WHO; and 3) the European Union-funded Global Climate Change Alliance: Pacific Small Island States Project *"Improving implementation of environmental health surveillance and response to climate sensitive health risks in Kiribati"*.

One of the key objectives of RAPID and in the DDM initiative is to re-invigorate EpiNet teams, which were established by the health authorities in all 22 of the PICTs in 2001. The multidisciplinary teams are intended to coordinate outbreak surveillance and field response, and establish and maintain relevant surveillance and response protocols for target diseases. In Kiribati, the EpiNet team is known as the Continuing Communicable Disease Surveillance Committee (CCDSC). This includes members from the Health Information Unit, Environmental Health Unit, Health Promotion Unit, Laboratory Services, and Public Health Nurses Unit. These units were the key participants in the workshop. In addition, two staff from Nauru were able to attend the workshop.

2.0 Overview of workshop

2.1 Workshop objectives

The workshop objectives were to:

- 1) Strengthen the capacity of the Environmental Health Unit, EpiNet team, Health Information Unit, Health Promotion Unit, Laboratory Services, and Public Health Nurses in surveillance, preparedness and response to outbreaks, including those of climate sensitive diseases.
- 2) Define appropriate knowledge and skills competencies for EpiNet team members (to help in planning further developmental activities).
- 3) Facilitate further dialogue among partners toward development of an Epi-Tech track within a Pacific FETP fellowship program.

2.2 Learning competencies

At the end of the workshop, it is planned that participants will be able to:

- 1) Describe their own country's syndromic surveillance system
- 2) Describe the steps in their syndromic surveillance system that work well
- 3) Describe the steps in their syndromic surveillance system that sometimes have problems
- 4) Describe the data from their syndromic surveillance system
- 5) Analyse the data from their syndromic surveillance system
- 6) Make a table from the available syndromic surveillance data
- 7) Make a graph from the available syndromic surveillance data
- 8) Detect an increase in cases of disease by looking at the syndromic surveillance data
- 9) Discuss with Ministry of Health / WHO / CDC / SPC whether an outbreak investigation is required
- 10) Plan an outbreak investigation
- 11) Undertake an outbreak investigation
- 12) List other sources of data available in their country, apart from syndromic surveillance, that could be used in investigating an outbreak
- 13) Provide advice on appropriate control measures during an outbreak
- 14) Prepare a brief outbreak investigation report
- 15) Put together a monthly syndromic surveillance report to feed back to the staff collecting the data.

2.3 Teaching methods

The workshop emphasized participatory learning through practical 'hands on' group-work activities. The importance of this was emphasized to facilitators prior to the workshop. Sessions were structured so that theoretical understanding was presented in an interactive way, then, taught concepts were reinforced through case studies, practical activities or other interactive learning methods. The balance of theory-to-practical exercises shifted over the course of the training with practical activities becoming more dominant as the week went on. This reflected the progressive learning and skills development of the group with longer and more complex practical activities becoming possible as the week progressed (Table 1).

Table 1: Proportion of each day spent using various teaching methods at the Kiribati EpiNet training - October 28 to November 1, 2013

	Participant-led plenary	Group work	Facilitator-led plenary (participatory)	Facilitator-led plenary (didactic)
Monday	4%	15%	81%	0%
Tuesday	0%	73%	27%	0%
Wednesday	0%	68%	32%	0%
Thursday	15%	62%	23%	0%
Friday	54%	19%	27%	0%
Total	15%	47%	38%	0%

2.4 Participants

Twenty-eight disease surveillance and response workers participated in the workshop (Table 21). Participants were staff from Kiribati Ministry of Health and Medical Service's (MHMS) Environmental Health Unit, Health Information Unit, Health Promotion Unit, Laboratory Services, and Public Health Nurses, as well as one staff member from Tarawa North, one from Abaiang, and one from Kiritimati. In addition, two participants (one Environmental Health Officer and one Health Information Officer) from Nauru participated in the workshop.

Table 2: Workshop participants, Outbreak Surveillance and Response Workshop, Kiribati, November 2013

Name	Sex	Position	Location	Country
Agnes Nauro Nikuata	F	Hospital Manager	Tarawa Central Hospital	Kiribati
Anetenu Kateibwi	F	Records/Receptionist	Health Information	Kiribati
Arite Tetoa	F	Senior National Officer	Ministry of Health	Kiribati
Bereti Terawea	F	Health Promotion Officer	Health Promotion	Kiribati
Bwebwetaake Raeao	F	Registered Nurse	Ministry of Health	Kiribati
Bungia Kaitaake	F	Health Inspector	Environmental Health	Kiribati
Bwenateti Teauokui	F	Registered Nurse	Ministry of Health	Kiribati
David Dowiyogo	M	Planner	Ministry of Health	Nauru
Gretna Tauma	F	Medical Laboratory Technician	Ministry of Health	Kiribati
Jacob Krisiano	M	Database officer	Health Information	Kiribati
Kaieta Rebite	F	Health Assistant	Environmental Health	Kiribati
Katarake Mwekaa	M	Medical Assistant	Abaiang	Kiribati
Lavinia Koina	F	Assistant Health Inspector	Environmental Health	Kiribati
Manrenga Viane	F	Senior National Officer	Ministry of Health	Kiribati
Maryanne Utiera	F	Surveillance Officer/Asst Statistician	Health Information	Kiribati
Mauriti Beteno	M	Registered Nurse	Ministry of Health	Kiribati
Namorua Tebaubau	F	Nursing Officer	Ministry of Health	Kiribati
Nenebo Benetito	M	Assistant Health Inspector	Environmental Health, Kiritimati	Kiribati
Taabilti Anrake	F	Hospital Nurse SNO	Ministry of Health	Kiribati
Taberaieta Tabeara	F	Public Health Nurse	Tab - North	Kiribati
Tabomoa Tinte	F	Assistant Health Inspector	Environmental Health	Kiribati
Tabuki Romatoa	F	Senior National Officer	Ministry of Health	Kiribati
Tarome Takaua	F	Health Assistant	Environmental Health	Kiribati
Teanibuaka Tabunga	M	Senior Health Information Officer	Health Information	Kiribati
Tebikau Tibwe	M	Ag CHI	Environmental Health	Kiribati
Teretia Teitei	F	Assistant Health Inspector	Environmental Health	Kiribati
Toonga Tieei	F	Senior National Officer	Ministry of Health	Kiribati
Vincent Scotty	M	Health Inspector	Ministry of Health	Nauru

2.5 Facilitators

Eight facilitators were involved in the training. The facilitators were:

- Adam Roth, Secretariat of the Pacific Community, Noumea
- Kate Hardie, Hunter New England Population Health (HNEPH), Australia
- Keith Eastwood, Hunter New England Population Health (HNEPH), Australia
- Adam Craig, World Health Organization, Suva
- Viema Biaukula, World Health Organization, Suva
- Rokho Kim, World Health Organization, Suva
- Mark Durand, Pacific Island Health Officers Association (PIHOA), United States of America
- Damian Hoy, Secretariat of the Pacific Community, Noumea.

2.6 Logistical support

Christine Fraser (Hunter New England Population Health) and Choi Yeeting (Kiribati Government and EU-funded GCCA:PSIS Project) provided administrative and logistical support for the preparation and implementation of the workshop.

2.7 Description of workshop activities (also see Appendix 1 – Agenda)

Sunday, 27 October

On Sunday afternoon, the eight facilitators met to plan the week's activities, workshop sessions and special functions.

