COMMUNICABLE DISEASE EPIDEMIOLOGY AND CONTROL IN FIJI

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FIJI PROFILE

Location:

2000km NE of NZ

Population:

>870 000

GDP Per Cap-

$4083

Healthcare system:

- Free Govt services, paid Private
- Govt- Curative and PH services
- 4 divisions, 16 subdivisions,

60+ HC and 100+ Nursing stations

COMMUNICABLE DISEASE CONTROL IN FIJI

- A KEY PUBLIC HEALTH PROGRAM OF THE MINISTRY IN STRATEGIC AND ANNUAL PLANS

- INSTITUTIONALIZATION AT MATAIKA HOUSE - MANDATED TO STEER POLICIES, PLANS, GUIDELINES, PROTOCOLS OF CD PREVENTION AND CONTROL FUNCTIONS

- FUNCTIONAL ASPECTS OF CD CONTROL- COORDINATION AND GOVERNANCE, SURVEILLANCE & RESEARCH, CLINICAL MANAGEMENT (INCLUDES LABORATORY, INFECTION CONTROL AND MEDICAL SERVICES), PH PREVENTION AND CONTROL, AND COMMUNICATION

- ENABLING (CROSS CUTTING ASPECTS)- LEGISLATION, INFORMATION SYSTEMS, RESOURCES, TRAINING, COOPERATION, ETC

SURVEILLANCE OF COMMUNICABLE DISEASES

- CAP 111 OF PUBLIC HEALTH ACT SECTION 68
- 54 CD'S SURVEILLED AND 7 PRIORITIZED BY MOH AND PPHSN
- 7 PRIORITY CD'S- CHOLERA, DENGUE, LEPTO, INFLUENZA, TYPHOID, MEASLES, RUBELLA
- VERTICAL PROGRAMS – HIV AND STI'S, TB, LEPROSY, NTD, VPD
- SURVEILLANCE SYSTEMS:
  - HEALTH INFORMATION UNIT- NNDSS, PATIS, PHIS – PASSIVE SURVEILLANCE
  - MATAIKA HOUSE- SYNDROMIC SURVEILLANCE, LAB SURVEILLANCE OF LEPTO, TYPHOID, DENGUE, INFLUENZA, MEASLES & RUBELLA
  - PUBLIC HEALTH LAB CONDUCTS – ELISA BASED TESTS FOR LEPTO, DENGUE, INFLUENZA, MEASLES AND RUBELLA AND PCR TESTING FOR INFLUENZA, LEPTO , DENGUE AND PNEUMOCOCCUS
  - LAB NETWORK BETWEEN MATAIKA HOUSE, DIVISIONAL LABS AND SUBDIVISIONAL LABS
  - SURVEILLANCE NETWORK WITH SENTINEL HEALTH FACILITIES

Table 1. National Notifiable Disease Surveillance Schedule.

Urgent *(To be telephoned immediately)*	Routine
• Acute Flacid Paralysis.	• ARI under 5 years (D)
• Anthrax (D)(L)	• Brucellosis (including Undulant Fever) (D) (L)
• Avian Influenzae (L)	• Chickenpox (Varicella) (D)
• Cholera # (D)(L)	• Dysentery (Amoebic) (D)(L)
• Diphtheria (D)(L)	• Encephalitis.
• Enteric Fevers:	• Fish poisoning (D)
(a) Typhoid Fever # (D)	• Human Immunodeficiency Virus(HIV) (L)
(b) Paratyphoid Fever (D)	• Infective Hepatitis (non-A) (D) (L)
• Haemophilus influenzae b (D)	• Influenza like illness
• Measles # (D)	• Legionellosis (D) (L)
• Meningococcal (D)	• Leprosy (D) (L)
• Multi-resistant organisms:	• Leptospirosis (Weil's Disease) # (L)
(a) MRSA (L)	• Malaria (D) (L).
(b) VRSA (L)	• Meningitis..
(c) VRE (L)	• Mumps.
(d) MDR-TB (L)	• Pertussis (D) (L)
(e) XDR –TB (L)	• Rheumatic fever and SBE (D)
• Outbreaks /clusters of suspected cases of:	• Rubella (D)
• Cryptosporidiosis (D)(L)	• Sexually Transmitted Infections:
• Dengue fever # (D)(L)	(a) Gonorrhea (D) (L)
• Food poisoning (D)	(b) Syphilis (D) (L)
• Giardiasis (D)(L)	(i) Chlamydia (L)
• Shigellosis (D) (L)	• Tetanus (D)
• Hepatitis A (D)	• Trachoma (D)
• Ross river virus (D) (L)	• Tuberculosis:
• Leptospirosis # (D) (L)	(a) Pulmonary (D) (L)
• Plague (D)(L)	(b) Other than pulmonary (D) (L)
• SARS/ Severe acute respiratory infection (D)	
• Viral haemorrhagic fever (D)(L)	
• Yellow Fever (D)(L)	

