

Acute (bloody) diarrhoea**RATIONALE FOR SURVEILLANCE**

Bloody diarrhoea is usually a sign of invasive enteric infection that carries a substantial risk of serious morbidity and death, especially in children in developing countries. *Shigella* is most frequently isolated from the stools of affected children. The policy of WHO is to promote an integrated affordable approach to the management of the sick child. The primary objective is to reduce morbidity and mortality.

Since the early 1990's the emergence of strains of *Shigella dysenteriae* type 1, resistant to most antibiotics, has become a major public health concern in central and southern Africa. The high case-fatality and the epidemic potential make surveillance to detect and control the outbreaks essential.

RECOMMENDED CASE DEFINITION**Clinical case definition**

Acute diarrhoea with visible blood in the stool.

Laboratory criteria for diagnosis

Laboratory culture of stools may be used to confirm possible outbreaks of specific diarrhoea, such as *S. dysenteriae* type 1, but is not necessary for case definition.

Case classification

Not applicable.

RECOMMENDED TYPES OF SURVEILLANCE

Patient records should be maintained at peripheral level.

Routine monthly / weekly reporting of aggregated data from peripheral level to intermediate and central level.

Community surveys / sentinel surveillance to complement routine data and for the evaluation of control programme activities.

Note 1: Laboratories involved in diagnosis of *Shigella dysenteriae* type 1 should report confirmed cases.

Note 2: Central recording of antibiotic susceptibility is recommended.

Note 3: After an epidemic caused by *S. dysenteriae* type 1 has been confirmed, it is not necessary to examine specimens from all cases (unnecessary burden on laboratory facilities).

RECOMMENDED MINIMUM DATA ELEMENTS**Case-based data at peripheral level**

- Unique identifier, age, sex, geographical area
- Date of onset, date of treatment
- Treatment given (Y/N), kind of treatment
- Hospitalized(Y/N)
- Laboratory result (*S. dysenteriae* type 1) if appropriate
- Outcome

Aggregated data for reporting

- Number of cases by geographical area
- Number of deaths by geographical area
- Number of hospitalizations if appropriate

RECOMMENDED DATA ANALYSES, PRESENTATION, REPORTS

- Number of cases by month, geographical area, age group
- Comparisons with same month and geographical area in previous years
- Plots of laboratory confirmed cases by month and year, if appropriate
- Information on seasonal and secular trends best presented as line graphs
- Monthly surveillance summaries should be produced nationally and regionally and fed back
- A quarterly or annual overview is helpful in trying to identify areas of concern and set priorities

PRINCIPAL USES OF DATA FOR DECISION-MAKING

- Monitor trends in disease incidence
- Identify high risk areas for further targeting of intervention
- Detect and monitor outbreaks and epidemics for appropriate response
- Estimate incidence rate and case-fatality rate
- Support plan for the distribution of medical supplies (diagnostic test, antibiotics etc.) and allocation of control teams
- Determine the effectiveness of control measures
- Provide research data in the area of means of transmission and antibiotic susceptibility of isolates (monitor antimicrobial resistance)
- Help mobilize donors to support epidemic control measures

SPECIAL ASPECTS

The syndrome-based reporting approach, while important in the case management in the primary care setting, may not lend itself to surveillance of specific diseases. A national reference laboratory is needed to confirm outbreaks of *S. dysenteriae* type 1 where suspected.

Countries at risk from epidemics should undertake routine surveillance of bloody diarrhoea. This is particularly recommended for central and southern Africa.

Each country should have at least 1 reference laboratory in order to confirm the organism / outbreak, perform antimicrobial susceptibility testing, undertake training, and disseminate results. At least 20 specimens should be collected to confirm the cause of the outbreak. Patients for culture should be chosen among those with bloody diarrhoea for less than 4 days, without treatment, who agree to the examination. Rectal swabs or swabs of stool passed within an hour should be placed in Cary Blair media and transported cold (refrigerated or frozen). Culture should be on Mac-Conkey xylose-lysine-desoxycholate media.

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