

# Increase in the child TB detection in Bangladesh through capacity development of physician and health workers

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# Acknowledgement

- National Tuberculosis Control Program
- USAID/TB CARE II
- WHO-Bangladesh
- Members of Bangladesh Pediatric Association



**TB CARE II**  
BANGLADESH

# Today's talk area

- Problem statement on Child TB
  - Low case detection rate
- Intervention- Training of Health Care Providers
  - Dhaka Division:
    - 17 Districts
    - 123 Sub-districts
    - 16 million children
    - Trained nearly 10,000
- Primary Outcome: Case Detection rate

# Journey of Child TB in Bangladesh

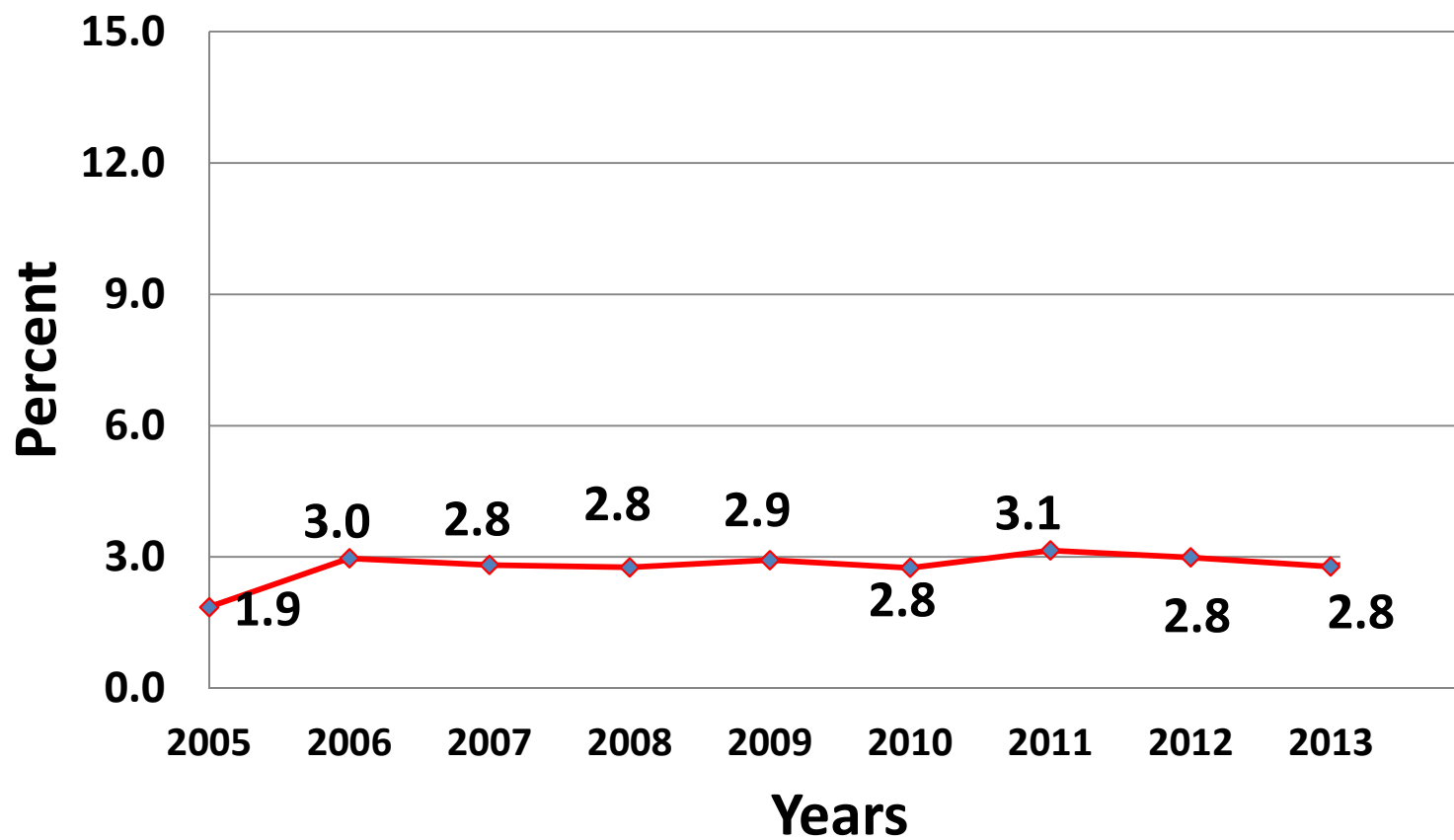


# Epidemiology: Global

- Global:
  - 6-10% of total TB (WHO)
  - 4-22% (Lancet 2014)
- 22 High Burden Countries:
  - 1- 2%: Cambodia, Nepal, China, Vietnam, Philippines
  - 3-5%: Bangladesh, Dr Congo, Russia, Uganda
  - 6-10%: India, Zimbabwe, Kenya, Pakistan, Indonesia

Ref: Global TB Report, 2014, 2015

# Child TB: 2005-2013 trends



# Sub-district 2013: Child vs. adult TB

Sub-district Hospital	TB		Expected CTB case
	Total	Child	(10%)
Sharishabari	479	13 (2.7%)	48
Durgapur	239	3 (1.2%)	24
Nagarkanda	207	10 (5.1%)	20
Roypura	1179	8 (0.67%)	118
Shivalaya	269	2(0.74%)	27
Savar	1996	7 (0.35%)	200



