



Typhoid Vaccination Situation in Sri Lanka

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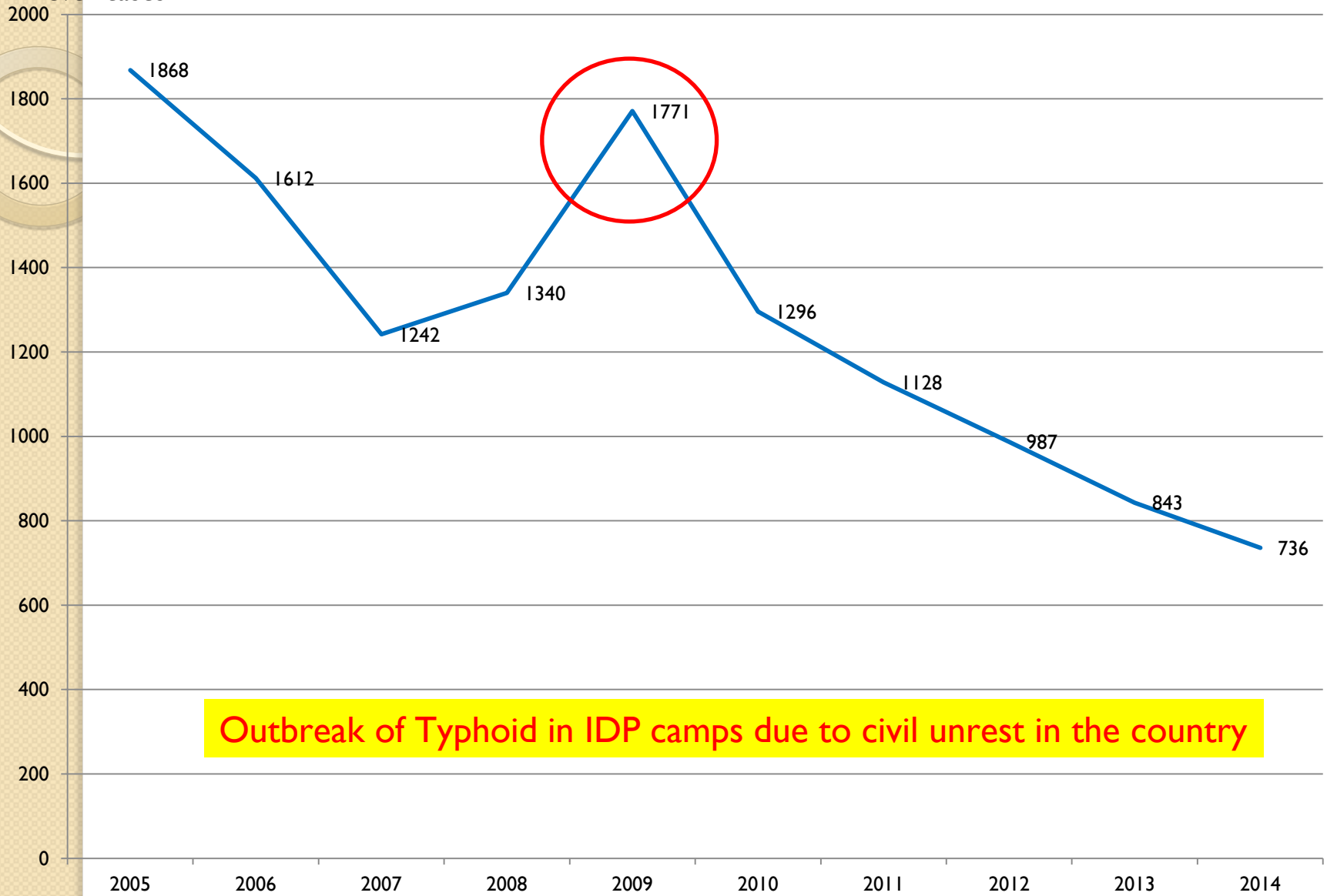
Chief Epidemiologist,
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Sri Lanka

Epidemiology of Typhoid Fever in Sri Lanka

- 12,823 confirmed for the past 10 years in Sri Lanka
- More than half of these cases (51%) are from 5 districts (Jaffna, Colombo, Vavuniya, Nuwara-Eliya and Badulla).
(There are 26 health districts in Sri Lanka)

