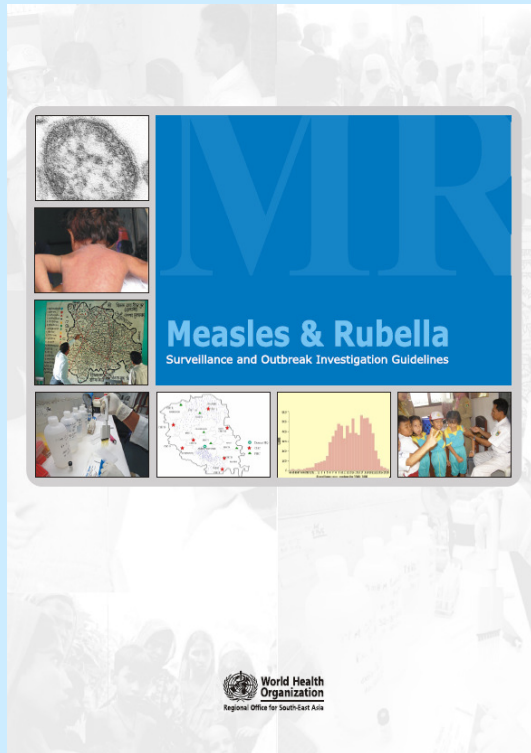


Measles Surveillance in South East Asia Region



Key Recent Activities

- Regional measles and rubella surveillance and outbreak investigation guidelines published
- Bangladesh, Indonesia, Myanmar and Nepal
 - Developed comprehensive guidelines focusing case based surveillance
 - Conducted training for concerned staff at all levels
 - Commenced case based measles surveillance within integrated VPD/Disease surveillance
 - Sharing case based data with SEAR
- Bhutan, DPR Korea, Maldives, Sri Lanka and Thailand
 - Expansion of case based surveillance to include serological confirmation

Status of implementation of case-based surveillance of suspected measles cases 2008

Country	Outbreak investigations		From health facilities	
	Data collection	Serology	Data collection	Serology
BANGLADESH	Case based	All outbreaks	Case based	Initiated nationally in 2008
BHUTAN	Case based	All outbreaks	Case based	Some cases
DPR KOREA	Case based	All outbreaks	Case based	All cases
INDIA	Case based in 7 states	In 7 states	Aggregate	Not done
INDONESIA	Case based	In some outbreaks	Case based data to districts, then aggregated	Started in 12 provinces from 2008/09
MALDIVES	Case based	All outbreaks	Case based	Some cases
MYANMAR	Case based	All outbreaks	Aggregate	Not done
NEPAL	Case based	All outbreaks	Case based in 73 active AFP surveillance sites	In 30 sites since 2007
SRI LANKA	Case based	All outbreaks	Case based	Some cases
THAILAND	Case based	All outbreaks	Case based	Some cases
TIMOR-LESTE	Case based	In few outbreaks	Aggregate	Not done

Timeliness and completeness of reports@ received in SEARO, 2008 & 2009*

Country	2008		2009	
	% Complete	% Timely	% Complete	% Timely
Bangladesh	100	100	100	100
Bhutan	100	58	83	50
DPR Korea	92	33	50	50
India	NA	NA	NA	Na
Indonesia	100	83	100	100
Maldives	83	75	100	67
Myanmar	100	100	100	100
Nepal	100	100	100	100
Sri Lanka	100	92	100	100
Thailand	100	75	100	83
Timor-Leste	42	25	0	0

*As of June 2009

@ From country to regional office

Full investigation of suspected measles outbreaks 2007 and 2008

	Bangladesh		Bhutan	DPRK	India*		Indonesia		Myanmar		Nepal		Thailand	
	2007	2008	2007	2007	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
# Suspected measles outbreaks	108	81	1	1	183	733	114	96	31	9	21	39	10	22
% fully investigated outbreaks	100	100	100	100	97	27	46	47	84	100	81	92		100
# outbreaks serologically confirmed as measles	0	1	1	1	152	111	35	24	25	7	2	6	17	20
# outbreaks serologically confirmed as rubella	102	59	0	0	4	35	12	15	0	0	10	27		2
# outbreaks serologically confirmed as 'mixed'	5	0	0	0	7	38	3	0	1	2	1	1		0

