Hospital Based Rotavirus &
Intussusception Surveillance (HBRIS)
in Bangladesh

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IEDCR & ICDDR,B
with the support from USAID & US CDC
jointly started Rotavirus surveillance from
July 2012
Discussion Points

- Study design
- Implementation plan
- Implementation Team
- Report Sharing
Rationale for surveillance

Government is planning to add rotavirus vaccine to EPI, so it is essential to

- Determine pre-vaccine burden
- Determine pre-vaccine intussusception hospitalization rate
- Identify genetic diversity
- Identify potential risk of intussusception after vaccine introduction
- Measure vaccine effectiveness & possible reasons of failure in future
Objectives of Surveillance

- Estimate proportion of rotavirus gastroenteritis hospitalizations among children <5 yrs of age
- Describe rotavirus strains circulating in different regions
- Estimate rate of intussusception hospitalizations among children <2 yrs of age
- Determine age, regional & seasonal distribution of hospitalizations associated with rotavirus AGE
Planned Study Area

10 Medical Colleges & District Hospitals in 7 divisions
HBRIS Covered 7 Divisions

Hospitals included in study:

Government

- Rajshahi Medical College Hospital (RMCH) – Rajshahi
- Jessore General Hospital (JGH) - Jessore
- Sher-e-Bangla Medical College Hospital (SBMCH) - Barisal
- Jahurul Islam Medical College Hospital (JIMCH) - Kishoregonj
- Jalalabad Ragib-Rabeya MC Hospital (JRRMCH) - Sylhet
- World Mission Prayer League (LAMB) - Dinajpur
- Bangabandhu Memorial Hospital (BBMH) - Chittagong
Site selection

- Distributed evenly throughout Bangladesh
- Hospitals - high annual census for pediatric AGE admissions
- Expect sufficient cases of intussusception to reliably estimate frequency
Case definitions (Rota part)

Inclusion criteria

- <5 years of age
- Admitted with AGE
- Illness is of ≤7 days duration
- Hospitalized for rehydration
- Written consent in Bangla from parent /legal guardian
Case Definitions Intussusception

- <2 years, admitted for intussusception in pediatric surgery/pediatric wards
- Meets Level 1 Brighton Collaboration criterion
- Enrolled if meet Case definition
- At a 30-day follow up call or visit outcome is ascertained
Study Design & Methods

Study Period

- Active Surveillance – planned for 5-10 yrs, continue after vaccination starts
- First phase: June 1, 2012 – Aug 31, 2014

Study Populations

- Children
  - <5 Yrs with Acute Gastroenteritis
  - <2 Yrs with Intussusception
- Patients enrolled following case definition from Pediatric Medicine & Surgery ward
Data Collection

- Demographic & clinical information—Parents or caregivers
- Treatment, length of stay - medical record
- Stool sample from every 4th patient is collected
- Stool sample - tested for rotaviruses antigen
- 25% of specimens +ve for rotavirus tested for genotypes
- Data for intussusception collected
- Electronic data & samples sent to icddr,b /15 days
- Genotyping is done every quarterly
Data Collection Tool

- Questionnaire
- Medical record abstraction form
- Using electronic device (PDA/Galaxy tab)
Implementation Team

Team formed at IEDCR, icddr,b & Implementing hospitals

- **IEDCR-**
  - Coordination
  - Monitoring & Supervision
  - Dissemination of findings

- **icddee,b**
  - Field staff
  - Virology Lab
  - Data management
  - Reporting

- **Hospital**
  - Focal Person
  - Surveillance Physician
  - Data collection
Operational Procedure

MOU signed between
- IEDCR & icddr,b
- IEDCR & non-gov hospitals

Orientation for all faculty at Implementing hospitals
Operational Procedure

- Focal Person & Surveillance Physician identified
- Field assistant recruited & placed
- Training conducted for
  - Identification & enrollment of case
  - Data collection
  - Sample collection & transport
Report is prepared every monthly.

Soft copy of report is uploaded in IEDCR website every month.

Hard copy of report shared with respective hospital.
Dissemination of Findings

Seminar conducted for
- Implementing Hospitals
- Policy makers, Program Managers
- USAID, US CDC, WHO, Unicef
- IEDCR, ICDDR,B
Thank you