No of Typhoid
Fever cases

Typhoid Fever Incidence in Sri Lanka

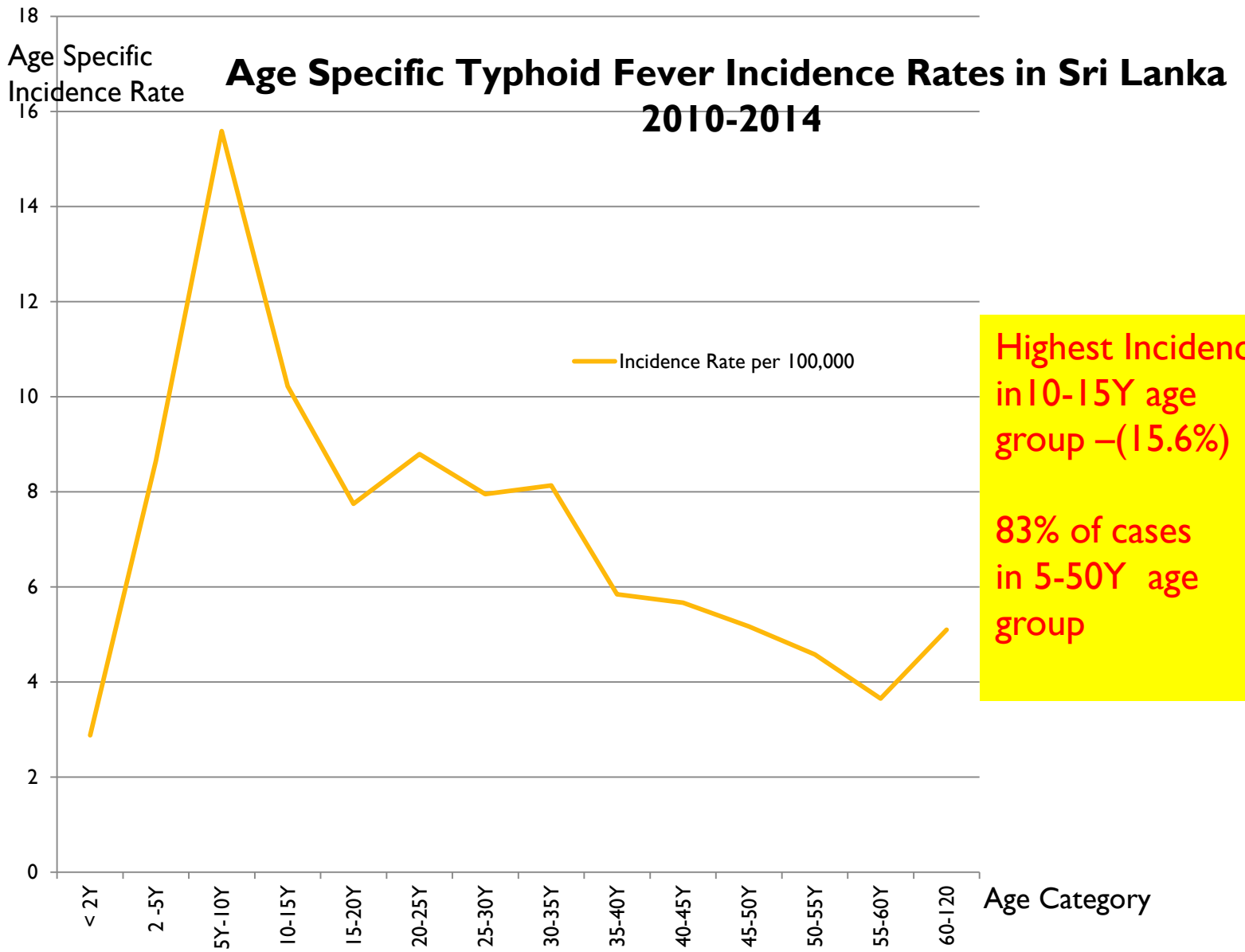


Outbreak of Typhoid in IDP camps due to civil unrest in the country

Typhoid Fever Incidence and Incidence Rate in Sri Lanka

Year	Incidence	Incidence Rate (per 100,000 population)
2005	1868	9.12
2006	1612	7.87
2007	1242	6.06
2008	1340	6.54
2009	1771	8.65
2010	1296	6.33
2011	1128	5.51
2012	987	4.82
2013	843	4.12
2014	736	3.59

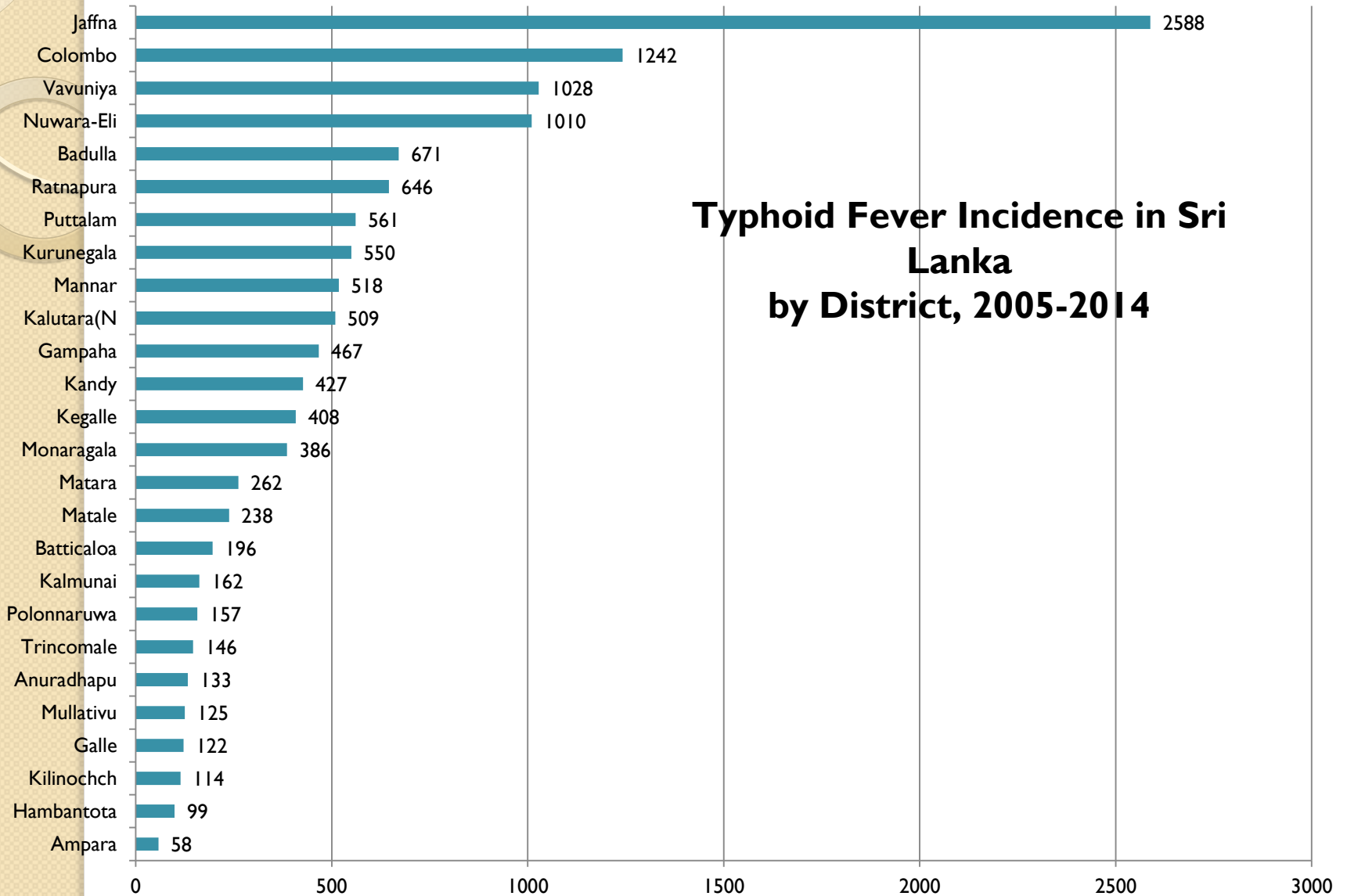
Outbreak of Typhoid in IDP camps due to civil unrest in the country