# Child TB = Difficult TB





# Missing link

- Low Clinical capacity-
  - Doctors
  - Health Care Workers
  - CXR/MT
- Lack of community awareness

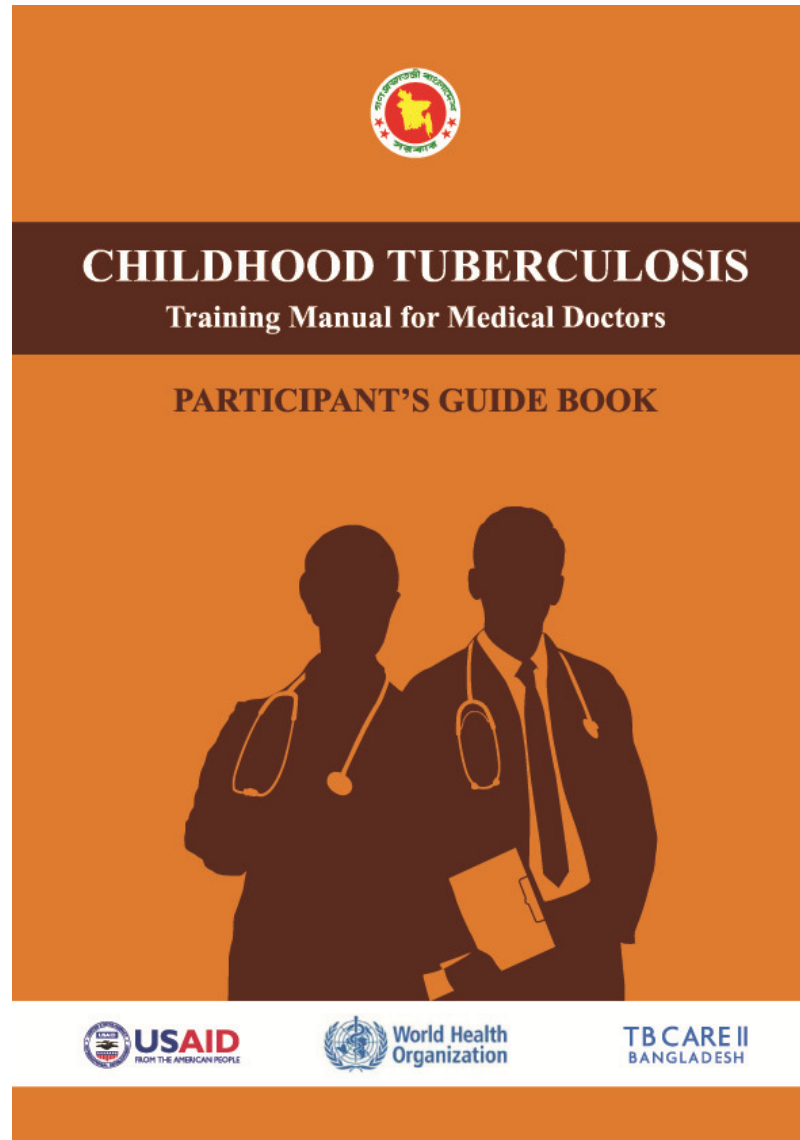
# Intervention

- Development of training materials and aids
- Development and implementation of program on capacity development

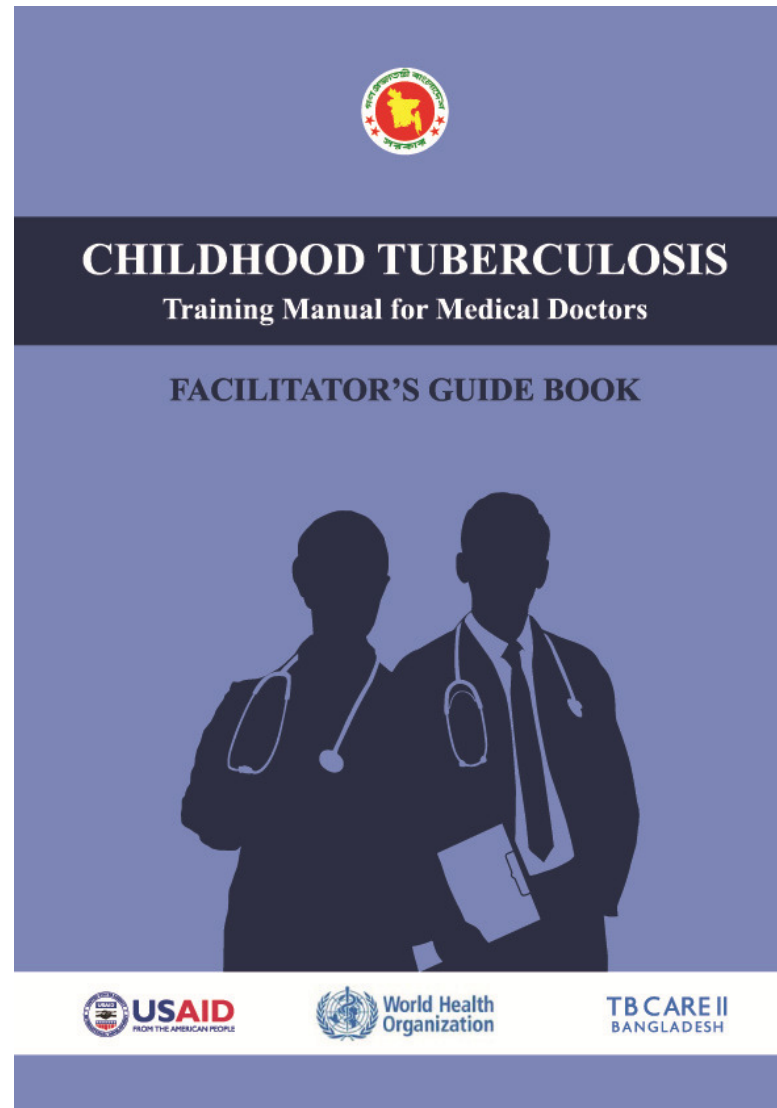
# Material development: Journey from 2012 -2014