Monday, 28 October

The workshop was opened by Tebikau Noran, on behalf of the Director Public Health, on Monday morning. A pre-evaluation was conducted to assess the key competency levels. A presentation on PacNet was provided by Damian Hoy. An overview of the course background, including PPHSN, EpiNet teams and the SHIP feasibility study and continuum, was presented by Adam Roth. Group discussion followed where participant expectations of the course were discussed and presented back to the plenary. Participants listed what they felt were appropriate knowledge and skills for CCDSC team members:

- Knowing about different models of surveillance and response
- Identifying constraints and how to deal with them
- Communication with the community during an outbreak
- Implementing specific control measures
- Performing data analysis
- Identifying causes of the outbreak and knowing about diseases that cause them
- Better understanding of outbreak thresholds and the influence of seasonality
- Collecting samples during an outbreak
- Use of Kiribati Outbreak Manual
- How climate change relates to outbreaks
- Improving data collection
- Improving timeliness
- Improving teamwork
- Knowing how to influence system changes (e.g., influencing leaders)
- Knowing who to report to.

Adam Craig then presented an introduction to the International Health Regulations and Viema Biaukula presented an overview of syndromic surveillance in the Pacific. A series of lectures of epidemiology were then conducted: Introduction to infectious disease epidemiology (Adam Craig); Microbiology (Keith Eastwood); and Descriptive epidemiology (Mark Durand and Adam Roth). At the end of each day, a facilitator's meeting took place to discuss what things worked well, what things could be amended for the next workshop, and plan the following day. This was facilitated by Mark Durand.

Tuesday, 29 October

On the Tuesday, Viema Biaukula gave a presentation on disease surveillance. Following this, a number of groups were created to map their national syndromic surveillance and response system. Groups were tasked with identifying the strengths and weaknesses of the sections of the system to which they were familiar (Figure 1 and Table 3). Groups then presented back to the plenary (facilitated by Kate Hardie) and one consolidated map was created. Throughout the week the map was used as a reference tool. Later in the week, this map was revisited by groups and they developed small improvement projects on how they could improve their systems, particularly in relation to the gaps that were identified earlier in the week. These projects were presented by the groups to the plenary on Friday morning (Appendix 2). A number of the projects presented identified the need for external assistance. Facilitators will have a teleconference over the coming weeks to discuss how this assistance can be provided.

On Tuesday afternoon, a presentation on how to display data was presented by Kate Hardie. This presentation was followed by a practical excel skills development activity (called Excel café). Kate Hardie and Damian Hoy lead this session with other facilitators tutoring participants in the use of excel.

Wednesday, 30 October

On Wednesday, an outbreak investigation lecture was presented by Adam Craig, and then Damian Hoy presented the mystery outbreak and then rest of the day was spent in pairs working through the mystery outbreak exercise. This was lead by Damian Hoy and facilitated by all facilitators. Participants conducted a descriptive analysis and prepared a Situation Report specifically with regard to the description and interpretation of time, place, person and clinical features.

Thursday, 31 October

On Thursday morning, Adam Craig provided an introduction to outbreak response and control. Tebikau and Teanabuka then presented their recent diarrhoea outbreak in Kiribati with regard to the outbreak investigation, response and control. Lessons learned from this were then discussed followed by a presentation on outbreak surveillance and response in mass gatherings by Adam Roth and Keith Eastwood. After this, Teanabuka and Mark Durand presented the findings from an investigation of an influenza-like illness outbreak which was currently taking place on South Tarawa. Rokho and Damian then presented on climate change and health.

Friday, 1 November

On the Friday afternoon, Mark Durand gave a presentation on NCD surveillance and then Adam Roth revisited the expectations of the workshop and participants agreed that most of the expectations had been met. The final evaluation of the work shop was then conducted to assess changes to the key competency levels. Tebikau Noran closed the workshop. Note: facilitators did not present the Moodle demonstration at this workshop as it was felt to be more appropriate for sub-regional workshops and those participants who undertake accredited training and commit to more regular communication and supervision. Having an email list with all participants and facilitators was thought to be a more appropriate means of communication following the Kiribati workshop.

Figure 1: National syndromic surveillance system map and identified strengths and gaps, Kiribati, November 2013

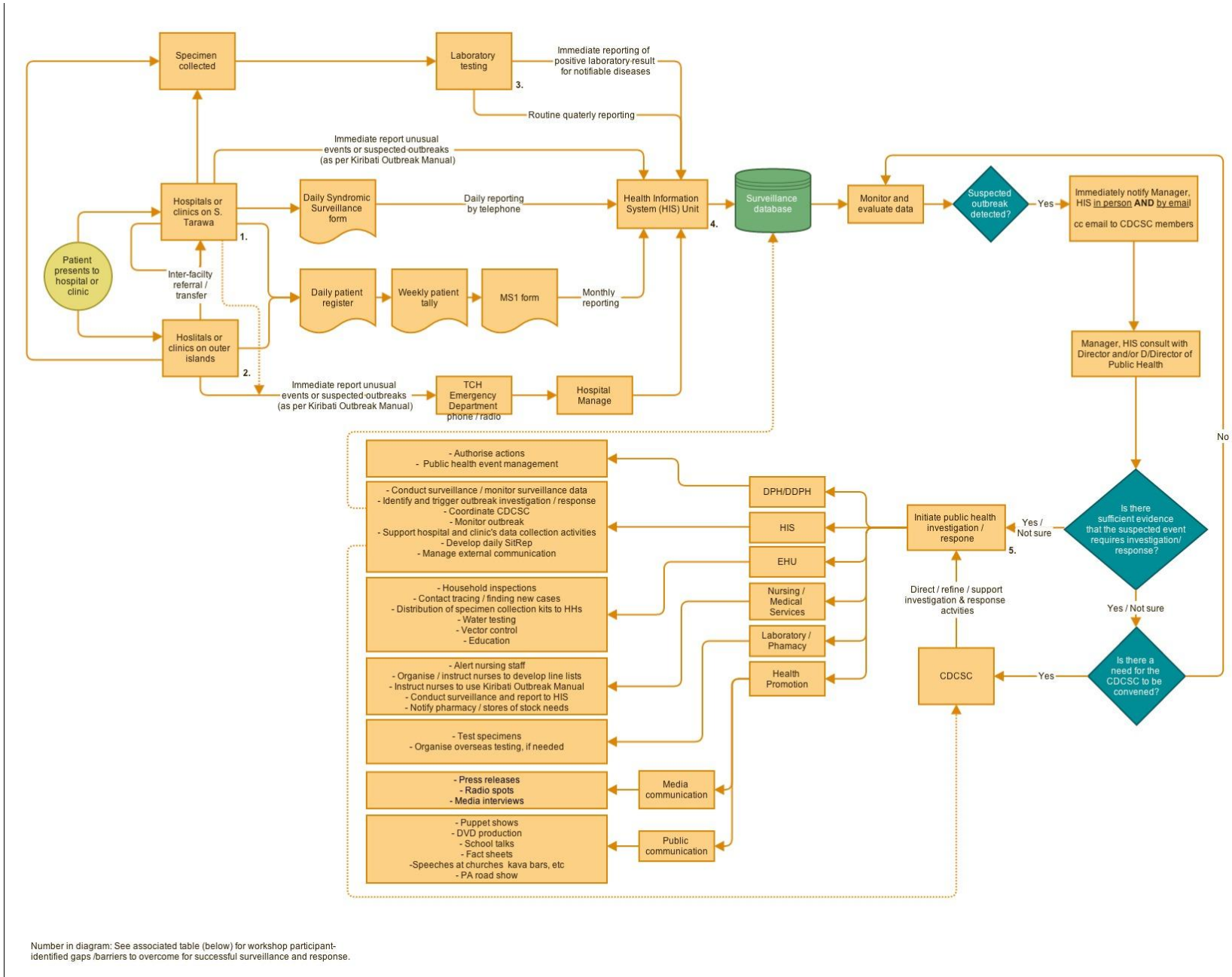


Table 3: Identified gaps in the national syndromic surveillance and response system, Kiribati, November 2013