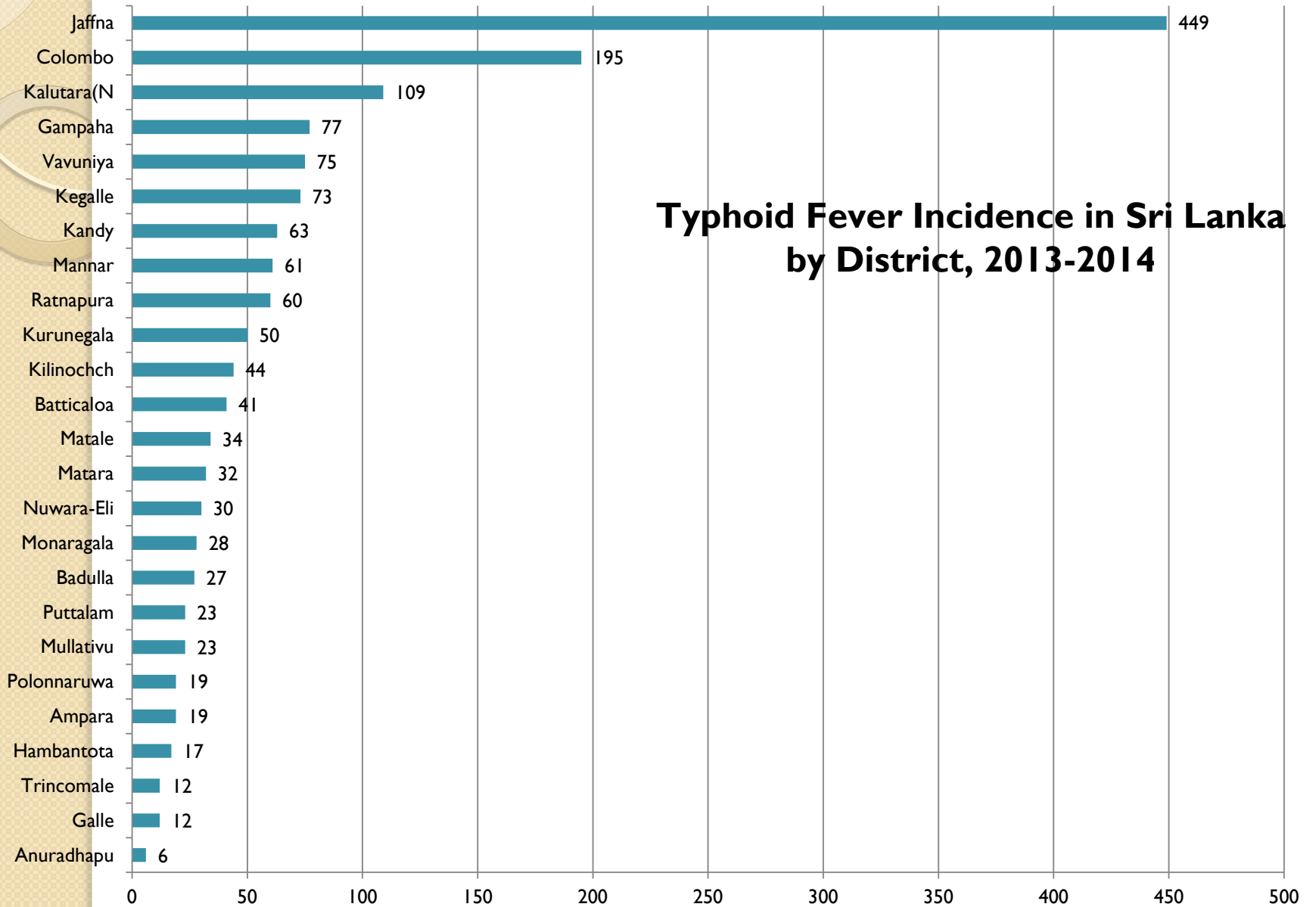
Highest Incidence in 10-15Y age group –(15.6%)