Notes.
Conditions marked with (D) are required to be notified by Medical Officers
Conditions marked with (L) are required to be notified by Laboratories

ESTIMATED BURDEN

LEPTO- 35 DEATHS/2500

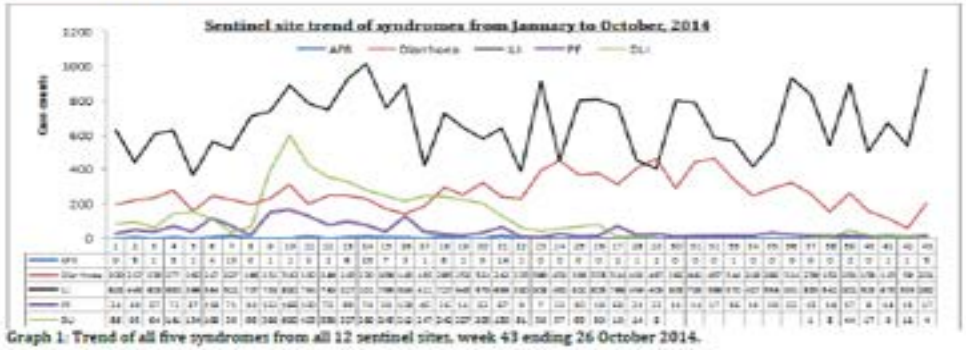
TYPHOID- 5 DEATHS/2000

DENGUE- 9 DEATHS/3000

Public Health Event of International and Regional concern

Diseases	Countries affected	dates of the update & source	# of cases	# of deaths	genotype	comments
Ebola	In-countries transmission-Liberia,Sierra Leone,Guinea Imported-Mali,Nigeria,Senegal,Spain,USA	WK 44-Pacnet	13,042 (sus+pro+conf)	4,818		• Majority of the cases is in countries with intense and widespread transmission (Liberia, Sierra Leone and Guinea). All districts in Liberia and Sierra Leone have been affected.Five countries (Mali, Nigeria, Senegal, Spain, and the United States of America) have now reported a case or cases imported from a country with widespread and intense transmission. The outbreaks of EVD in Senegal and Nigeria were declared over on 17 October and 19 October 2014, respectively.A total of 546 health-care workers (HCWs) are known to have been infected with EVD up to the end of 2 November, 310 of whom have died. Four HCWs were infected between 27 October and 2 November.
MERS-CoV	Austria,Turkey,Kingdom of Saudi Arabia	WK 43-Pacnet	• Austria reported its first case of MERS-CoV to WHO on 30 Sep 2014. The case is a 29 year old female citizen of the Kingdom of Saudi Arabia who travelled oto Vienna, Austria on a flight from Doha, Qatar while • Turkey reported its first case (and fatality) of MERS-CoV to WHO on 17 Oct 2014 in a returned traveller from Kingdom of Saudi Arabia. The case travelled to Turkey while symptomatic. • As of 27 October 2014 the Kingdom of Saudi Arabia has announced 25 confirmed cases, 10 deaths of MERS-COV for the month of October, compared to 12 confirmed cases, 4 deaths in September. There is a total of 786 laboratory confirmed cases of MERS-CoV infection, including 334 deaths, 435 recoveries, and 17 currently active cases.			
Dengue	French Polynesia	WK 44-Pacnet	91 (as of 26/10/14)	0	type 1	An ongoing outbreak and the number of cases increases in wk 44 compared to the previous week(wk 43)
Measles	PNG,Solomon,Vanuatu	WK 44-Pacnet	4406(since july 1ST)	8	B3	An ongoing outbreak and the genotype is the same circulating in Port Moresby.Vaccination campaign and rapid coverage assessment conducted in all provinces.
Chikungunya	American Samoa,French Polynesia,Samoa,Tokelau	WK 44-Pacnet	F/Polynesia-541 confirmed	0		On-going outbreak in American Samoa, French Polynesia, Samoa and Tokelau. 541 confirmed case in F/Polynesia as of 30/10/14(509 cases from Tahiti) since 10/10/14