Stage of Surveillance and Response Procedure (cross-reference with Figure 1)	Identified gaps	Priority	External Assistance needed	Summary of actions required to address gap	Key person responsible for taking action to address gap
1. Clinics and hospitals (on South Tarawa) – syndromic surveillance data capture and reporting; unusual event and outbreak reporting	Kiribati Outbreak Manual (KOM) needs to be revised to align with Kiribati SS System process and case definitions. The reporting and decision making process presented in the Kiribati Outbreak Manual also needs updating	High/Short-term	Yes	Revise KOM then, once finalised print and distribute to all HCF in Kiribati. Provide training to HCW on use of the Manual <i>Improvement project identified during the workshop by HIS representatives, see below</i>	Manager, HIS
	Not all clinics have access to the Kiribati Outbreak Manual or, if they do, not all staff know about it or how to use it	High/Short-term	No	Distribute KOM to all clinics, provide training to HCW on use of the KOM <i>Improvement project identified during the workshop by HIS and nurses, see below</i>	DON (supported by Manager, HIS)
	Lack of clarity among nurses as to the infectious disease surveillance and reporting procedure / lack of clear guidelines	High/Short-term	No	Ensure notification requirements are clearly articulated in KOM. Provide in syndromic surveillance skills development training for clinical staff and ensure staff understand their reporting obligations <i>Improvement project identified during the workshop by HIS and nurses, see below</i>	Manager, HIS
	Too many data capture and reporting forms in clinics, need to streamline data capture and reporting process	Low/Longer-term	No	Review forms and, if possible, streamline reporting process	DON
	Surveillance data quality and reporting timeliness impacted as nursing staff are often too busy to collect all information requested (particularly during outbreaks)	Medium-term	No	Investigate ways data capture and reporting can be streamlined	DON
	Logistics barriers to surveillance information transfer from data collection sites (clinics / hospitals) to HIS (eg, lack of transport to pick up line lists, unreliable internet, not phone credit...)	High/Short-term	No	Develop a clear protocol and procedure for daily reporting of Syndromic Surveillance Information to HIS. Develop a clear protocol and procedure for collection of line lists, when being developed	DON / Manager, HIS
2. Clinics and hospitals (on outer islands) – unusual event and outbreak reporting	Outer islands find it difficult to make reports to HIS as required to go through ER phone line, which is often not attended or busy.	High/Short-term	No	Develop a more efficient mechanism for public health event reporting. Develop mechanism to record / transfer notifications of potential outbreaks to responsible officer when received out of office hours <i>Improvement project identified during the workshop by HIS and nurses, see below</i>	Manager, HIS / DON
3. Laboratory – specimen testing and reporting	Collection of specimens for suspected cases is often delayed, as people authorised to order/collect specimens are unavailable. Transfer of specimens to overseas laboratories is often delay due to slow administrative / approval process for approval, and sometimes lack of funds.	Medium-term	Yes	Develop protocol to allow designated non-treating officers to authorise the collection and testing of specimen from suspected cases during outbreak <i>Improvement project identified during the workshop by laboratory representative, see below</i> Ensure lab knows about and has access to PPHSN-LabNet funds for transfer of specimens during outbreaks	Manager, Laboratory
	Routine laboratory based surveillance for common outbreak-prone disease is not conducted	Medium-term	No	Develop a project for routine collection and testing of samples from ILI and diarrhoea cases. Reporting of lab results to HIS <i>Improvement project identified during the workshop by laboratory representatives, see below</i>	Manager, Laboratories / HIS
4. HIS - Surveillance data collection, analysis and triggers	HIS is only staffed during business hours (M-F; 8:30-4:00) and there is no official procedure for contacting HIS outside of this time	High/Short-term	No	See above	
	Need to clarify outbreak surveillance response triggers / thresholds for action	High/Short-term	Yes	Small workshop to identify and address threshold-related issues	Statistician, HIS
	Lack of clarity about mechanism for the rapid escalation of suspected outbreak intelligence to decision maker level and on to	High/Short-term	No	Using Figure 1 as a guide, develop, test and agree on a procedure for internal communication within the Public Health Team and to the CDCSC	D / DDPH & Manager, HIS

	outbreak responders			<i>Improvement project identified during the workshop by HIS representatives, see below</i>	
	No mechanism to provide regular feedback/updates on syndromic surveillance activities	Medium-term	Yes	Develop a regular surveillance feedback/updates tool (e.g., newsletter / bulletin update) from HIS to relevant stakeholders. The tool should be simple to develop and sustain <i>Improvement project identified during the workshop by HIS representatives, see below</i>	Manager, HIS
5. Investigation and response (inc. CDCSC function)	It is unclear who is ultimately in charge of outbreak response / decision making / CDCSC operations if the Director or Deputy Director of Public Health is away	High/Short-term	No	Develop written agreement / protocol that identifies and documents key outbreak response roles and responsibilities. Develop system for delegation of authority if usual officer in a key role is absent. Ensure all CDCSC members know and agree to the arrangement	D / DDPH
	Lack of house markers (or mechanism to record case address) inhibits contact tracing / targeted interventions and wastes time during outbreaks	Medium-term	Yes	Develop agree approach to collecting and recording cases' residential data and follow-up contact information. May involve other Ministries.	Manager, EHU
	No functional outbreak preparedness and response plan in place in Kiribati (note: there is an out-dated draft Pandemic Plan, but this is not used)	High/Short-term	Yes	Large project requiring strong leadership and high-level commitment for MHMS to be successful <i>Improvement project identified during the workshop by Environmental Health Unit representatives, see below</i>	Manager, EHU
	Difficult to mobilise finances in response to outbreak. Outbreak funds needed to ensure drug supply, produce health promotion materials, rent transport etc.	Medium-term	No		D / DDPH
	No workforce 'surge' capacity plan in place (ie, plan for what additional skills will be need during public health emergencies, and where will they skills be sourced)	Low/Longer-term	Yes	<i>Improvement project identified during the workshop by Environmental Health Unit representatives, see below</i>	
	A need to keep pharmacy supplies stocked in case of emergency	High/Short-term	No	Stockpiling of essential stock and prediction (in advice) of stock need during outbreak events	Manager, Hospital Stores
	Lack of pre-prepared 'key messages' health promotion/communication material that can be printed and distributed in response to public health emergencies	Medium-term	Yes	<i>Improvement project identified during the workshop by Environmental Health Unit representatives, see below</i>	Manager, EHU & Manager, HPU
	Need for training in behaviour change-oriented health promotion methods	Medium-term	Yes	<i>Improvement project identified during the workshop by Health Promotion Unit representatives, see below</i>	Manager, PHU
	Very limited isolation space within TCH (and Betio Hospital)	Medium-term	No	<i>Improvement project identified during the workshop by Nursing representatives, see below</i>	DON & Director of Hospital & DPH
Other	No mosquito vector surveillance currently being undertaken	Low/Longer-term	Yes	Training in mosquito surveillance techniques and vector control <i>Improvement project identified during the workshop by Environmental Health Unit representatives, see below</i>	Manager, EHU