83% of cases in 5-50Y age group

Typhoid Fever Incidence in Sri Lanka by District, 2005-2014

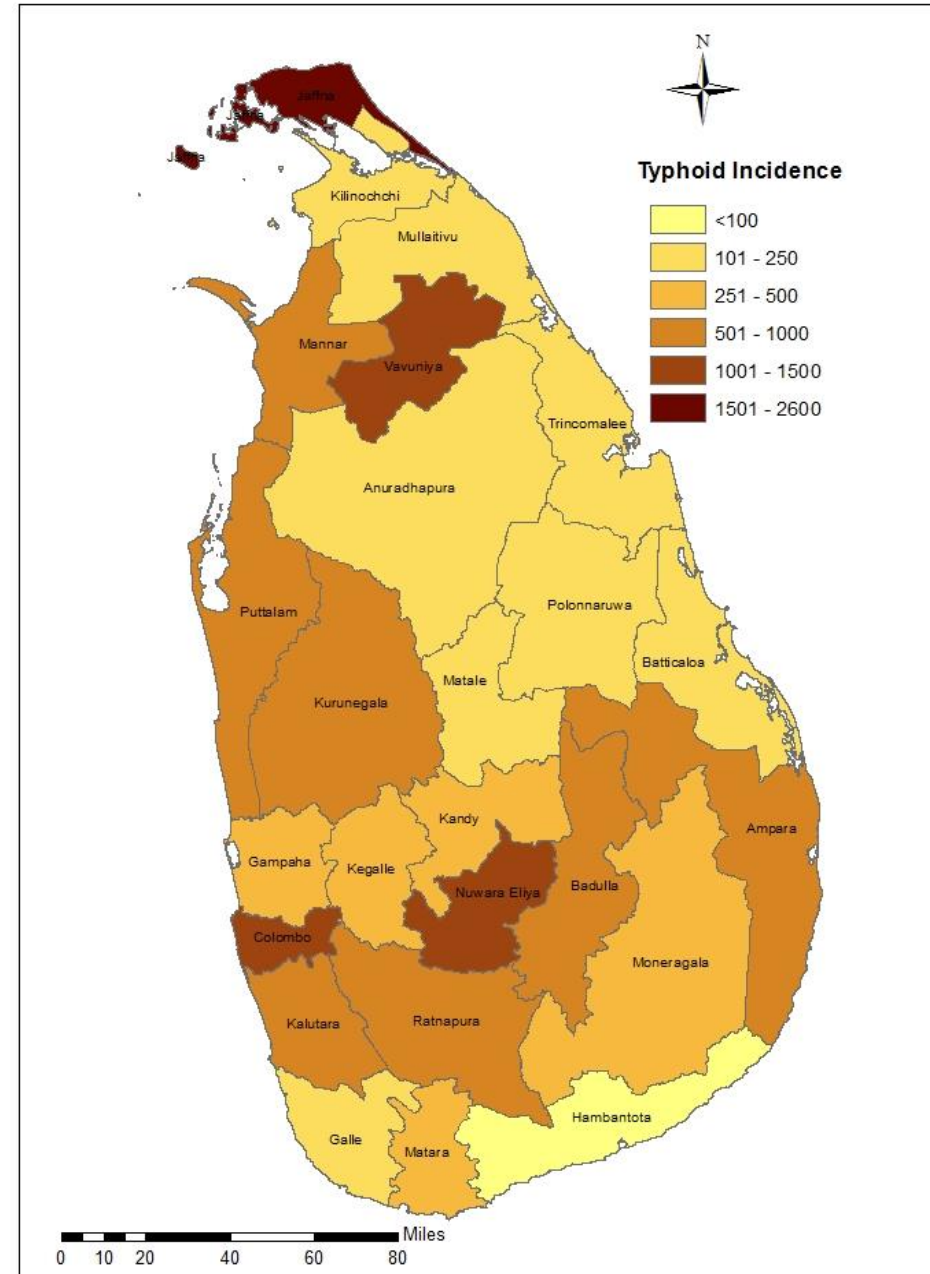


Typhoid Fever Incidence in Sri Lanka by District, 2013-2014



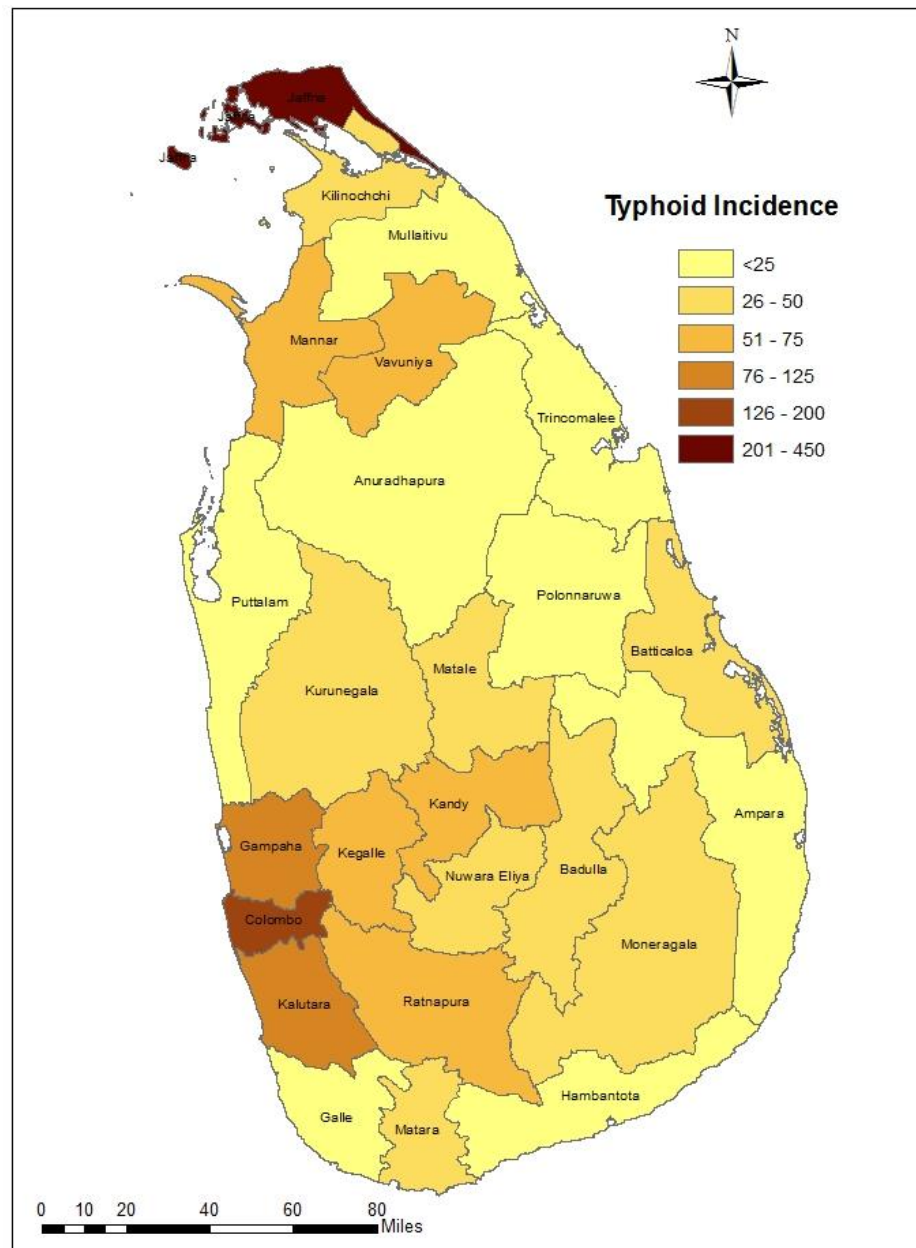
Typhoid Fever incidence in Sri Lanka by District, 2005-2014

District	Incidence
Jaffna	2588
Colombo	1242
Vavuniya	1028
N'Eliya	1010
Badulla	671



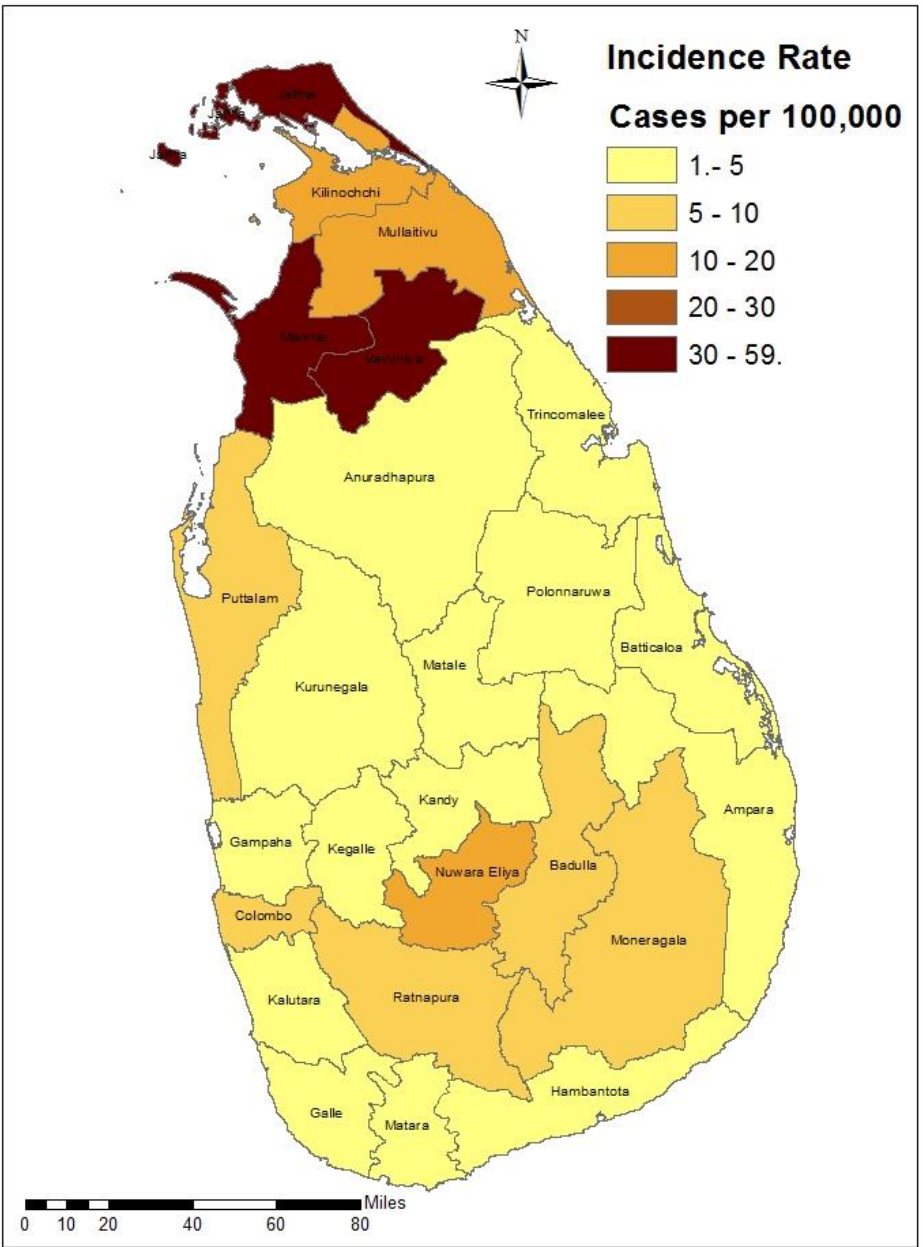
Typhoid Fever incidence in Sri Lanka by District, 2013-2014