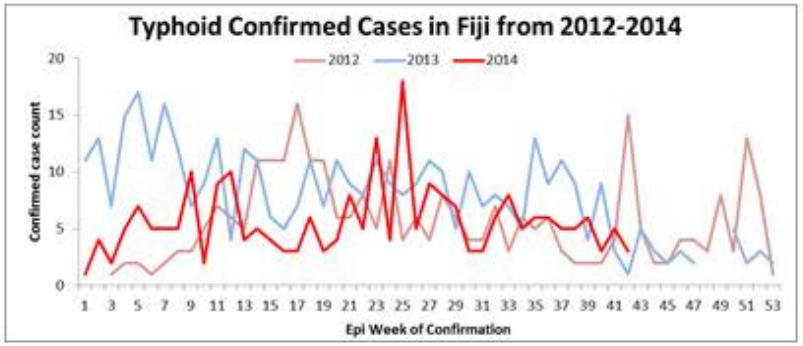
Sydromic surveillance:



Graph 1: Trend of all five syndromes from all 12 sentinel sites, week 43 ending 26 October 2014.

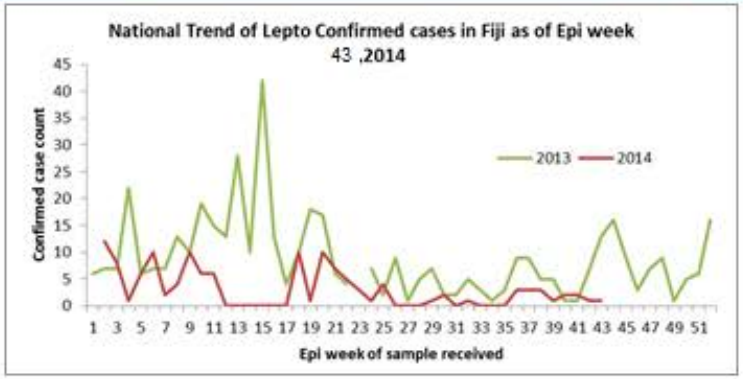
TYPHOID

*Data source: Monthly Lab linelists of confirmed S.Typhi cases received from

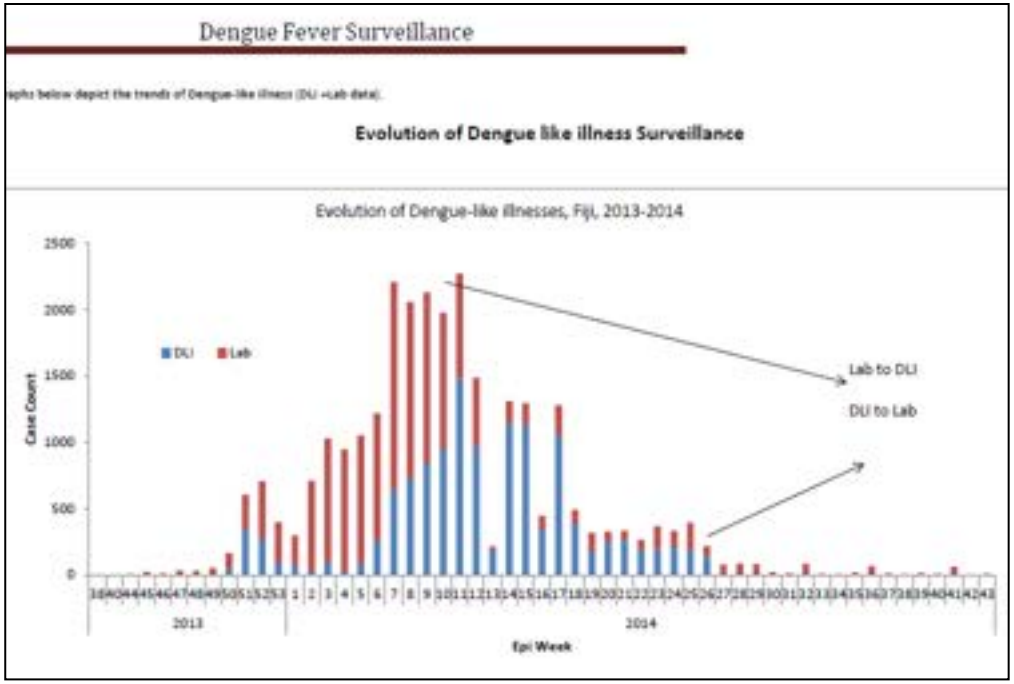


LEPTOSPIROSIS

*Data Sou cases



DENGUE OUTBREAK IN FIJI DEC 2013 – JUN



DENGUE FEVER

*Data Source: NPHL test cases

Summary Overview: Week 43

Lab tested + DLI cases	National	Central	Western	Northern	Eastern
1. Total Dengue positive	5537	3745	1140	642	12
2. Cumulative Lab cases	14758	9409	4065	1239	48
3. Cumulative DLI cases	13481	4288	7613	1242	338
4. Total Dengue reported (cumulative=2+3)	28236	13697	11678	2475	386
5. Percentage positive (%=1/4* 100%)	20%	27%	10%	26%	3%
6. Rate per 10,000 (rate=4/population* 10,000)	313	381	325	175	95
7. Confirmed deaths*	16	9	4	1	2
8. Numbers of hospitalised cases	10088	7552	9285	1884	369
Lab cases					
Total lab cases reported in week 43(positive)	6(0)	5(0)	5(0)	-	-
Total lab cases reported in week 42(positive)	1(0)	1(0)	-	-	-