Developments	Year
National Guidelines-1 <sup>st</sup> edition	2012
Second Edition- Finalized	Sept 2015
Training modules for physicians	2012-2013
Facilitator's guide	2012-2013
Flip Chart for Health Care Workers	2013
Interactive training CD for GP	2014
Three teaching Video: <ul style="list-style-type: none"><li>• Mantoux Test</li><li>• Gastric aspirate</li><li>• Examination of a child with TB</li></ul>	2014

# Participant's Handbook



# Modules for CTB Training



# Program Initiative: BPA TB CARE II

- Starting date: 22<sup>nd</sup> November 2013
- Training completed: 2<sup>nd</sup> July 2014
- Coverage area:
  - Dhaka Division
    - 17 districts
      - 123 UHCs

# Discussing CXR slides in group





# Group work: Specimen collection



# Live case demonstration





# Training in Festive mood



# Personnel trained

Participants	Trained
Doctors (4-day training)	581
GP (1-day orientation)	544
Facilitators (4-day)	39
HCW	8358
Others	43



# HCW group work on contact investigation



# Data collection and analysis

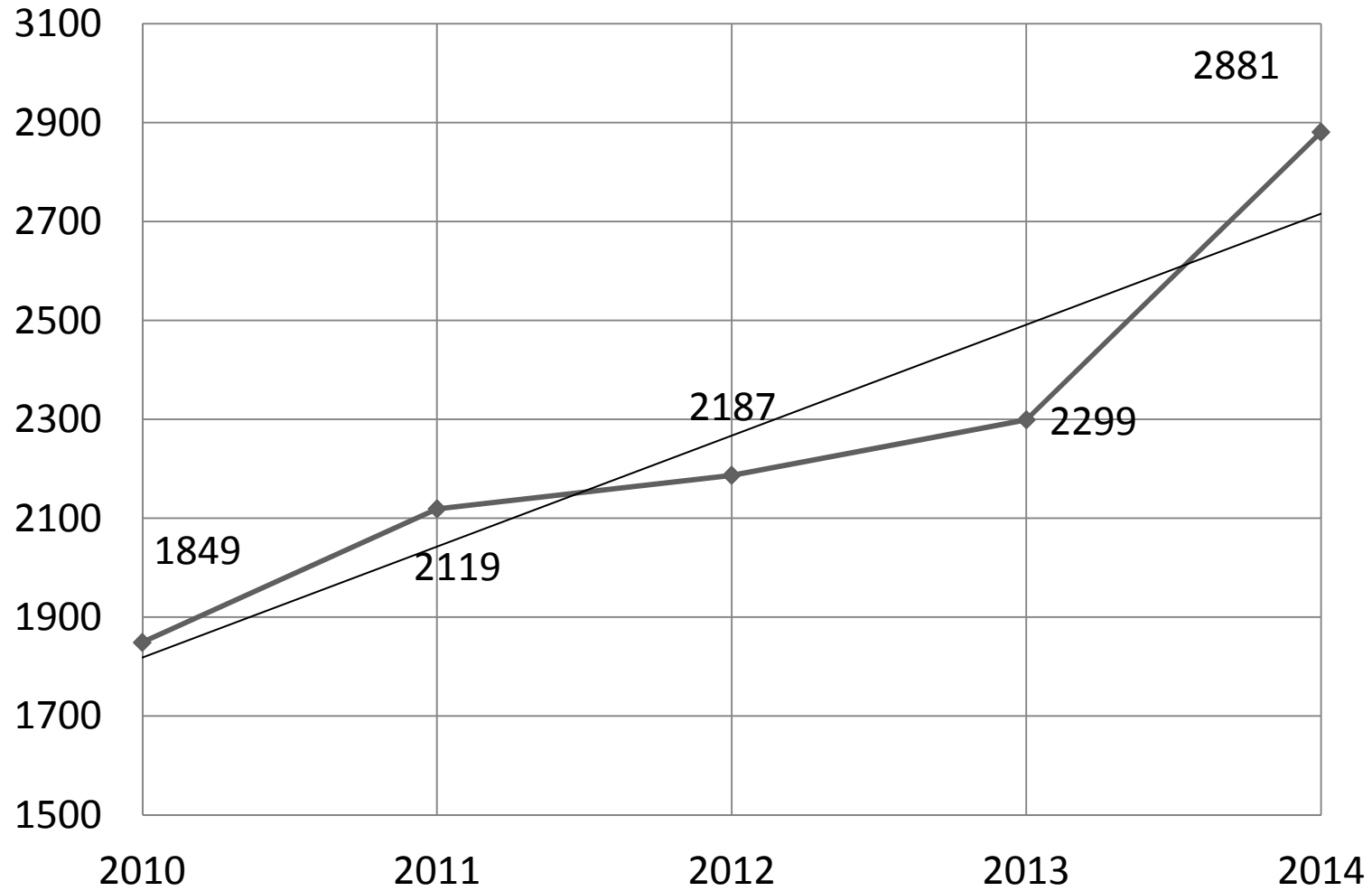
- NTP notification data
- 2010 to September 2015
- Comparison between 7 divisions
- Trend analysis disaggregated by age groups (<5 yrs and 5-14 years)