District	Incidence
Jaffna	449
Colombo	195
Kaluthara	109
Gampaha	77
Vavuniya	75



Typhoid Fever Incidence Rate in Sri Lanka by District, 2005-2014

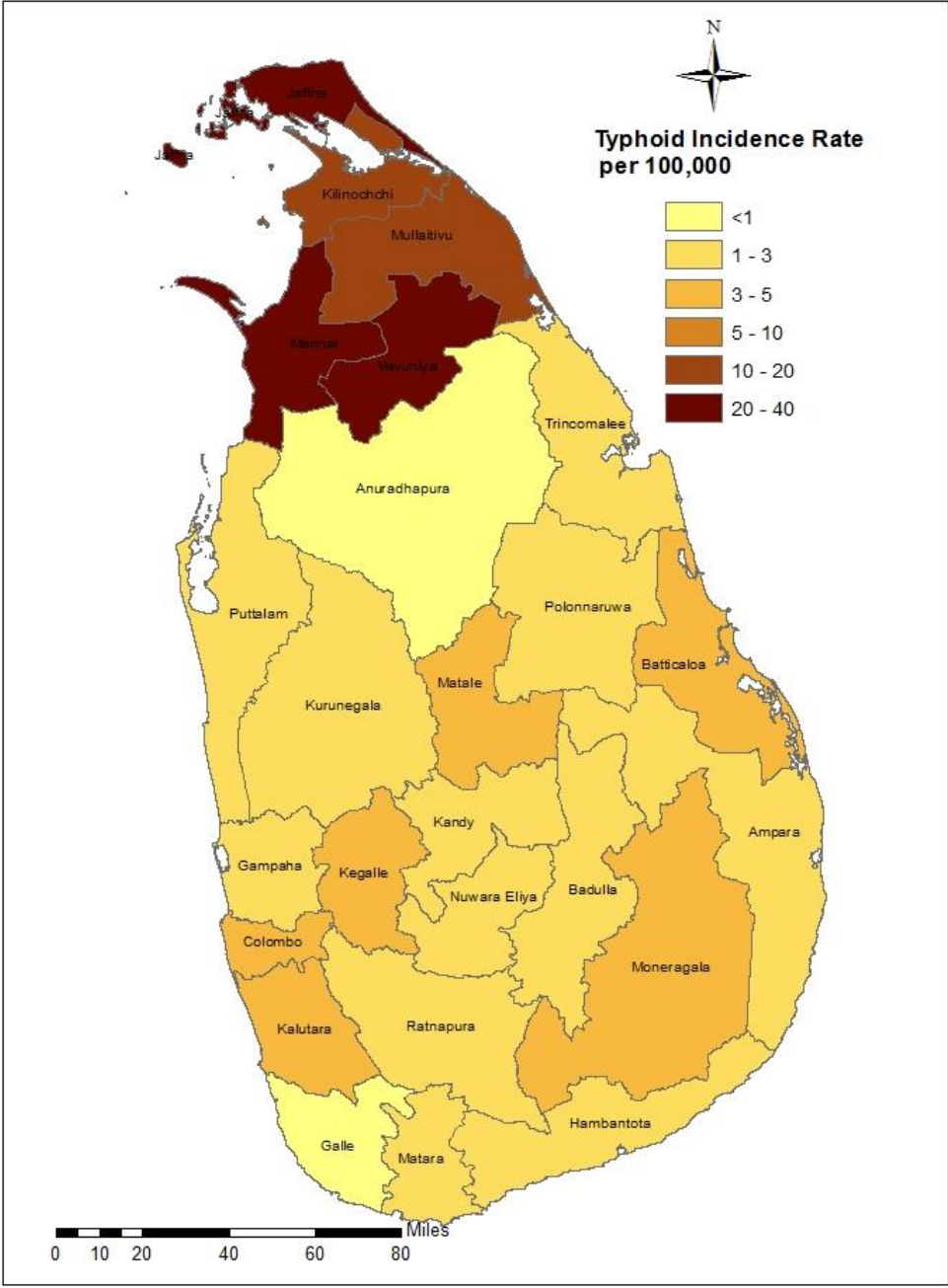
District	Incidence Rate
Vavuniya	59.73
Mannar	52.02
Jaffna	44.32
Nuwara-Eliya	14.19
Mullativu	12.6



Typhoid Fever Incidence Rate in Sri Lanka

by District, 2013-2014

District	Incidence Rate
Jaffna	38.45
Mannar	30.63
Vavuniya	21.79
Kilinochchi	19.38
Mullativu	11.59



Control Strategies adopted in Sri Lanka..

- Disease Surveillance
- Health Education
- Typhoid Vaccination
- Water Quality Surveillance

Disease Surveillance system in Sri Lanka

- Typhoid is a notifiable disease under the routine disease surveillance system
- Every medical practitioner or person professing to treat diseases, who attends on any person suffering from any disease in the notifiable diseases list shall notify the relevant Medical Officer of Health(MOH).

Disease Surveillance system in Sri Lanka...