* Data from 6 states

Measles surveillance indicators: Current status of monitoring

Reporting Rate 2009*

Country	National Non Measles Suspected measles Rate (Annualized**)	Number of Districts	% Districts reporting ≥ 1 Non measles suspected measles cases/ 100000 (Annualized)
Bangladesh	12.53	64	48%
Bhutan	10.95		
DPR Korea	0.17		
India	No data		
Indonesia	0.84		
Maldives	0		
Myanmar	0.03	326	0%
Nepal	8.4	75	56%
Sri Lanka	1.67		
Thailand	Incomplete data		
Timor-Leste	No data		

•(target more than 2 per 100,000 population).

**As of August 2009

Issues and Challenges

- Interest and commitment from the government and partners is evolving
- Case Investigation Forms and line lists are not being completed always and not transmitted to the next level
- Rubella is endemic in the region. In countries where there is no rubella immunization program, many cases have to be investigated as suspected measles cases

Issues and Challenges

- Competing health priorities with similar signs and symptoms e.g Dengue, Chikungunya fever that are endemic in the region
- Decentralized health systems in large countries need to be convinced to regularly report district level data.
- Some districts have less than 100000 population

Adequacy of investigation within 48 hours

- Data is not fully collated yet
- Most countries collect information on age, sex, date of rash onset, date of specimen collection, vaccination status, geographical area
 - However epidemiological links are not investigated
- Plan to focus in 2010
- Investigation of all epidemiological links would be challenging in most countries in current stage of measles and rubella control, especially within 48 hours
- Should this indicator be applicable to cases reported at health facilities only?
 - E.g. Should cases found during outbreak investigations be included for numerator and denominator

% Lab confirmation of suspected measles cases 2009*

Country	% Lab confirmation of suspected measles cases 2009*
Bangladesh	63.2
Bhutan	92.9
DPR Korea	Incomplete Data
India	No Data
Indonesia	11.6
Maldives	0 Cases reported
Myanmar	65.2
Nepal	84.9
Sri Lanka	26.7
Thailand	0.9 (Incomplete data)
Timor-Leste	No Data

Target : more than 80% of the cases excluding epi-linked cases from the denominator

**As of August 2009

Issues and Challenges

- Rubella is endemic in the region. In countries where there is no rubella immunization program, many cases have to be investigated as suspected measles cases
- Disease with similar signs and symptoms eg Dengue, Chikungunya fever that are endemic in the region
- Difficulties in collecting blood
 - non invasive procedures would be an alternative

Viral detection - 2009

Country	Total Outbreaks Investigated	Confirmed Measles outbreaks	Measles Virus Isolation	Confirmed rubella Outbreaks
Bangladesh	144	0	Not Applicable	129
Bhutan	0	0	Not Applicable	0
DPR Korea	No Data	0	Not Applicable	0
India	No Data	No Data	No data	No Data
Indonesia	56	19	0	54
Maldives	0	0	Not Applicable	0
Myanmar	6	6	0	0
Nepal	61	2	0	55
Sri Lanka	0	0	Not Applicable	2
Thailand	7	0		0
Timor-Leste	No data	No Data	No Data	No data

\$21 outbreak samples sent 3 isolates

**As of August 2009

Issues and Challenges

- To detect virus samples should be collected early
 - Many samples would be from rubella outbreaks in countries where there is no rubella immunization