2.8 Workshop evaluation

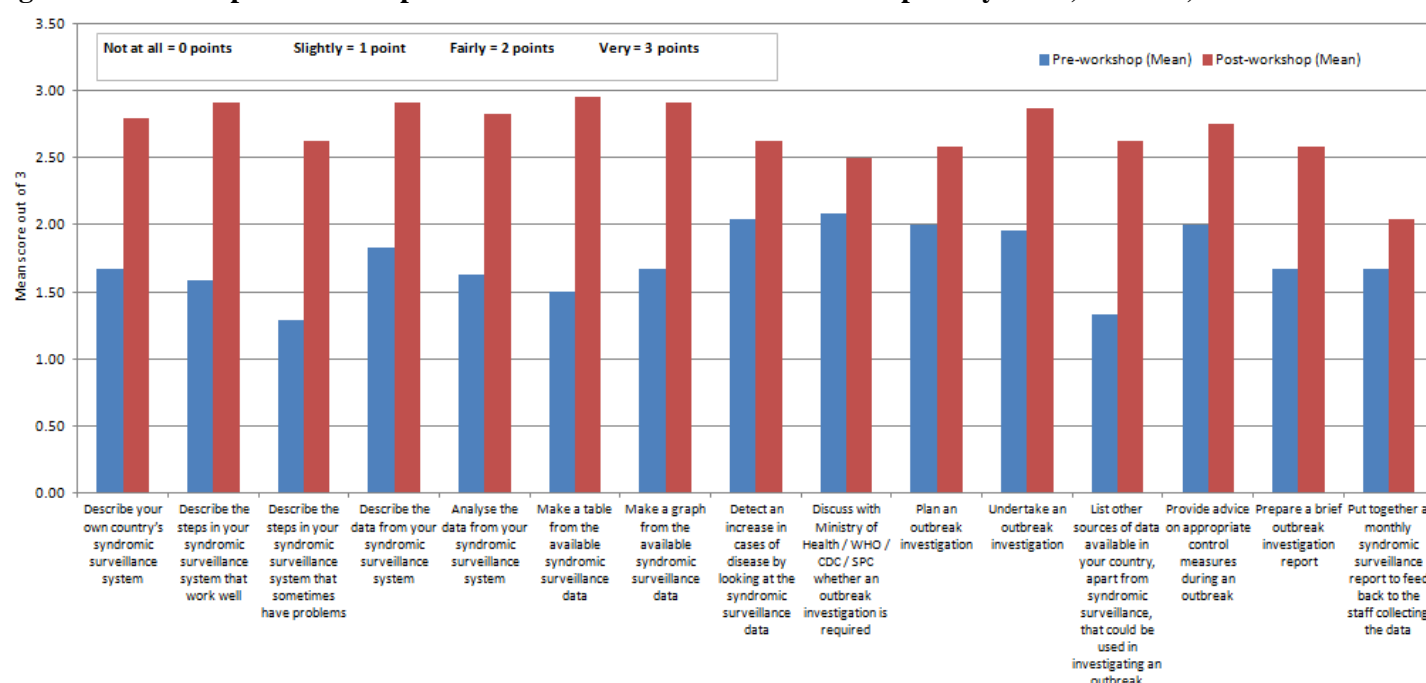
The workshop generally seemed to be successful in achieving its three objectives. During the full course duration of five days, all participants were present and there were no dropouts.

Objective 1: Strengthen the capacity of the Environmental Health Unit, EpiNet team, Health Information Unit, Health Promotion Unit, Laboratory Services, and Public Health Nurses in surveillance, preparedness and response to outbreaks, including those of climate sensitive diseases.

A pre- and post-workshop evaluation indicated that participants' level of self-reported understanding and skill in surveillance, preparedness and response was strengthened as a result of participating in the course (see Appendix 3 for evaluation template). The evaluation revealed an overall improvement across all 15 competency areas with the mean pre-workshop evaluation score of 1.7 rising to 2.7 (a 56% improvement) by the end of the training. The greatest improvement (103%) was in "Describing the steps in your syndromic surveillance system that sometimes have problems" and the mapping exercise greatly contributed to that improvement. Other competencies that saw large improvement were "Make a

table from the available syndromic surveillance data” (97%), “List other sources of data available in your country, apart from syndromic surveillance, that could be used in investigating an outbreak” (97%), “Describe the steps in your syndromic surveillance system that work well” (84%), “Make a graph from the available syndromic surveillance data” (75%), and “Analyse the data from your syndromic surveillance system” (74%). The least improvement was seen in the following competencies: “Detect an increase in cases of disease by looking at the syndromic surveillance data” (29%); “Discuss with Ministry of Health / WHO / CDC / SPC whether an outbreak investigation is required” (20%); “Plan an outbreak investigation” (29%); and “Put together a monthly syndromic surveillance report to feed back to the staff collecting the data” (23%). It is noted that the evaluation was a self-reported evaluation and provides one indication of learning achieved. Participants felt the most useful sessions were disease surveillance, outbreak investigation, outbreak investigation (group work), and developing a quality improvement project.

Figure 2: Pre- and post-workshop evaluation mean scores for the 15 competency areas, Kiribati, November 2013



The evaluation also captured people’s thoughts about the workshop. Overall, people were very satisfied. Below is a sample of some of the responses:

“After this workshop, I have learned many things from it. The most important ones are knowing how to respond to an outbreak, and knowing how to use excel to analyse data”.

“Very interesting, active and informative as we have intelligent and brilliant facilitators coming from different countries with different expertise. I could also say that their way to teach is very simple and which we could absorb and understand the key messages from one session to another”.

“This workshop was what was promised: a very good learning experience.”

“Fantastic...facilitators, very helpful and social to each participant as they are involved in every part (eg group work) – that is, they sit in groups with the participants which is different from other workshops I have been involved with...they spoke politely and clearly and used simple English that was easy to understand. There was also good coordination between partners”.

“Overall this is a very good workshop and I feel so grateful for this. It would be great if the second module could be run in Kiribati.”

Objective 2: Define appropriate knowledge and skills competencies for EpiNet team members (to help in planning further developmental activities).

A range of key knowledge and skill-based competencies that EpiNet team members should have was identified to help plan further capacity development activities. The evaluation question ‘*What other skills, related to disease surveillance or outbreak investigation and response, would you like to learn or enhance*’ had the following responses:

- Data analysis and interpretation +++
- Control measures ++
- Communicating results +
- Statistics – attack rates, percentages
- Vector Surveillance
- Outbreak Investigation
- Describing cases
- Syndromic Surveillance Response
- Teamwork skills for response
- Faster and more effective response
- Coordination, Leadership, management skills
- Available services to tap into: technical, financial

Objective 3: Facilitate further dialogue among partners toward development of an Epi-Tech track within a Pacific FETP fellowship program.

Further dialogue was undertaken by partners toward development of an Epi-Tech track within a Pacific FETP fellowship program. The present partners and course participants were updated on the ongoing feasibility study of a Pacific FETP program. Furthermore, there were several informal discussions focussing mainly on the development of the next module of DDM to be delivered in Guam in March 2013 and accreditation procedures.

2.9 Accreditation

Thirteen of the 28 workshop participants expressed interested in receiving credit towards a tertiary qualification through FNU for their participating in this workshop. Facilitators will follow up all participants to make sure all those interested in receiving FNU credit are identified. Adam Roth (SPC) will liaise with FNU to determine whether those interested in receiving a credit towards an FNU course are eligible and to determine what else is required. SPC will report outcomes of this discussion to those that have expressed interest in receiving a credit. Facilitators will have to assume the supervisory role for specific projects.