- Health Districts in Sri Lanka are divided into Medical Officer of Health (MOH) areas.
- These MOH areas are headed by one or more medical doctors.
- There are Public Health Inspectors (PHI) attached to the MOH office, and these PHI carry out disease control activities under the guidance of the MOH

Typhoid vaccine

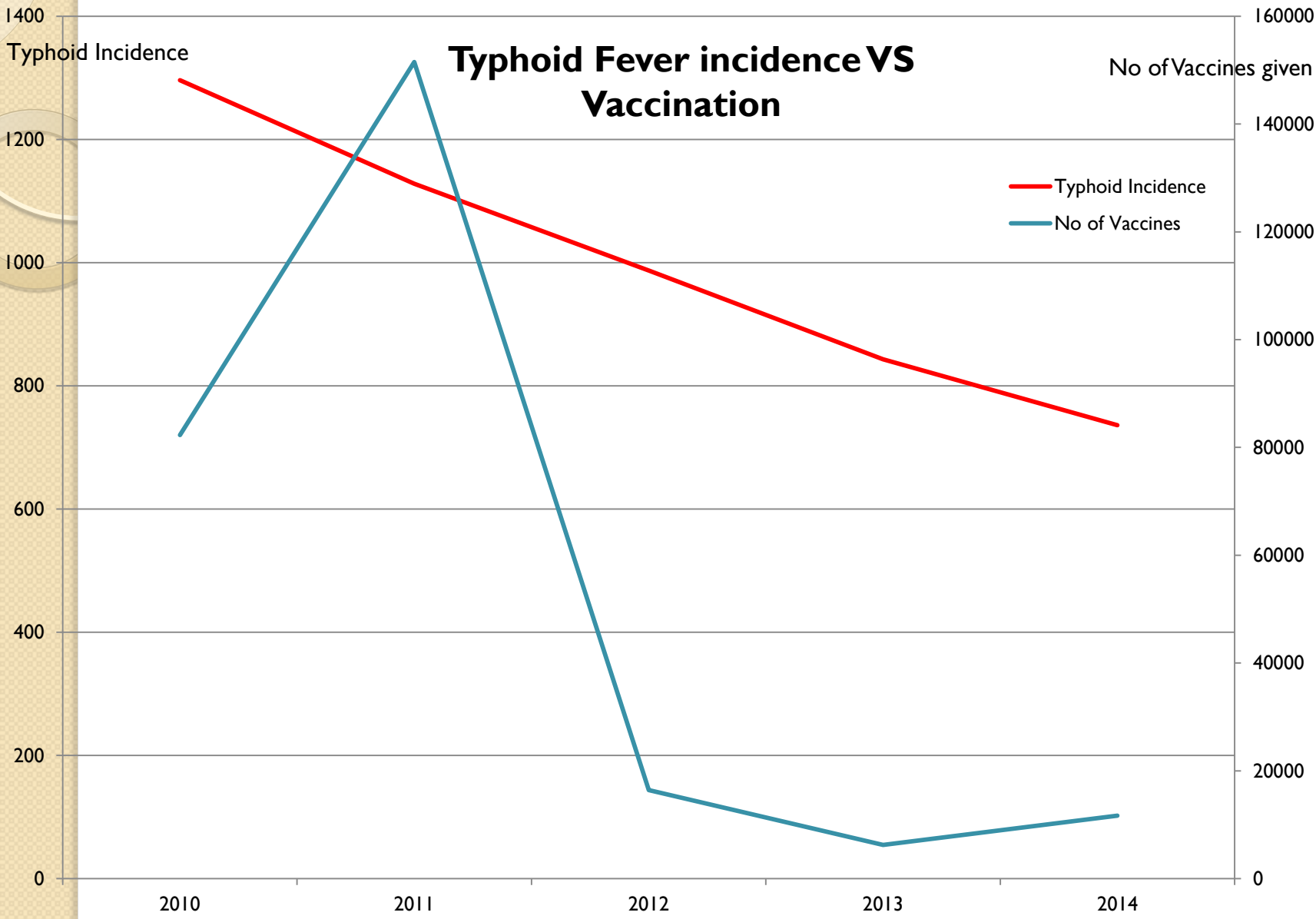
- Inactivated Whole Cell Typhoid vaccine was manufactured in Sri Lanka for over four decades before stopping in 2004
- Both injectable Vi capsular polysaccharide vaccine and Ty21a oral vaccine are registered .
- A total of 268,200 injectable Typhoid vaccines doses were distributed by MoH from 2010-2014

Sri Lanka is currently using Vi capsular polysaccharide vaccine

Typhoid vaccine..

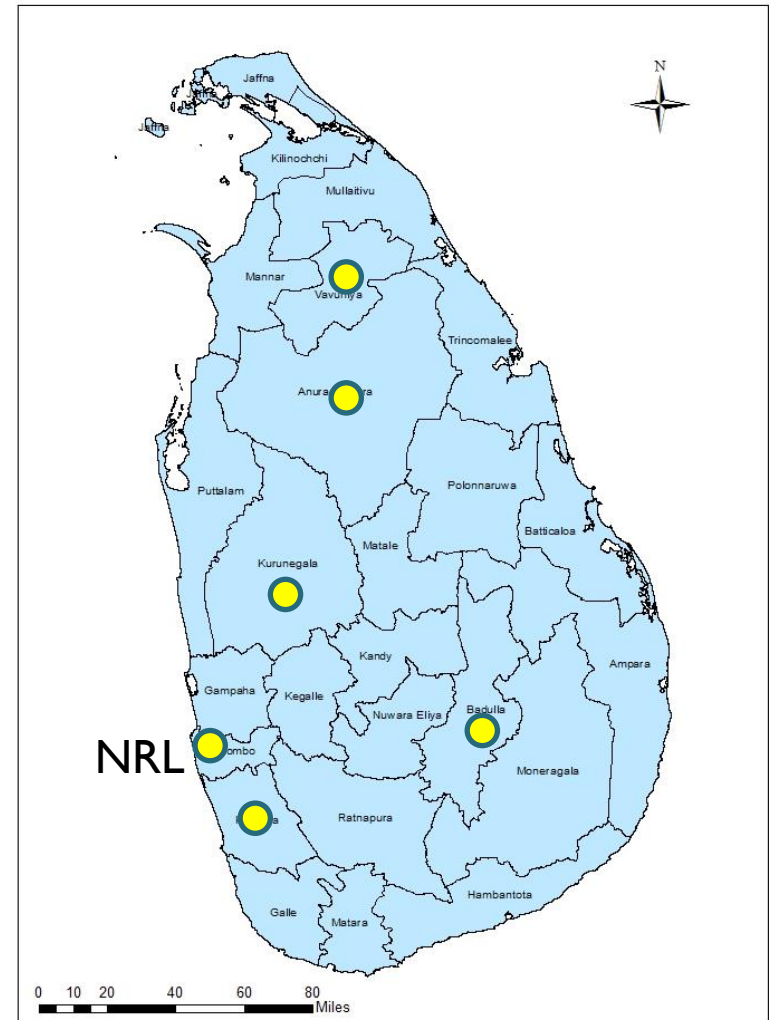
- Typhoid vaccine is being administered to
 - Food handlers
 - Pilgrims who visit areas with high Typhoid Fever incidence.
 - Internally displaced persons living in temporary shelters.
 - Close contacts of typhoid patients (eg. family members)
 - Children getting frequent episodes of diarrhoea (eg. more than 4 attacks in preceding six month)
 - Communities that do not have access to safe water.
 - Health care workers associate with typhoid patients.

