NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

CHOLERA ALERT for HEALTH CARE WORKERS

4 October 2018

Centre for Enteric Diseases,
Outbreak Response Unit, Division of Public Health Surveillance and Response
National Institute for Communicable Diseases

The NICD has confirmed the diagnosis of cholera in a traveller returning from Zimbabwe. The patient developed abdominal cramps and diarrhoea on 29 September and was admitted to a Tshwane hospital on 1 October, presenting with profuse watery diarrhoea complicated by dehydration. Provincial and district health authorities responded swiftly, visiting the patient's household on 2 October to assess household contacts, conduct an environmental health assessment, and provide health information. Household surfaces were decontaminated and borehole and tap water samples were taken for investigations. Household contacts are currently under surveillance. Cholera is usually transmitted through drinking water or food contaminated with cholera. However, cholera can also be transmitted following direct contact with infective material (e.g. stool or vomitus). Transmission within households is not uncommon. In this case, the risk for further spread in the community is negligible.

Further testing at NICD has confirmed that the isolate is a toxin-producing *V. cholerae* serotype Ogawa, and is multi-drug resistant; it is resistant to most first-line antibiotics (including tetracycline, cotrimoxazole, doxycycline and ciprofloxacin) but is susceptible to azithromycin. The mainstay of cholera treatment is fluid replacement. Mild-to-moderate cases may be treated with oral rehydration fluid. Severe cases require admission and intravenous administration of fluid. Antibiotic treatment is recommended for patients with moderate to severe dehydration, as it reduces disease severity and the risk of further transmission. The public are urged to drink water from safe water sources, ensure good hand hygiene before and after using the toilet, and before and after handling food. The cholera outbreak in Zimbabwe is ongoing, with 7 148 suspected cases and 49 deaths reported. While the outbreak is concentrated in the densely populated suburbs of Harare, cases have been reported from at least 6 other provinces. An oral cholera vaccination campaign has been launched in Harare. **South African health care workers are advised to suspect cholera in <u>any individual with acute onset of watery diarrhoea.</u>**

<u>Management of suspected cholera cases</u>

1. Specimen collection

- Stool is the preferred specimen. A rectal swab can be collected if stool collection is not feasible.
- On the specimen submission form, clearly request '<u>MCS & cholera</u>' testing. Testing for cholera is not included in routine 'MCS' – it must be specifically requested.
- Transport to the laboratory as soon as possible.

	If a delay of >2 hours before processing is likely, place the stool specimen in Cary-Blair transport medium as described in the steps below. If possible, the transport medium should have been chilled for 1 to 2 hours beforehand.
	1. Collect a small amount of stool by inserting a sterile cotton-tipped swab into the stool specimen and rotating it 2. If mucous and shreds of intestinal epithelium are present, these should be sampled with the swab.
	3. Immediately insert the swab into the transport medium. 4. The swab should be pushed completely to the bottom of the transport medium bottle.
	5. Break off and discard the top portion of the swab-stick that is protruding above the edge of the bottle, leaving the cotton tip in the transport medium.

	6. Replace the screw cap on the specimen container and transport medium bottle and tighten firmly. 7. Place both into the plastic specimen bag and seal. 8. Complete the specimen request form and place in the sleeve of the plastic specimen bag. Include all the required patient details, clinical presentation and history, and the name and contact details of the attending healthcare practitioner, and type of specimen (i.e. stool or rectal swab). Specifically request MC&S and cholera testing. 9. If there is a delay in transport (or processing in the laboratory) immediately place both containers in a refrigerator (at 4°C) or cooler box (with ice bricks) until collected by the courier. DO NOT FREEZE.

Collection of rectal swabs:

1. Moisten the swab in sterile transport medium (Cary-Blair).
2. Insert swab gently into the rectal sphincter (2 to 3cm) and rotate. Remove swab and check for visible faecal matter.
3. Immediately insert the swab into the transport medium (see steps above), label the specimen, and deliver to laboratory promptly.
4. If there is a delay in transport (or processing in the laboratory) immediately place both containers in a refrigerator (at 4°C) or cooler box (with ice bricks) until collected by the courier. DO NOT FREEZE.

2. Treatment

- **Aggressive rehydration therapy** is the mainstay of treatment and is the most important lifesaving measure. Further details about clinical management including assessment of dehydration and guide to rehydration treatment are available in the National Guidelines for Cholera Control http://www.nicd.ac.za/assets/files/2014%20SA%20Cholera%20Guidelines.pdf
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- **Antibiotic treatment (azithromycin)** should be given to all patients with moderate to severe dehydration. This cholera strain is resistant to other first-line antibiotics typically used to treat cholera.

	Paediatric dose	Adult dose
Azithromycin	20 mg/kg po as a single dose	1 g po as a single dose

- **Zinc** supplementation should be given to all children ≤5 years with cholera

Age	Dose of zinc	Duration
0 - 6 months	10 mg po once a day	10 – 14 days
6 months – 5 years	20 mg po once a day	10 – 14 days

3. Notification

Cholera is a notifiable medical condition. Notify as a suspected cholera case immediately - do not wait for laboratory confirmation.

4. Complete a cholera case investigation form - available on the NICD website http://www.nicd.ac.za/wp-content/uploads/2017/03/NICD_Cholera-CIF_20181004.pdf

5. NICD Hotline for healthcare workers

Should you have any questions, you may contact the NICD 24-hour hotline (for use by health professionals only): 082-883-9920.

For laboratory-related queries, please contact Mimmy Ngomane (mimmyn@nicd.ac.za; (011) 386 6235; 072 407 4667) or Juno Thomas (junot@nicd.ac.za; (011) 555 0439; 073 170 8874).