2.10 Conclusions

The workshop was successful in achieving its three stated objectives. The evaluation suggests that capacity was strengthened in surveillance, preparedness and response to outbreak-prone disease, including those that are climate-sensitive. The workshop demonstrated that the interactive training methods used in this DDM module is of value as the DDM training approach as they appeared to transfer knowledge and skills in an effective way. Appropriate knowledge and skills for EpiNet (CCDSC) team members were defined by participants and most of these were strengthened in the workshop. Partners further discussed development of an Epi-Tech track within a Pacific FETP fellowship program.

3.0 Next Steps following workshop

1. A teleconference will be held with all facilitators to discuss how the improvement projects can be supported. In mid-2014, another teleconference will be held to discuss progress on the implementation of the improvements projects.
2. Adam Roth will discuss course credit and DDM accreditation with FNU and SPC will liaise with Kiribati workshop participants to discuss credit options.
3. Partners (PIHOA, WHO, CDC, SPC, FNU) will pilot Module 2 of the DDM course (epidemiology and data analysis) at the sub-regional level in Guam in March. Adam Roth and Damian Hoy will develop the draft curriculum for this and circulate to partners (PIHOA, WHO, CDC, SPC, FNU) for comment. This will then be implemented in June in Kiribati as part of the PPHSN and the GCCA project.
4. Partners (PIHOA, WHO, CDC, SPC, RAPID, FNU) will continue to collaborate to deliver Module 1 (Outbreak surveillance and response) in the Solomon Islands in March 2014.
5. Facilitators were asked how they felt the curriculum could be improved. There was individual feedback to this in facilitator meetings and in email feedback since. This feedback is shown below. Please note, these suggestions are those of individuals and do not necessarily represent those of the whole group. Amendments to the curriculum will need to be passed by FNU to ensure they still meet accreditation requirements:
 - Think about ideal participant: facilitator ratio (some suggested 4 or 5:1 is ideal – national facilitators can be included and these should be identified well in advance of workshop and it needs to be made clear there are expectations of them).
 - Spread the day one plenary sessions over two days to break things up.
 - Consider moving microbiology to before infectious disease epidemiology. The microbiology presentation was a bit too long and the slides on lab diagnosis weren't included. If it's decided that we could continue with this in module 2 then I'll move these slides into microbiology II.
 - Have outbreak investigation lecture on the Monday before the descriptive epidemiology lecture.
 - Have disease surveillance lecture earlier on day 1. Include the PacNet lecture in this session (or the PPHSN lecture).
 - Get time with national doctors separately – go off at lunchtime to speak to them so that they are aware of the need to fill in syndromic surveillance forms, etc.
 - More time required to outline scope of workshop early on Monday to allow participants to be able to describe their hopes and expectations of workshop.
 - Prior to the mapping session, would be good to have a short presentation on background info for the country and its surveillance system. It would be good to give this overview before the expectations.
 - Would be useful for facilitators to have a geographical map and an organogram to help understand the context in the mapping exercise.
 - Would be useful for facilitators to have surveillance forms sent to them a month before so they can incorporate these into their presentations.
 - Include screen shots in Excel and outbreak investigation exercise handouts.
 - Emphasising to the facilitators and participants to follow the instructions for the mystery outbreak exercise generally worked well – this needs to continue to be emphasised for future workshops.
 - Have a dropbox set up with all presentations, agenda and facilitator notes for the group sessions.
 - Include some group work/discussion into the introduction to the mystery outbreak exercise.
 - Pairing of people who are less competent at Excel with someone who is more competent worked very well.
 - Inclusion of nurses in workshop worked well – continued inclusion of nurses/community health workers will be important in future workshops to have a significant impact at improving the syndromic surveillance system.
 - Email leaders well in advance to book a spot in their schedules. It is very important to have leaders opening, closing and attending the presentation of the improvement projects.
 - Need to continue to encourage participants to use the Pacific Outbreak Manual.
 - The evaluation needs to be tightened up to better reflect the agenda. Also, the evaluation as it stands is based on self-report report – consider alternative evaluation methods – exercise or other way participants can demonstrate their newly developed skills in practice.
 - Would be good to have a better wrap up next time where we discuss next steps on the Friday afternoon.
 - Important that all files (incl. the improvement projects) are copied onto USBs.
 - Important that the computer used for ppt projections has up to date anti-virus software.

- Emphasise the importance of participants arriving on time on the first day for future workshops.
- Recommend that the slides be synthesised into a text to supplement the outbreak manual.
- Need to continue to emphasise when organising the workshop that participants **MUST** be involved in the surveillance/response system in their daily work as despite prior emphasis a number of individuals attended who have nothing to do with surveillance and response.
- Would be good to present where outbreak surveillance and response fits with disaster risk management/response.
- Would be good to strengthen the following areas which did not score as well in the evaluation: “Detect an increase in cases of disease by looking at the syndromic surveillance data”; “Discuss with Ministry of Health / WHO / CDC / SPC whether an outbreak investigation is required”; “Plan an outbreak investigation”; and “Put together a monthly syndromic surveillance report to feed back to the staff collecting the data”.
- Consider stratifying group so training can be targeted to key officers involved in EpiNet team v the broader surveillance/response system staff.
- Consider value of including a simulation /practice exercise to supplement class room / desk-top activities based learning.

Appendix 1 – Agenda

Time	Activity (approximate time)	Teaching method	Facilitator	DDM 2013 objectives
Sunday 27 October				
3.00 - 5.00	Facilitators' meeting		Mark Durand/Damian Hoy	
Monday 28 October				
8:30 - 10:15	Welcome and introductions (15 min)	Participant-led plenary (participatory)	Tebikau Noran, Damian Hoy	PH712: 13,14
	Pre evaluation; workshop register; PacNet register (15 min)	Group work	Kate Hardie, Damian Hoy	
	Course background (PPHSN, EpiNet teams and SHIP feasibility study and continuum) and overview (30 min)	Facilitator-led plenary (participatory)	Adam Roth	
	Expectations of this course. What are important/ideal knowledge and skills for EpiNet teams? (45 min)	Group work	Adam Roth leading with assistance from all facilitators	
10:15 - 10:30	MORNING TEA			
10:30 - 12:00	Introduction to: IHR, Syndromic Surveillance (30 min)	Facilitator-led plenary (participatory)	Adam Craig and Viema Biaukula	PH712: 13,14 PH713: 3
	Introduction to infectious disease epidemiology (60 min)	Facilitator-led plenary (participatory)	Adam Craig	
12:00 - 13:00	LUNCH			
13:00 - 15:00	Microbiology (60 min)	Facilitator-led plenary (participatory)	Keith Eastwood	PH713: 2,4,5,6,7,9,11,12,13
	Descriptive epidemiology (60 min)	Facilitator-led plenary (participatory)	Adam Roth and Mark Durand	PH711: 1,8
15:00-15:15	AFTERNOON TEA			
15:15 - 16:30	Descriptive epidemiology - activity (30 min)	Facilitator-led plenary (participatory)	Adam Roth and Mark Durand	PH713: 2,4,5,6,7,9,11,12,13
	Disease surveillance (45 min)	Facilitator-led plenary (participatory)	Viema Biaukula	PH712: 1,2,3,4,5,6,8,9
16.30 - 17.30	Facilitators' meeting		Mark Durand	
Tuesday 29 October				
8:30 - 10:15	National Syndromic Surveillance and response: Mapping of the process of SS in your country (including surveillance and response): Identify process problems	Group work	Kate Hardie and Adam Craig leading with assistance from all facilitators	PH712: 3,4,6,7,9,11,13,14
10:15 - 10:30	MORNING TEA			
10:30 - 12:00	National Syndromic Surveillance and response: Mapping (continued)	Group work	Kate Hardie and Adam Craig leading with assistance from all facilitators	PH712: 3,4,6,7,9,11,13,14
12:00 - 13:00	LUNCH			
13:00 - 14:45	National Syndromic Surveillance and response: Mapping (continued) - present and harmonise maps (60 min)	Participant-led plenary (participatory)	Kate Hardie	PH712: 3,4,6,7,9,11,13,14
	Displaying data overview (45 min)	Facilitator-led plenary (participatory)	Kate Hardie	PH715: 2,3
14:45 - 15:00	AFTERNOON TEA			
15:00 - 16:30	Excel cafe: Data presentation and analysis	Group work	Kate Hardie and Damian Hoy leading with assistance from all facilitators	PH715: 2,3
16.30 - 17.30	Facilitators' meeting		Mark Durand	
Wednesday 30 October				
8:30 - 10:15	Outbreak investigation steps (60 min)	Facilitator-led plenary (participatory)	Adam Craig	PH713: 1,2,4-13,16,19,22