# Case Detection in Dhaka Division 2010 to 2015

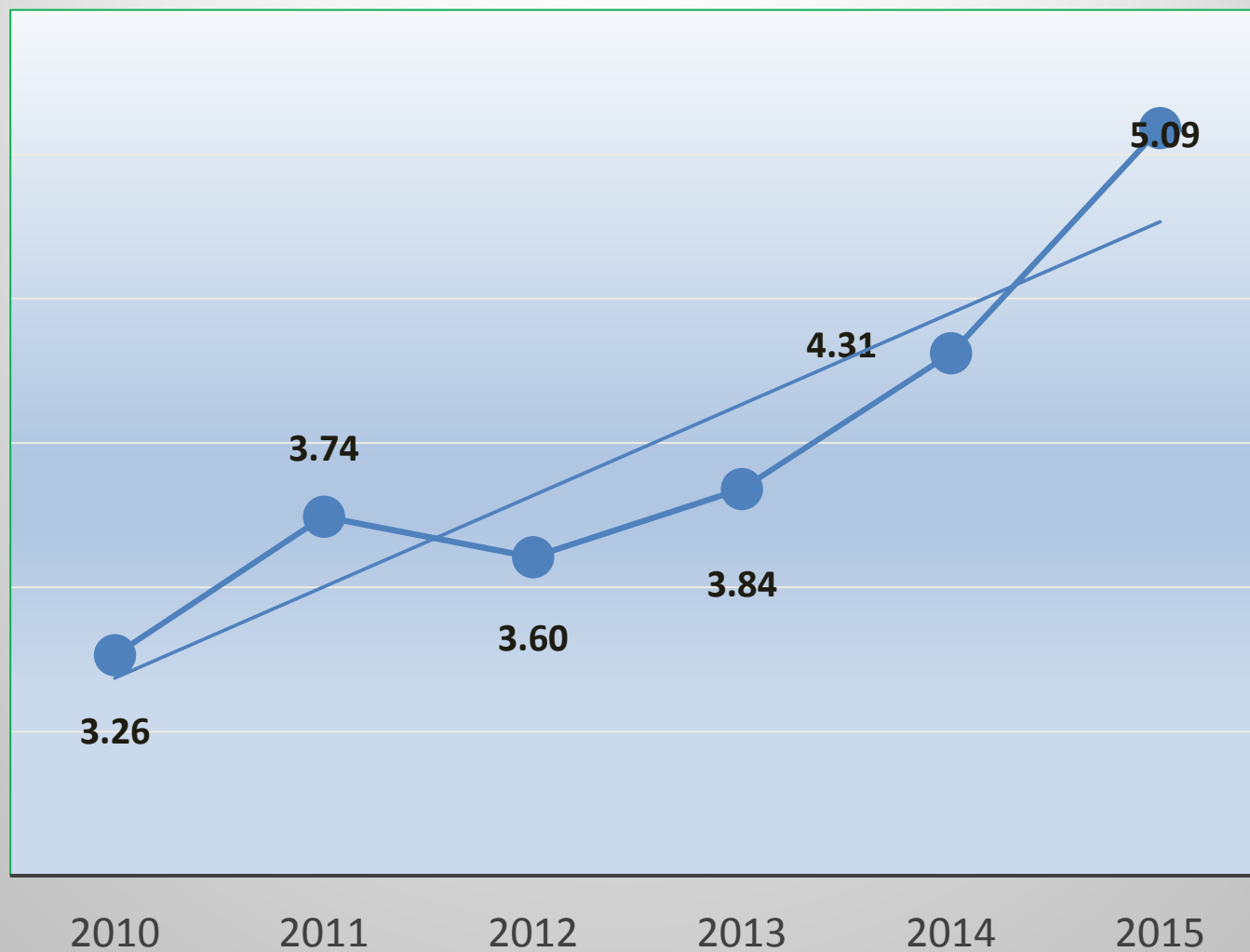
Year	Child TB case	% of Child TB
2015 (30 <sup>th</sup> sept)	2787	5.09%
<b>2014</b>	<b>2879</b>	<b>4.31%</b>
2013	2299	3.55%
2012	2187	3.59%
2011	2119	3.74%
2010	1849	3.26%



**Trend of Child TB case detection: 2010 to 2014**



**Trend of Child TB in Dhaka Division 2010 – 2015**



# Division wise case detection- 2012-2014

Division	2012	Increase	2013	Increase	2014
Barishal	186	50	236	11	247
Chittagong	918	23	941	280	1221
Dhaka	2187	112	2299	582	2881
Khulna	256	42	297	-4	293
Rajshahi	373	-1	372	71	443
Rangpur	284	37	321	129	450
Sylhet	636	-51	585	201	786