RESPONSE TO COMMUNICABLE DISEASE EVENT

- RESPONSE TO ENDEMIC DISEASES- ROUTINE
  - OUTREACH ACTIVITIES- INTEGRATED RESPONSE USUALLY BY HEALTH INSPECTORS- INVOLVES LARGELY ENVIRONMENTAL SANITATION
- RESPONSE TO UNUSUAL EVENT-IDENTIFICATION AT FIELD LEVEL EITHER DR'S/NURSES/LAB OR WITH SURVEILLANCE SYSTEM
  - USUALLY SPECIFIC SET OF RESPONSE IMPLEMENTED BY THE DIVISIONAL OUTBREAK RESPONSE TEAM DEPENDING ON THE CD- BOTH CLINICAL (LABORATORY, INFECTION CONTROL, CASE MEDICAL MANAGEMENT) AND PUBLIC HEALTH (ENVIRONMENTAL /COMMUNITY SANITATION , COMMUNICATION, AND TRACING)
  - CONFIRM OUTBREAK, DRAWUP A RESPONSE PLAN WHICH HAS SURVEILLANCE, CLINICAL MANAGEMENT, PREVENTION AND CONTROL, COMMUNICATION, AND COORDINATION AS KEY ACTIVITIES, CONDUCT QUICK TRAINING ON THE PLAN, IMPLEMENT IT, AND MONITOR PROJECTED OUTCOMES
- RESPONSE TRIGGER WITH MATAIKA HOUSE- AFTER RAPID AND THOROUGH INVESTIGATION

PERSISTENCE/EMERGENCE OF CD EVENTS

- PRIORITIZED ENDEMIC DISEASES
  - LACK OF INFORMATION TO GUIDE GOOD PUBLIC HEALTH GOVERNMENT POLICIES AND LAWS- INCOMPLETE RISK ASSESSMENT- HUMAN, PATHOGEN, ENVIRONMENT
  - LABORATORY ALGORITHM – PANEL OF TEST FOR FEBRILE ILLNESS
- UNUSUAL EVENTS (EMERGING AND RE-EMERGING)
  - AS MENTIONED ABOVE
  - GLOBALIZATION, CLIMATE CHANGE, HUMAN BEHAVIOR

PREVENTION AND CONTROL

- EFFICENT SURVEILLANCE SYSTEMS NEEDED TO INFORM EFFECTIVE RESPONSE TO ENDEDMIC AND UNUSUAL EVENTS
  - GOOD EPIDEMIOLOGICAL SURVEILLANCE SYSTEMS
  - GOOD LABORATORY IDENTIFICATION SYSTEMS
  - GOOD UNDERSTANDING OF THE HUMAN BEHAVIORAL VARIABLE
- DECISION-MAKING TREE FOR PREVENTION AND CONTROL CAN BE FORMULATED IF SYSTEMS PROCESS MODEL WELL DEVELOPED VIA EFFECTIVE SURVEILLANCE SYSTEMS AND RESEARCH

RESEARCH

- EARLY THIS YEAR- 100 CD RELATED RESEARCH CONDUCTED IN FIJI REGISTERED BY NREC
- EXPERT MEETINGS FOR LEPTO AND TYPHOID- 70% OF STRATEGY RESEARCH
- TYPHOID RESEARCH- ENVIRONMENTAL, HUMAN AND PATHOGEN- CASE CONTROL STUDY UNDERWAY
- LEPTO RESEARCH- SAME & INCLUDES ANIMALS
- DENGUE RESEARCH- STRATEGY HAS BIG RESEARCH COMPONENT YET NONE STARTED- REVIEW OF STRATEGY 2015
- RESEARCH FINDINGS WILL ASSIST IN UNDERSTANDING THE DISEASE BETTER, DEVELOPING A MODEL AND A DECISION-TREE FOR PREVENTION AND CONTROL OPERATIONS OF SPECIFIC CD'S

THANK YOU

QUESTIONS???