	Outbreak investigation: mystery outbreak introduction (15 min)	Facilitator-led plenary (participatory)	Damian Hoy	PH711: 1,2,5,6,7 PH713: 1,2,4-13,16,19,22
	Outbreak investigation: mystery outbreak	Group work	Damian Hoy leading with assistance from all facilitators	PH711: 1,2,5,6,7 PH713: 1,2,4-13,16,19,22
10:15 - 10:30	MORNING TEA			
10:30 - 12:00	Outbreak investigation: mystery outbreak (continued)	Group work	Damian Hoy leading with assistance from all facilitators	PH711: 1,2,5,6,7 PH713: 1,2,4-13,16,19,22
12:00 - 13:00	LUNCH			
13:00 - 14:45	Outbreak investigation: mystery outbreak (continued)	Group work	Damian Hoy leading with assistance from all facilitators	PH711: 1,2,5,6,7 PH713: 1,2,4-13,16,19,22
14:45 - 15:00	AFTERNOON TEA			
15:00 - 16:30	Outbreak investigation: mystery outbreak (continued)	Group work	Damian Hoy leading with assistance from all facilitators	PH711: 1,2,5,6,7 PH713: 1,2,4-13,16,19,22
	Outbreak investigation: mystery outbreak wrap-up (20 min)	Facilitator-led plenary (participatory)	Damian Hoy	PH711: 1,2,5,6,7 PH713: 1,2,4-13,16,19,22
16.30 - 17.30	Facilitators' meeting		Mark Durand	
Thursday 31 October				
8:30 - 10:15	Outbreak response and control: introduction (30 min)	Facilitator-led plenary (participatory)	Adam Craig	PH711: 1,7,11 PH713: 1,5,19,22
	Outbreak: investigation, response and control case study: diarrhoea in Kiribati (30 min)	Participant-led plenary (participatory)	Tebikau Noran and Teanabuka	PH711: 1,7,11 PH713: 1,5,19,22
	Outbreak: diarrhoea in Kiribati - lessons learned, strengths, challenges, opportunities for improvement (45 min)	Group work	Tebikau Noran and Teanabuka leading with assistance from all facilitators	PH711: 1,7,11 PH713: 1,5,19,22
10:15 - 10:30	MORNING TEA			
10:30 - 12:00	Outbreak: diarrhoea in Kiribati - lessons learned, strengths, challenges, opportunities for improvement (30 min)	Participant-led plenary (participatory)	All facilitators and participants (Tebikau Noran and Teanabuka facilitate)	PH711: 1,7,11 PH713: 1,5,19,22
	Outbreak surveillance and response in mass gatherings (30 min)	Facilitator-led plenary (participatory)	Adam Roth and Keith Eastwood	PH711: 1,7,11 PH713: 1,5,19,22
	Response and control - case study on air-borne disease (30 min)	Facilitator-led plenary (participatory)	Mark Durand	PH711: 1,7,11 PH713: 1,5,19,22
12:00 - 13:00	LUNCH			
13:00 - 14:45	Response and control - vector/water /food-borne disease	Group work	Mark Durand/Rokho Kim/Damian Hoy	PH711: 1,7,11 PH713: 1,5,19,22
14:45 - 15:00	AFTERNOON TEA			
15:00 - 16:30	National Syndromic Surveillance and response: develop projects to improve the SS	Group work	Adam Roth leading with assistance from all facilitators	PH712: 3,4,6,7,9,11,13,14 PH713: 22
16.30 - 17.30	Facilitators' meeting		Mark Durand	
18.00	Evening function (all participants and facilitators)			
Friday 1 November				
8:30 - 10:15	National Syndromic Surveillance and response: Prepare presentation on SS map and projects	Group work	Adam Roth and Adam Craig leading with assistance from all facilitators	PH712: 3,4,6,7,9,11,13,14 PH713: 22
10:15 - 10:30	MORNING TEA			
10:30 - 12:00	National Syndromic Surveillance and response: Presentation of group work - how can we improve our SS process	Participant-led plenary (participatory)	All facilitators and participants (Adam Roth and Adam Craig facilitate)	PH712: 3,4,6,7,9,11,13,14 PH713: 22
12:00 - 13:00	LUNCH			
13:00 - 15.15	NCD surveillance (60 min)	Facilitator-led plenary (participatory)	Mark Durand	PPH712: 1,2,3,4,5,6,7,8,9,10,11,12

	Revisit expectations of this course. Ongoing support/mentoring. Needs for next module (75 min)	Group work	Adam Roth leading with assistance from all facilitators	
15.15 - 15.30	AFTERNOON TEA			
15:30 - 16.30	Moodle demonstration (30 min)	Facilitator-led plenary (participatory)	Cancelled	PH712: 3,4,6,7,9,11,13,14 PH713: 22
	Evaluation of the workshop (15 min)	Facilitator-led plenary (participatory)	Keith Eastwood	
	Workshop wrap-up and closure (15 min)	Participant-led plenary (participatory)	Tebikau Noran	
16.30 - 17.30	Facilitators' meeting		Mark Durand	

Appendix 2: Identified Improvement Projects

Identified Improvement Projects, Kiribati, November 2013

HEALTH INFORMATION UNIT				
Improvement needed: Feedback Report/Updates to Nurses, EHU, others				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
Assistant Statistician HIS Manager Registry Office	Develop Template Fill in template HIS Manager approve report Registry Officer Distribute	Development (Dec to Jan 2014) Reports (Weekly)	Production of a weekly feedback	
Improvement needed: Review Kiribati Outbreak Manual				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
HIS Manager WHO/SPC DHS DPHS DNS/DDNS EHU Lab HPU	CCDSC Set up project Management Structure Review Kiribati Outbreak Manual Consulting WHO/SPC people on what needs to be changed Develop Draft Final review / version Launching Training	Set up (Nov – Dec, 2013) Review (Feb, 2014) Writing (Mar – Apr, 2014) Revision, printing, etc... (May, 2014) Launching (Jul, 2014) Training (14 Jul to 15 Jul, 2014)	Management Team to do the monitoring Meet regularly Draft develop Final draft Printing Launching Training	
Improvement needed: CDC HIS Policy & Procedures (Communication Policy; Surveillance Trigger Policy; Response Policy)				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
EHU DPHS HIS Consultation CCDSC	Mapping Draft Policy CCDSC meeting to refine policy Trainings	Mid Dec to Jan 2014	Reports to CCDSC on progress CCDSC review workshop	
ENVIRONMENTAL HEALTH UNIT				
Improvement needed: Improve timeliness of notification of an incident (including a weekly surveillance report from HIS)				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
DPHS HIS EHU	Ensure feedback system is operational	End 2013	Weekly report of all incidents is received by concerned staff	Responsible EHO Kaieta and Tarome
Improvement needed: Identify Environmental Health Officer surge capacity (including cover over weekends and public holidays, also transportation and communications)				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
1. DPHS 2. EH manager 3. HIS manager	1. To coordinate and to seek training for concerned officers	Functional feedback system by end of 1 st quarter 2014 Annual review	The new system is working as planned with A reduced burden from	Responsible EHO Tebikau Tibwe/ Bungia