# Dhaka Division

## Case detection change: 2010-2015

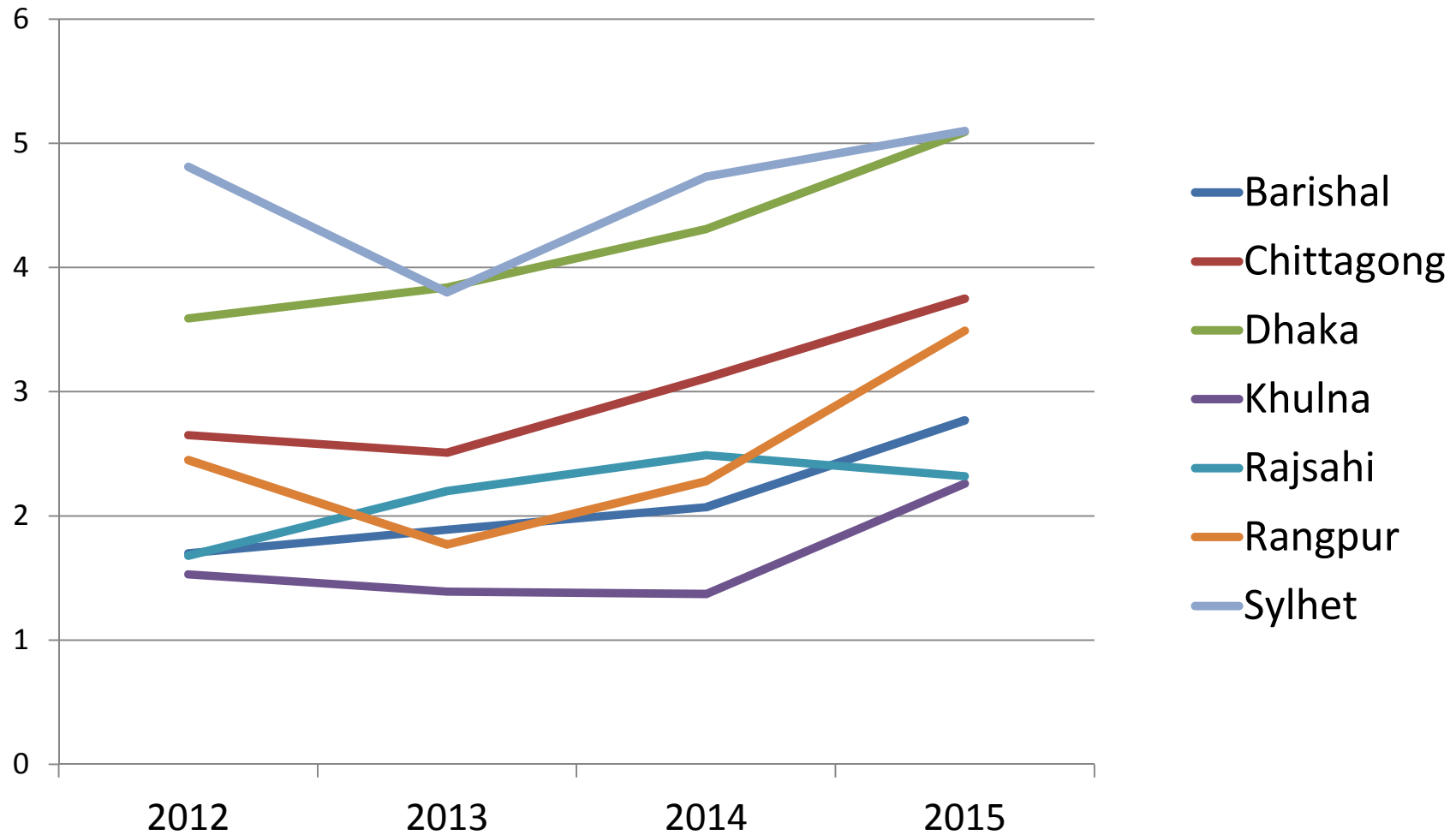
Estimated case detection 2015:  
 $2787 + 929 = 3716$

2015 - 2013	2013 - 2011	2012 - 2010
$3716 - 2299 = 1517$	$2299 - 2119 = 180$	$2187 - 1849 = 338$