Outbreak Size

Country	Total Outbreaks Investigated	Confirmed Measles outbreaks	% of outbreaks with < 10 cases
Bangladesh	144	0	Not applicable
Bhutan	0	0	Not applicable
DPR Korea	No Data	0	No data
India	No Data	No Data	No data
Indonesia	56	19	62.9
Maldives	0	0	Not applicable
Myanmar	6	6	66.6
Nepal	61	2	50
Sri Lanka	0	0	Not applicable
Thailand	7	0	Not applicable
Timor-Leste	No data	No Data	No Data

**As of August 2009

Issues and Challenges

- Difficulties in explaining 10 cases as the cut off

Annualized measles incidence per million population: 2009

Country	Lab confirmed + Epilinked cases	Annualized Incidence (Lab confirmed & Epilinked cases)	Clinically Confirmed cases	Annualized Incidence (Lab confirmed, Epilinked & clinically confirmed cases)
Bangladesh	15	0.15	648	6.78
Bhutan	3	6.71	4	15.65
DPR Korea	0	0	0	0
India	No Data	No data	No data	No data
Indonesia	840	5.51	7470	54.55
Maldives	0	0	0	0
Myanmar	104	2.64	7	2.82
Nepal	29	1.62	135	9.18
Sri Lanka	10	0.74	209	16.25
Thailand	0	0	4068	96.53
Timor-Leste	No Data	No data	No Data	No data

**As of August 2009

Issues and Challenges

- Lab confirmation of cases reported to the health centers is not always happening
 - Because of this there are many clinically confirmed cases
- Some countries “clinically confirm” rubella cases and clinicians are reluctant to report them as suspected measles cases

Surveillance Plans for 2010 and beyond

- Use Regional Committee resolution for the advocacy of case based measles surveillance with in integrated disease surveillance system
- Based on the regional guidelines, assist countries to update their national guidelines to ensure case based surveillance is incorporated
- Assist in training of country program managers and the sub national level managers
- Develop advocacy tools for measles case based surveillance
- Collection, collation, analysis, interpretation and transmission of data to be strengthen at all levels

* Measles and rubella surveillance and outbreak investigation guidelines

Surveillance Plans for 2010 and beyond

- Monitoring and supervision to be strengthened
- Feedback to be provided
- Countries will be encouraged to look at the global indicators to ensure that they meet global standards at the national and sub national level
- Data tools to be developed for data entry and merging of lab data with field data
- Include measles surveillance in all national EPI reviews
- Assist countries to strengthen their lab network so as to cope up with the anticipated enhanced workload

Thank You

Surveillance performance indicators for countries with elimination goal

- **Reporting Rate:**
 - Annual report of at least 2 non-measles suspected measles cases¹ per 100,000 population in at least 80% of districts
- **Laboratory Confirmation:**
 - Adequate specimens for detecting measles IgM should be collected from at least 80% of suspected measles cases and laboratory tested in a WHO accredited laboratory
- **Viral Detection:**
 - Samples should be collected for virus detection from 80% of identified transmission chains (outbreaks) and tested in an accredited laboratory.
- **Adequacy of Investigation:**
 - At least 80% of all reported suspected measles cases should have had an adequate investigation within 48 hours of notification.

¹. Cases investigated and discarded as non-measles cases using laboratory testing in a WHO accredited laboratory and/or epidemiological-linkage to another confirmed disease.

Regional Measles Consultation August 2009

RECOMMENDATION ON MEASLES SURVEILLANCE

- The definition for measles elimination should be in line with the global consensus document:

The absence of endemic measles* cases for a period of twelve months or more, in the presence of adequate surveillance.

**Endemic measles is defined indigenous or imported measles virus that persists for a period of 12 months or more in any defined geographical area.*

- Recommended region to use the indicators for monitoring progress towards elimination and targets suggestive of having achieved elimination and surveillance system indicators as in the global consensus document

Regional Committee Meeting September 2009 measles resolution

- URGES member states
 - To strengthen health system including laboratory capacity to increase and sustain a high level of routine immunization, high-quality case-based surveillance and well functioning AEFI monitoring