Pre-Employment administration of Typhoid Vaccine was mandatory in Sri Lanka earlier



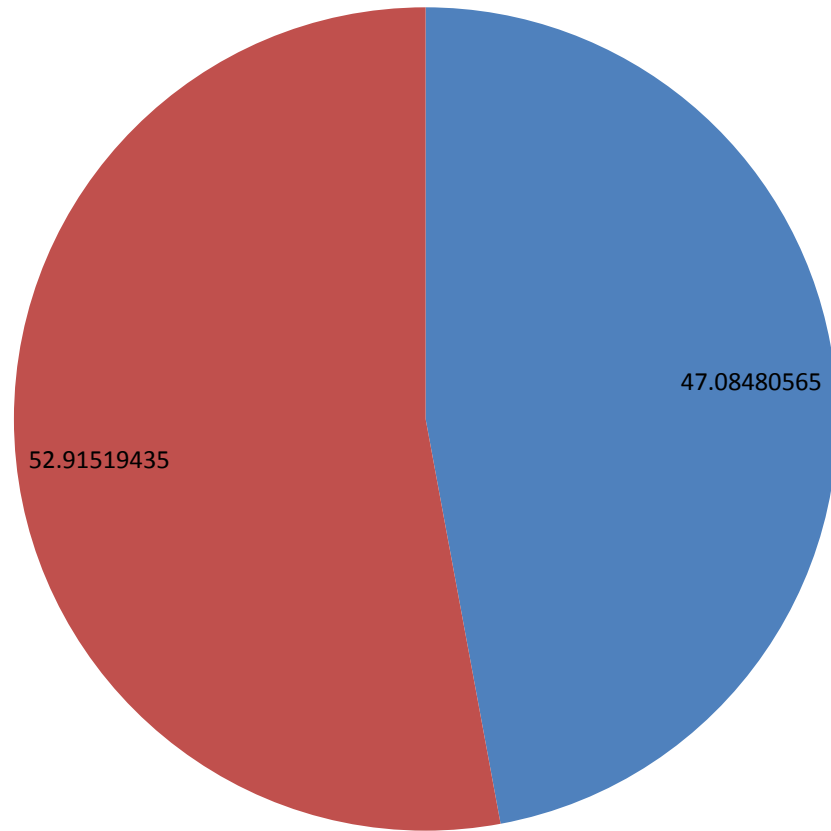
Water Quality Surveillance in Sri Lanka

- ▶ Water samples are analyzed in the National Reference Laboratory and 5 Regional Laboratories-Since 2011 and ongoing
- ▶ 6 Water samples from an MOH area per month



Water Quality-2012

Total No of Water samples-3396



■ Satisfactory

■ Unsatisfactory

Water Quality-2012...

Source	No of samples tested	Satisfactory (%)	Unsatisfactory(%)
NWS&DB	558	431 (77.2)	127(22.8)
CWS	1069	558 (52.2)	511 (47.8)
PW	1239	364 (29.4)	875 (70.6)
Others	530	246(46.4)	284 (55.6)

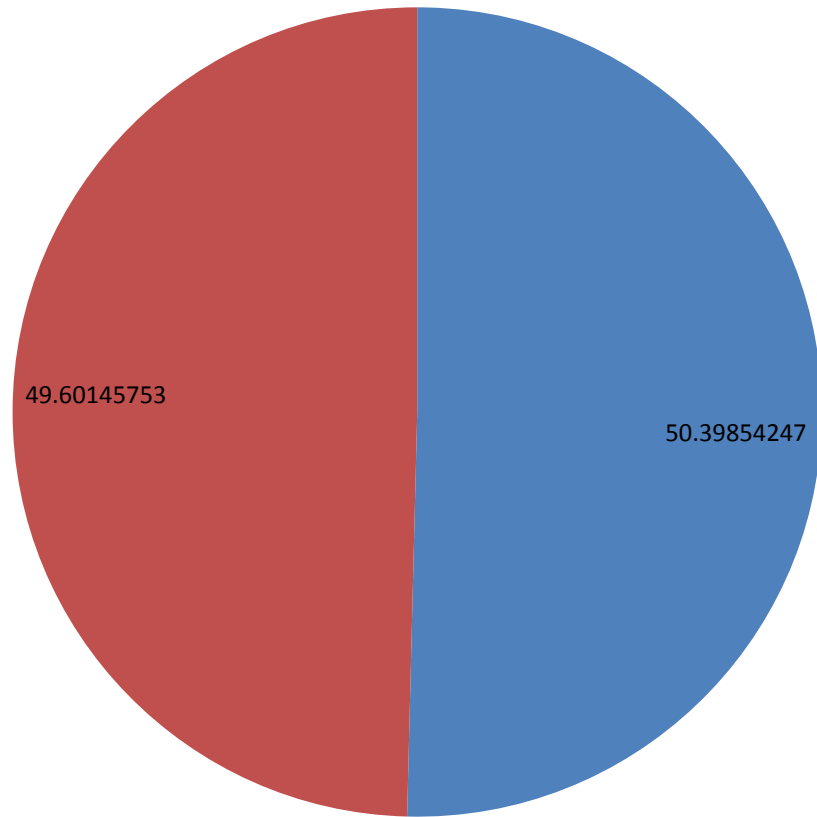
NWS&DB-National Water Supply and Drainage Board

CWS-Community Water Supplies

PW-Private Wells

Water Quality-2013

Total No of Water samples-4391



■ Satisfactory

■ Unsatisfactory

Water Quality-2013...

Source	No of samples tested	Satisfactory (%)	Unsatisfactory(%)
NWS&DB	684	521 (76.1)	163 (23.9)
CWS	1254	557 (44.3)	700 (55.7)
PW	1214	522 (43.0)	692 (57.0)
Others	1236	613 (49.6)	623 (50.4)