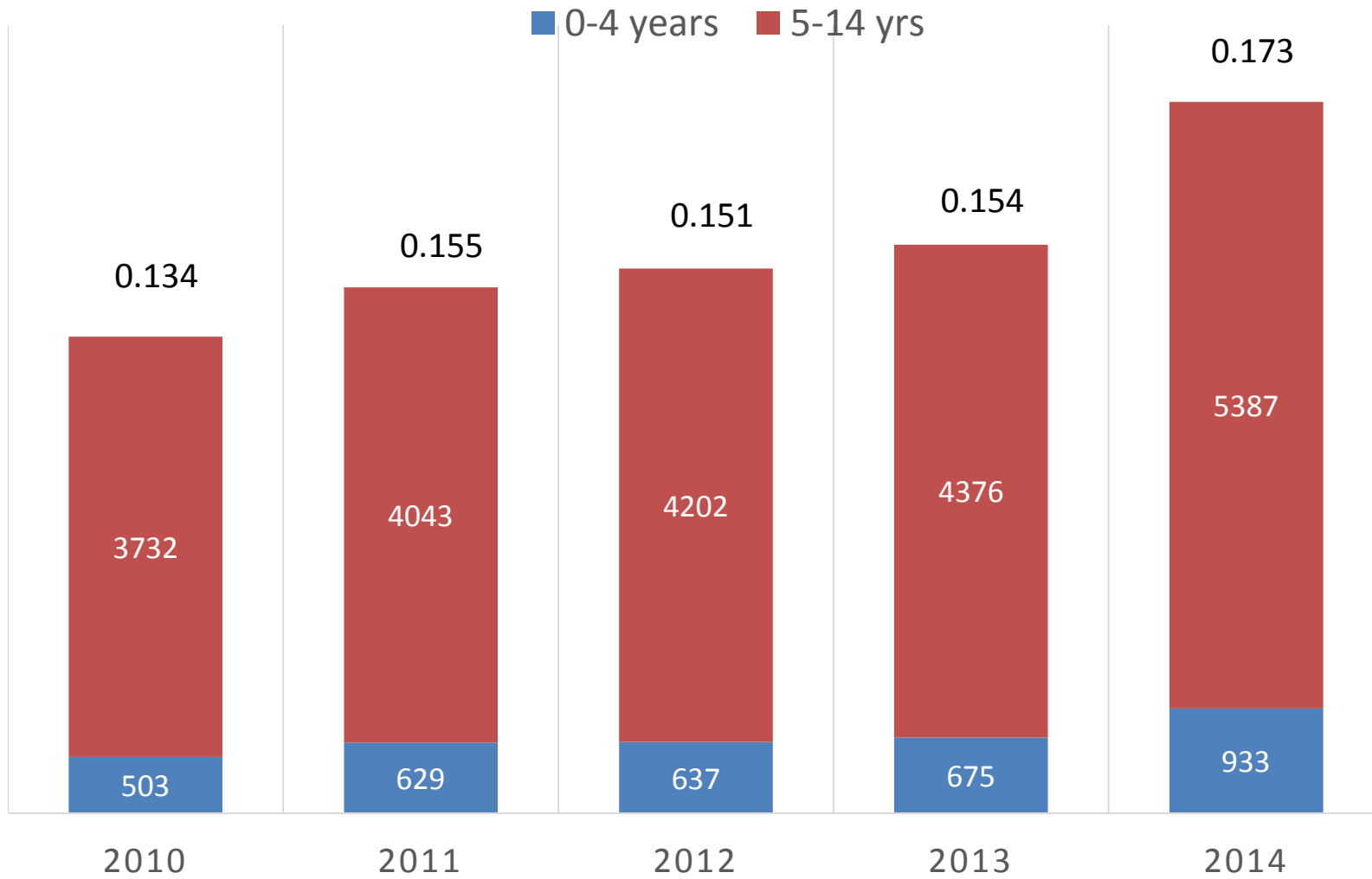
## Case detection in 2015 (30 Sept)

Barishal	9515	264	2.77
Chittagong	32065	1201	3.75
Dhaka	53502	2724	5.09
Khulna	17063	386	2.26
Rajshahi	14669	340	2.32
Rangpur	15414	538	3.49
Sylhet	14497	739	5.10
Total	156725	6192	3.95