	2. To remind HIS and to develop a roster for the EH 3. To ensure that HIS has a reporting system in place Annual review to ensure system is okay		disease outbreaks	Kaitaake
Improvement needed: Mosquito vector surveillance (identification and possible PCR)				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
WHO SPC – GCCA:PSIS SPC – Noumea SPC – PHD SPC - SOPAC EHU - MHMS	Training on mosquito surveillance/identification Training in control of vectors	Mid 2014	At least one officer is trained and the mosquito surveillance programme is functional	Responsible EHO Tabomoa/Teretia
Improvement needed: Development/review of environmental health factsheets				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
Uni Newcastle WHO SPC Health Promotion MOH – Fiji EHU – MHMS	Adopt existing factsheets and revise to suit Kiribati situation	End 2014	A whole bunch of facts available to be used by the EH for national events and for awareness purposes	Responsible EHO All EH officers
Improvement needed: Review/development of a generic Biopreparedness Plan				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
EHU University of Newcastle WHO SPC – PHD and GCCA:PSIS	Adopt one already made from around the region and revise to suit the situation in Kiribati	First draft – end 2014 Final draft – June, 2015	Simulation exercise by end of 2015	Responsible EHO To be funded under the GCCA:PSIS project
HEALTH PROMOTION UNIT				
Improvement needed: Training on Key Messages & Development on Disease Response				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
OIC at Health Promotion Unit Director of Public Health Services CCDSC WHO/SPC NGOs Influential Leaders in villages Nurses (Public & Curative)	Endorsement from Director of Public Health Services Send a formal letter to these agencies: WHO, SPC & Climate Change Request help from WHO, SPC & Climate Change for workshop funding to train and develop materials	April 2014	Workshop complete for Air-borne, Food-borne, Vector-borne, Diarrhea and ARI disease Materials all developed	To evaluate key messages to the public during outbreaks
Improvement needed: Standard “key messages” sets and tools for mass media, village megaphone campaigns, hospital/clinic staff- for apparent mosquito born disease, common-source food-borne outbreaks, other diarrhea outbreaks, and ILI outbreaks				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
HPU, EHU, HIU, nurses, Director of Public Health Services, CCDSC, SPC PHD, GCCA-PSIS	-Communications plan developed -awareness materials produced	December 2014	-key messages and awareness materials utilized	SPC GCCA-PSIS project to fund a health communications plan and development of awareness materials

Improvement needed:				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
NURSES				
Improvement needed: Improved communication lines from outer islands for when there is an outbreak				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
HIS, Outer islands clinics	-Write new protocol		-emergency line more accessible	
Improvement needed: Development of an isolation ward for outbreaks				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
Director of Public Health Services, clinics, nurses			-isolation wards established and being utilized	
Improvement needed: Distribution of outbreaks manuals to clinics				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
-EHU	8 copies by 5th November to Tap North	Nov 2013	-outbreak manuals distributed	
Improvement needed: Training of clinic nurses in outbreak surveillance and response, including infection control				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
-EHU; HPU	-Partner identified -training conducted			
LABORATORY UNIT				
Improvement needed: Sample collection for ILI, Diarrhoea				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments
Public Health Services, Med lab, SPC PHD, GCCA-PSIS	-partner identified -supplies for taking stool and nasal swabs sourced and costed -supplies purchased		-more samples collected for ILI and diarrhea - more data available	-GCCA:PSIS project may be able to purchase the supplies
Improvement needed: Change in Policy to allow lab EpiNet member to initiate testing for outbreak prone diseases by standing order, when there is an apparent cluster of cases				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments

Lab supervisor, Lab epinet representative, Chief of medical staff	Write-up and dissemination of new policy		Policy endorsed	
Improvement needed:				
Who should be involved	Actions needed (list)	Deadline	How to know success (evaluation)	Comments

Appendix 3: Workshop evaluation template

Think about how you are currently involved with syndromic surveillance and outbreak investigation and response. After your involvement in this workshop, please rate how prepared/confident you now feel in your ability to...	Not at all	Slightly	Fairly	Very
Describe your own country's syndromic surveillance system				
Describe the steps in your syndromic surveillance system that work well				
Describe the steps in your syndromic surveillance system that sometimes have problems				
Describe the data from your syndromic surveillance system				
Analyse the data from your syndromic surveillance system				
Make a table from the available syndromic surveillance data				
Make a graph from the available syndromic surveillance data				
Detect an increase in cases of disease by looking at the syndromic surveillance data				
Discuss with the Ministry of Health / WHO / CDC / SPC whether an outbreak investigation is required				
Plan an outbreak investigation				
Undertake an outbreak investigation				
List other sources of data available in your country, apart from syndromic surveillance, that could be used in investigating an outbreak				
Provide advice on appropriate control measures during an outbreak				
Prepare a brief outbreak investigation report				
Put together a monthly syndromic surveillance report to feed back to the staff collecting the data				
Which sessions were the most useful to you . Please tick <u>three only</u> .				
Monday	Tuesday	Wednesday	Thursday	Friday
<input type="checkbox"/> Course overview/ PPHSN/ EpiNet team/ FETP continuum <input type="checkbox"/> Introduction to IHR, syndromic surveillance and the Pacific Outbreak Manual <input type="checkbox"/> Descriptive epidemiology <input type="checkbox"/> Descriptive epidemiology group work	<input type="checkbox"/> Disease surveillance <input type="checkbox"/> Displaying data <input type="checkbox"/> Displaying data practical session	<input type="checkbox"/> Outbreak Investigation <input type="checkbox"/> Outbreak Investigation group work	<input type="checkbox"/> Response and Control <input type="checkbox"/> Response and Control Case Studies <input type="checkbox"/> Non-Communicable Disease Surveillance	<input type="checkbox"/> Surveillance Mapping Exercise <input type="checkbox"/> Developing a quality improvement activity
Which sessions were the least useful to you . Please tick <u>up to three</u> .				
Monday	Tuesday	Wednesday	Thursday	Friday
<input type="checkbox"/> Course overview/ PPHSN/ EpiNet team/ FETP continuum <input type="checkbox"/> Introduction to IHR, syndromic surveillance and the Pacific Outbreak Manual <input type="checkbox"/> Descriptive epidemiology <input type="checkbox"/> Descriptive epidemiology group work	<input type="checkbox"/> Disease surveillance <input type="checkbox"/> Displaying data <input type="checkbox"/> Displaying data practical session	<input type="checkbox"/> Outbreak Investigation <input type="checkbox"/> Outbreak Investigation group work	<input type="checkbox"/> Response and Control <input type="checkbox"/> Response and Control Case Studies <input type="checkbox"/> Non-Communicable Disease Surveillance	<input type="checkbox"/> Surveillance Mapping Exercise <input type="checkbox"/> Developing a quality improvement activity
What other skills, related to disease surveillance or outbreak investigation and response, would you like to learn or enhance?				
Any other general feedback on the workshop?				