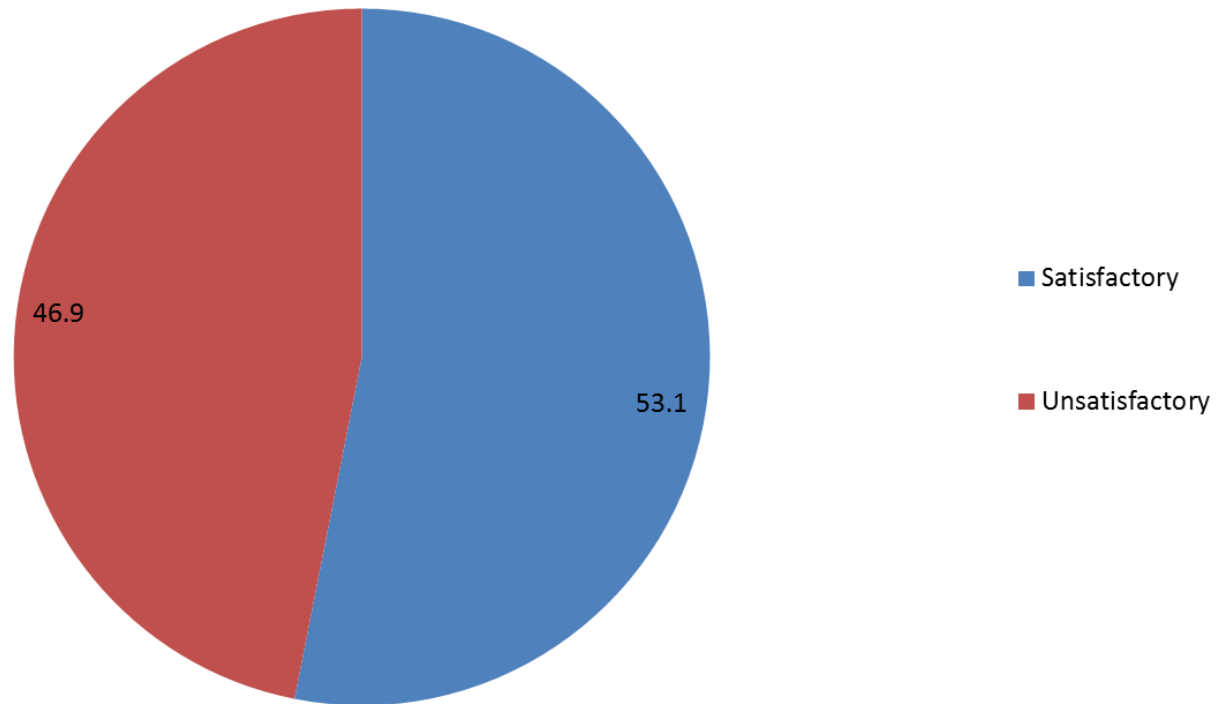
NWS&DB-National Water Supply and Drainage Board

CWS-Community Water Supplies

PW-Private Wells

Water Quality-2014

Total no of Water
Samples-5607



Water Quality-2014

Source	No of samples tested	Satisfactory (%)	Unsatisfactory(%)
NWS&DB	744	545 (73.3)	199 (26.7)
CWS	1920	909 (46.9)	1031 (53.1)
PW	1395	679 (48.7)	716 (51.3)
Others	1528	847(55.4)	681 (44.6)

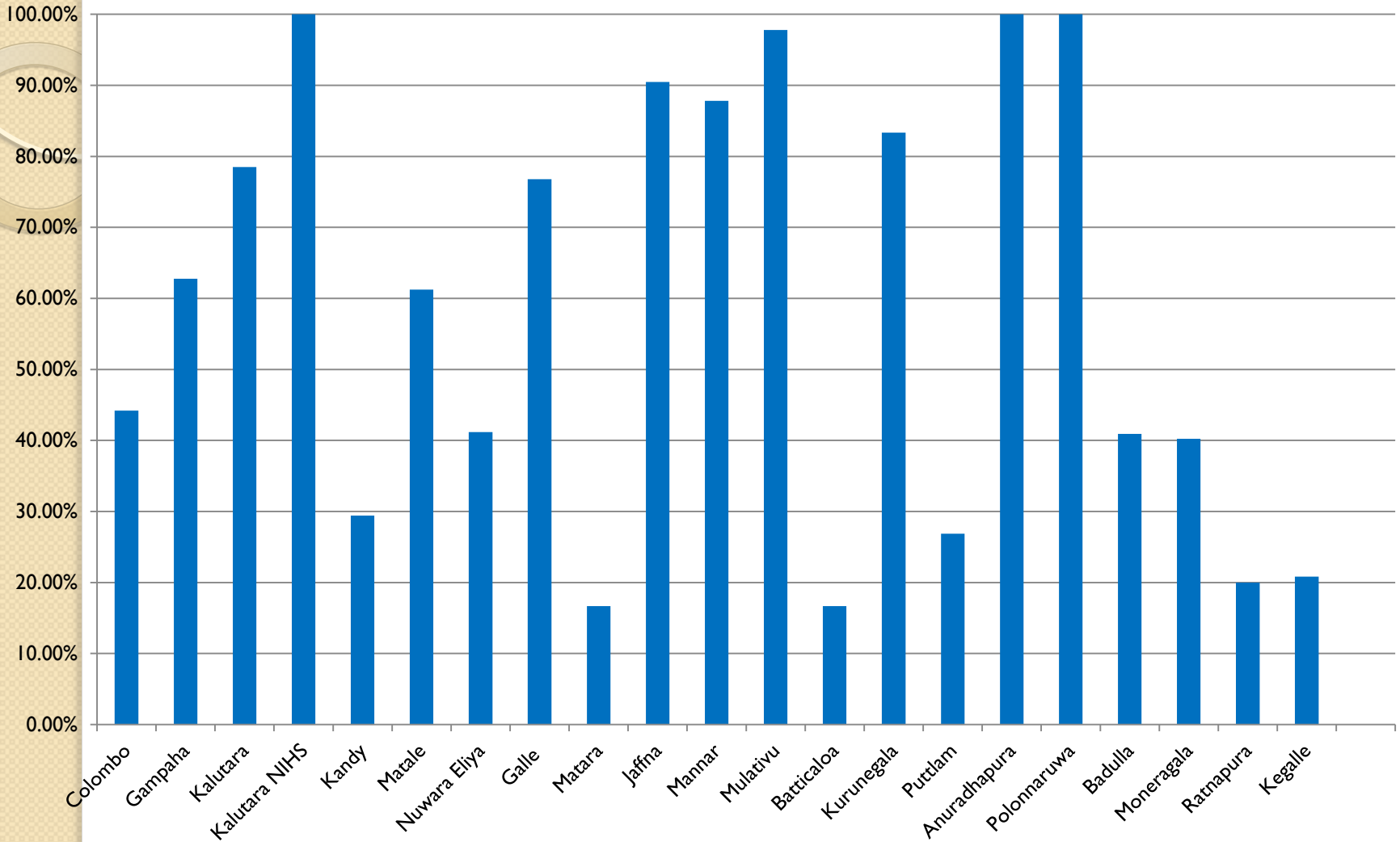
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Percentage of
satisfactory
samples

Analysis of Water Samples -2014



This may be a biased samples-Most of the water samples were collected from Water sources which were suspected of being contaminated

Control Strategies adopted in Sri Lanka..

- Special surveillance of typhoid in selected sentinel sites hospitals
- Antibiotic sensitivity patterns are assessed routinely

Way forward

- Strengthening of Sentinel Site Surveillance system and laboratory diagnosis
- Wider use of antibiotic sensitivity patterns when treating typhoid fever patients
- Immunization Campaigns in high risk areas for high risk age groups- in Jaffna



Thank You