# Case detection rate trend in 7 divisions



## CHILD TB- AGE DISAGGREGATED NATIONAL DATA: 2010-2014

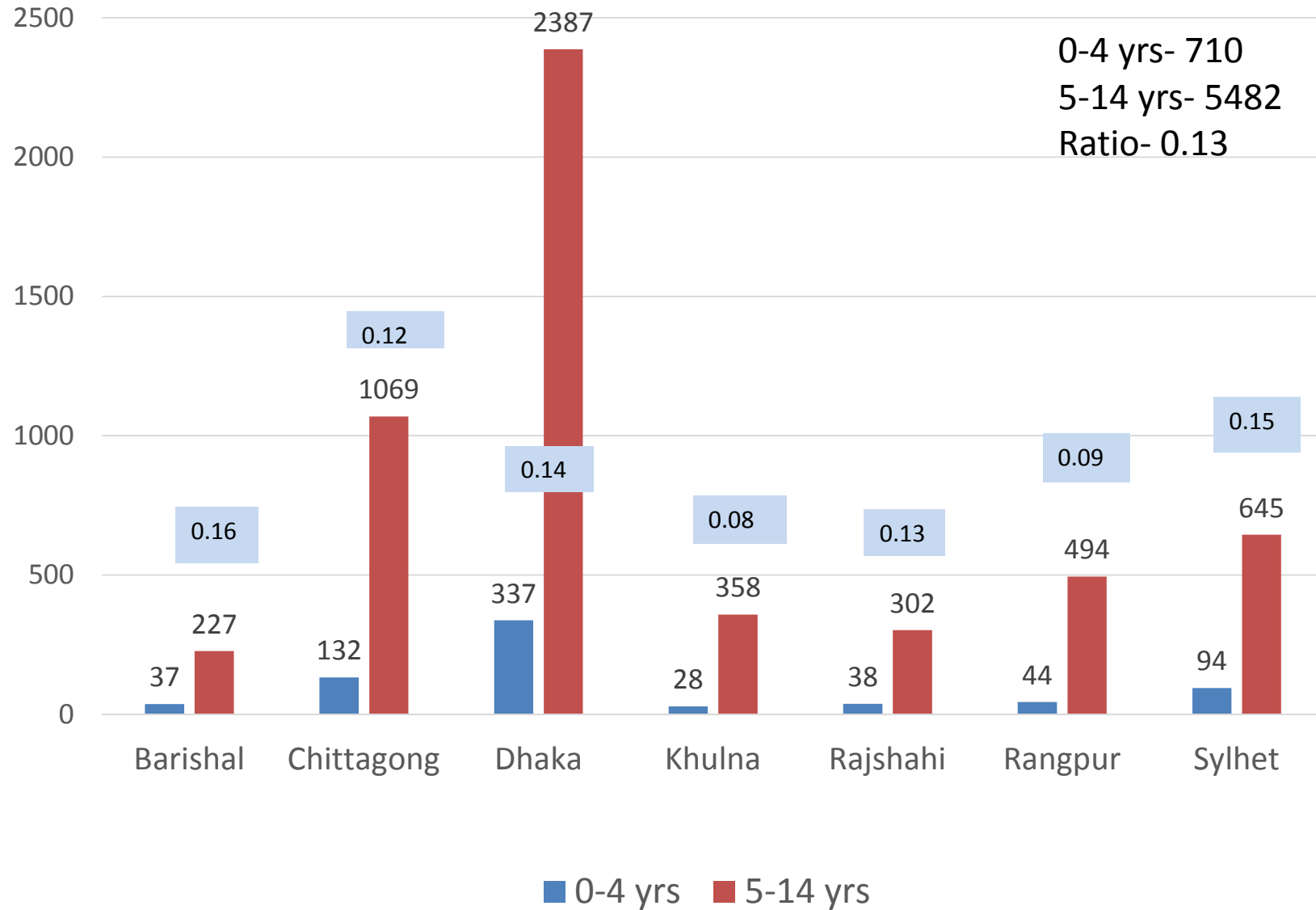




# Division wise case detection (0-4 Years)

Division	2012	Increase	2013	Increase	2014
Barishal	36	8	42	5	47
Chittagong	142	283	134	32	166
<b>Dhaka</b>	<b>251</b>	<b>40</b>	<b>291</b>	<b>165</b>	<b>456</b>
Khulna	33	4	37	-4	33
Rajshahi	43	2	45	15	60
Rangpur	21	5	26	15	41
Sylhet	112	-12	100	33	133

## Age Deseggregated Data- 2015



# Conclusion

- Capacity development program on child TB has increased case detection rate in intervention area in Bangladesh
- Increase case detection persisting
- 0-4 yrs case detection rate not increased

# Recommendation

- Capacity development program to be scaled up in other divisions of Bangladesh
- Contact investigation should be started with trained HCW
  - 0-4 years case detection will be addressed

Quiz: In South Africa *One* will always embrace?



# Mandela on Children

***The true character of a society is revealed in how it treats its children.***

Launching of the Blue Train, Worcester, South Africa,  
Sept. 26, 1997

True character of the TB community is revealed  
by.....

***History will judge us by the difference we make  
in the everyday lives of children.***

At the special session of the UN for Children, New York  
May 9, 2002

Thanks







# Story of Difficult vs. Easy



# Case detection up to June 2015

Division	2015 (Till 30 June)	2014	% of 2014
Barishal	150	247	60%
Chittagong	770	1221	63%
Dhaka	1910	2881	66%
Khulna	159	293	54%
Rajshahi	145	443	32%
Rangpur	225	450	55%
Sylhet	281	786	43%
<b>Total</b>	<b>4176</b>	<b>6321</b>	

