

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Dengue Epidemic Prevention, Control and Management Program

THE THAILAND EXPERIENCE

Research & Surveillance Group

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BASIC FACTS ABOUT DENGUE

- Vector borne viral disease
- Caused by Dengue virus (4 serotypes)
- Spread by Aedes mosquito bite
 - Aedes aegypti
 - Aedes albopictus
- 2.5 billion at risk globally
- 1.8 billion resides in Asia Pacific region
- Highest mortality during initial period of outbreak



Associated Factors

- ▣ Unplanned urbanization
- ▣ Poor water storage
- ▣ Un satisfactory sanitary conditions
- ▣ Trade and travel
- ▣ Increased population

Prevention and Control of Dengue

WHO Global Strategy

- ▣ **Active disease surveillance**
 - Laboratory diagnosis
 - clinical classification DF,DHF/ DSS
- ▣ **Information Exchange**
 - network system for timely national and international cooperation
- ▣ **Capacity building: training staff for**
 - laboratory diagnosis
 - case management, doctors and nurses
 - vector surveillance and control

Disease surveillance

- ▣ Job description of surveillance staff
 - (Surveillance and Rapid Response Team, SRRT)
- ▣ Data generation & flow
- ▣ Data analysis & reporting
- ▣ Data utilization for action
- ▣ SRRT at hospital level also

Case Management

- ▣ Standard case definitions
- ▣ Early Case detection (Tourniquet-Test etc)
- ▣ Effective triage system
- ▣ Specific admission & discharge criteria
- ▣ Strong referral system

Vector surveillance

- ▣ Standardized formats -on line
- ▣ Vector & habitat identification
- ▣ Vector monitoring indices
- ▣ Weekly vector surveillance
- ▣ Regular vector survey twice a year
- ▣ Special vector surveillance in high risk areas

Vector control measures

- ▣ Source reduction (predominantly)
- ▣ Biological control (*Bacillus thuringiensis israelensis*, Bti & larvivorous fish)
- ▣ Chemical control (fogging , IRS, larvicide)
- ▣ Use of detergents at home
- ▣ Personal Protection (Repellents, detergents, lemon extract etc)

Chemical Control

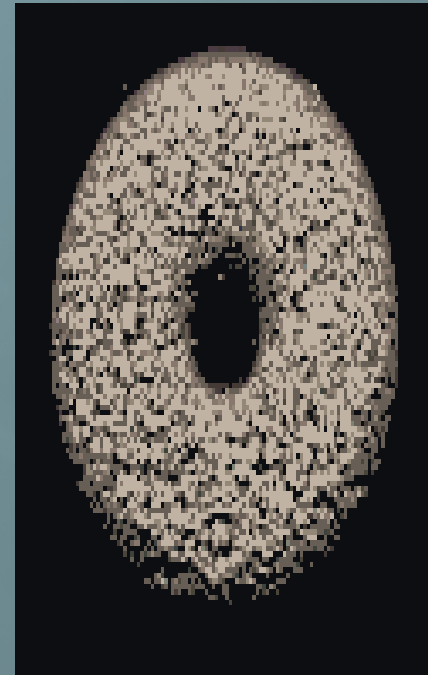
- Adult control : mass fogging of adulticide
- Add temephos into all containers used for water storage.



Biological control



Releasing larvivorous fish, Chantaburi, Thailand (Photo: Tawat Kantasri)



- Larvivorous fish (guppy)
- Bti (*Bacillus thuringiensis israelensis*)

Personal protection

▣ Repellents against mosquitoes

- Repellents on skin or clothing
- Mosquito coils
- Vapourising mats
- Liquid vapouriser
- Household insecticides



▣ Insecticide impregnated materials

Insecticide impregnated nets, LLINs



Communication & behavior change strategies

- ❑ Electronic & Print media
- ❑ Computer games & cartoon movies
- ❑ Dengue days (Annually, weekly)

- ❑ School curriculum,
- ❑ Competitions , quiz
- ❑ Road shows & walks,
- ❑ color codes





Dengue Campaign



TV Program



Community Participation



ACTIVITIES



Laws and Regulations

- ▣ Communicable disease notification law
- ▣ Fine to Larvae positive house

Research

- ▣ Bti and detergents
- ▣ Insecticide resistance
- ▣ vaccine development
- ▣ vector biology
- ▣ repellents

Planning Elements	Indicators	Verification Source	Assumptions & Risks
Goal			
To reduce the burden of dengue from Punjab			
Objectives			
To build an effective surveillance system for dengue prevention & control in Punjab	<ul style="list-style-type: none"> • Data flow regulated from all levels by mid 2012 • Timely alerts by mid 2012 	MIS DGHS Report	<ul style="list-style-type: none"> • Funding • Political commitment • Inter-sectoral coordination
Purpose			
To improve the data quality	<ul style="list-style-type: none"> • Number of health facilities utilizing online data entry by mid 2012 • Number of health care workers achieving >70% in post training assessment by mid 2012 	MIS DGHS Report	<ul style="list-style-type: none"> • Funding • Political commitment • Inter-sectoral coordination

Suggestions

- ▣ Research based policies & effective surveillance system
- ▣ Probable case definition
- ▣ OPD management to be improved
- ▣ Training of GPs and private hospitals` staff
- ▣ Capacity building of BHUs and RHCs staff
- ▣ Policy makers and public representatives involvement
- ▣ Inter-sectoral linkages
- ▣ Public awareness and health education
- ▣ Develop laws to minimize the associated/risk factors

Thank
you