Appendix 4: Resulting communications

Workshop summary for: 1) Climate Change and development Community Email list

Building resilience to climate sensitive disease through strengthening outbreak surveillance and response Kiribati MHMS, RAPID (UoN, HNEPH, WHO, SPC), GCCA, and PPHSN (WHO, SPC, PIHOA in this instance)

Climate change poses significant threats to the health of the people of the Pacific. Common climate-sensitive health risks identified across 14 Pacific Island countries and territories (PICTs) include: vector-borne diseases; food and water safety and security; the potential spread of food- and water-borne diseases; exacerbation of non-communicable diseases; injuries and deaths from extreme weather events; increasing cases of ciguatera; and disorders of mental health. Strengthening capacity for outbreak surveillance and response is a common area identified by PICTs for adaptation to the health threats of climate change. Related to this, at the Pacific Health Ministers' meeting in 2011, one of the key recommendations was *"to address the lack of trained and experienced epidemiologists in the region..... development of comprehensive training programmes to develop core competencies in "data techs", "epi techs" and epidemiologists"*.

In response, PPHSN regional partners (WHO, FNU, CDC, PIHOA and SPC) have revitalised the existing PPHSN-FNU collaboration for data for decision-making (DDM), and are currently exploring ways that to broaden this program to strengthen essential public health functions and services in the PICTs to better respond to the health threats of climate change, and the Health Ministers' recommendations. One of the key steps in this initiative is to re-invigorate EpiNet teams, which were established by the health authorities in all 22 of the PICTs in 2001. The multidisciplinary teams coordinate outbreak surveillance and field response.

The DDM provided is delivered in four modules comprising outbreak investigation, surveillance, data analysis and basic epidemiology. It has already been accredited by FNU, and participants will be able to claim credit for the full program or each module separately which will include doing a write-up of an improvement project. Module 1 was recently conducted in Kiribati from October 28 to November 1. The workshop was delivered through a collaboration between: 1) PPHSN regional partners; 2) the AusAID-funded *Response and Analysis for Pacific Infectious Diseases (RAPID)* project, which is a collaboration between Hunter New England Population Health (HNEPH), University of Newcastle Australia (UoN), SPC and WHO; and 3) the European Union-funded Global Climate Change Alliance: Pacific Small Island States Project *"Improving implementation of environmental health surveillance and response to climate sensitive health risks in Kiribati"*, which has an overall objective to increase the resilience of Kiribati to the adverse health impacts of climate change.

In Kiribati, the EpiNet team is known as the Continuing Communicable Disease Surveillance Committee (CCDSC). This includes members from the Health Information Unit, Environmental Health Unit, Health Promotion Unit, Laboratory Services, and Public Health Nurses Unit. These units were the key participants in the workshop. In addition, two staff from Nauru were able to attend the workshop. The workshop had a heavy emphasis on group-work and participant lead sessions. All of the facilitator-led plenaries were participatory to some extent. The importance of this was emphasized to facilitators prior to the workshop. Most of workshop hours were dedicated to group work, followed by participant-led plenaries, then facilitator-led activities. Participants mapped their surveillance systems and identified a series of small improvement projects to strengthen their systems. A number of these will be technically supported by the workshop facilitators over the coming years.

The workshop achieved its objectives of strengthening the capacity of the MHMS in surveillance, preparedness and response to outbreaks, including those of climate sensitive diseases, defining appropriate knowledge and skills competencies for EpiNet team members to help in planning further developmental activities, and facilitating further dialogue among partners toward development of an Epi-Tech track within a Pacific FETP fellowship program. The workshop demonstrated that the DDM series appears to provide the appropriate knowledge and skills for training EpiNet team members and would likely be an effective base curriculum from which further epidemiologic training activities could be developed.

Workshop summary for Inform'Action

Strengthening capacity for outbreak surveillance and response in the region

Kiribati MHMS, RAPID (UoN, HNEPH, WHO, SPC), GCCA, and PPHSN (WHO, SPC, PIHOA in this instance)

At the Pacific Health Ministers' meeting in 2011, one of the key recommendations was *"to address the lack of trained and experienced epidemiologists in the region..... development of comprehensive training programmes to develop core competencies in "data techs", "epi techs" and epidemiologists"*.

In response, Pacific Public Health Surveillance Network (PPHSN) regional partners (WHO, FNU, CDC, PIHOA and SPC) have revitalised the existing PPHSN collaboration for data for decision-making (DDM), and are currently exploring ways to broaden this training programme to strengthen essential public health functions and services in the Pacific Island countries and territories (PICTs). One of the key steps in this initiative is to re-invigorate EpiNet disease surveillance and response teams, which were first developed in the early 2000s in each Pacific island country and territory through the PPHSN, as the vanguard for communicable disease surveillance and response in the region.

Two EpiNet workshops were organised this year, one sub-regional workshop for the North Pacific in Guam and one national workshop in Kiribati. The next EpiNet workshop will take place in Tuvalu at the beginning of 2014.

Sub-regional EpiNet workshop in Guam

[add article from Mark Durand]

National EpiNet workshop in Kiribati

Module 1 of the DDM was recently conducted in Kiribati from October 28 to November 1. The workshop was delivered through a collaboration between: 1) PPHSN regional partners (WHO, PIHOA and SPC); 2) the AusAID-funded *Response and Analysis for Pacific Infectious Diseases (RAPID)* project, which is a collaboration between Hunter New England Population Health (HNEPH), University of Newcastle Australia (UoN), SPC and WHO; and 3) the European Union-funded Global Climate Change Alliance: Pacific Small Island States Project *"Improving implementation of environmental health surveillance and response to climate sensitive health risks in Kiribati"*, which has an overall objective to increase the resilience of Kiribati to the adverse health impacts of climate change.

How is DDM organised?

Data for Decision Making (DDM) training is delivered in four modules comprising; outbreak investigation, surveillance, data analysis and basic epidemiology. It has already been accredited by Fiji National University, and participants will be able to claim credit for the full programme or each module separately which will include doing a write-up of an improvement project.

Focus on climate sensitive diseases

Climate change poses significant threats to the health of the people of Kiribati as well as other countries in the Pacific. The workshop aimed to strengthen the capacity of the Ministry of Health and Medical Services (MHMS) in surveillance, preparedness and response to outbreaks, including those of climate sensitive diseases.

Involving staff from several health units

In Kiribati, the EpiNet team is known as the Continuing Communicable Disease Surveillance Committee (CCDSC). This includes members from the Health Information Unit, Environmental Health Unit, Health Promotion Unit, Laboratory Services and Public Health Nurses Unit. Staff from all these units participated in the workshop. In addition, two staff from Nauru were able to attend the workshop.

Participatory approach

The workshop had a heavy emphasis on group-work and participant-led sessions. Most of workshop hours were dedicated to group work, followed by participant-led plenaries, then facilitator-led activities. Participants mapped their surveillance systems and identified a series of small improvement projects to strengthen their systems (e.g. finish updating the national outbreak manual for Kiribati). A number of these will be technically supported by the workshop facilitators over the coming years.

The workshop achieved its objectives of strengthening the capacity of the MHMS in surveillance, preparedness and response to outbreaks, including those of climate sensitive diseases, defining appropriate knowledge and skills

competencies for EpiNet team members to help in planning further developmental activities, and facilitating further dialogue among partners toward development of an Epi-Tech track within a Pacific Field Epidemiology Training fellowship programme.

This second workshop demonstrated that the DDM series appears to provide the appropriate knowledge and skills for training EpiNet team members and would likely be an effective base curriculum from which further epidemiologic training activities could be developed.

SPC SEPPF GCCA: PSIS wants to do a media release on the GCCA Project, which would include the workshop.
Kiribati MHMS, RAPID (UoN, HNEPH, WHO, SPC), GCCA, and PPHSN (WHO, SPC, PIHOA in this instance)

This will be circulated for comment once the SPC SEPPF GCCA: PSIS drafts the release.