# Sylhet Division Scale up

- District-4
- UHC-38
- Doctors: 183
- HCW: 5250
- Opinion leaders meeting-38



# Strategy for case detection

Division: Doctors training



UHC: Health Workers training



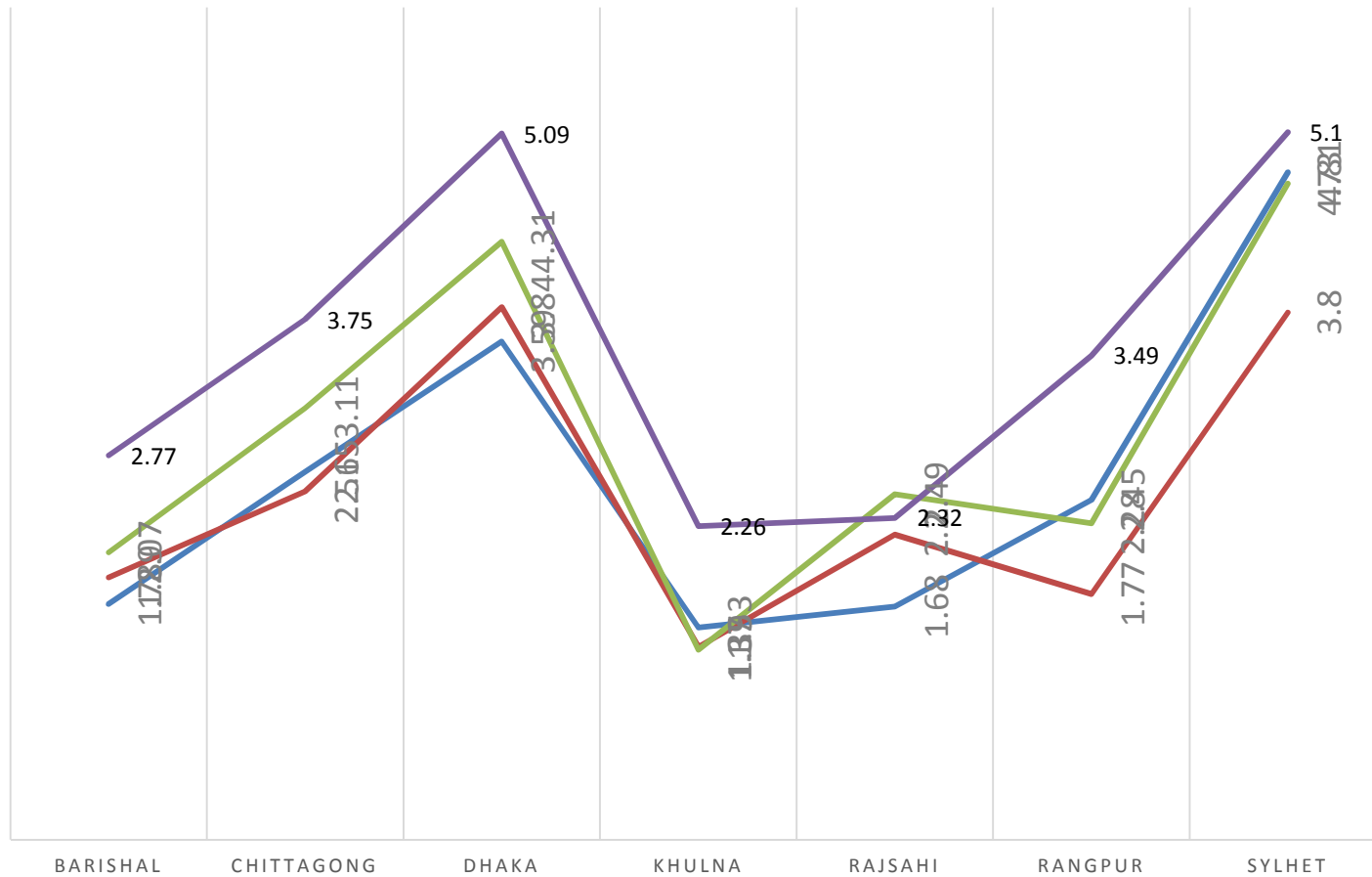
Local Level Planning by HCW



Community

## PERCENTAGE INCREASE OF CHILD TB IN 3 YEARS

—2012 —2013 —2014 —2015



# Refined strategy for Sylhet Div

- Active contact Investigation
- Listing of all SS+ve case of Sylhet Division
- Tagging HCW/NGO worker to that case
- Use of contact screening check list
- Referral of suspected case to UHC
- Trained doctor will manage
- Isoniazide to all <5yrs contact children without disease

# TB situation in Sylhet Division

District	New SS+ve case	HCW	Contact search ratio
Sylhet	2500	1013	2.46
Moulvibazar	1420	647	2.19
Sunamgonj	2377	777	3.05
Hobigonj	1752	658	2.66



# Monitoring

- **NTP:** Regular monitoring through PO and child TB focal person
- **Divisional Director:** Discussion agenda in monthly meeting with CS

# Monitoring

- **Civil Surgeon:** Discussion in monthly meeting with UHFPO and Quarterly TB meeting
- **UHFPO:** Through LLP and the completed contact screening forms
  - HCW will submit these through AHI and HI

# Assistance from BPA

- **BPA TB Project:**

- Communicate with HI, AHI and HCWs over phone
  - To help further capacity building
  - Assist understanding of filling forms
- Project Manager and Project Coordinator will keep contact with CS and UHFPO
- Project Director will keep communication with LD, PM-TB and Divisional Director

# Program Schedule

- Starting: Mid October 2015
- Completion: June 2016
- Venue: Sylhet MAG Osmani Medical College for doctors training
- UHC: For Health Workers orientation
- TNO office: For opinion leaders orientation

# Challenges

## Sylhet Division



**Your opinion and suggestions please**

	Barishal	Chittagong	Dhaka	Khulna	Dhaka	Rajshahi	Rangpur	Sylhet
2012	1.70	2.65	3.59	1.53	3.59	1.68	2.45	4.81
2013	1.89	2.51	3.84	1.39	3.84	2.20	1.77	3.80
2014	2.07	3.11	4.61	1.37	4.61	2.49	2.28	4.73



# Child TB Diagnosis in Dhaka Division 2010 to 2014

Year	Child TB case	Total TB cases (Adult & Child)	% of Child TB	Case number increase from previous year	% increase from previous year
<b>2014</b>	<b>2879</b>	<b>66738</b>	<b>4.31%</b>	<b>580</b>	<b>25%</b>
2013	2299	64753	3.55%	112	5%
2012	2187	60689	3.59%	68	3.2%
2011	2119	56597	3.74%	270	14.6%
2010	1849	56643	3.26%	-	