



Field Epidemiology & Disease Surveillance Division

National Institute of Health

Focal Point for International Health Regulations

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WHO Collaborating Centre for Research and Training in Viral Diagnostics

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Subject: Advisory for the Prevention and Control of Chickenpox (Varicella) Disease

During March and April 2017 sporadic clusters of Chickenpox (varicella) have been reported from Faisalabad, Punjab. This 'Advisory' is therefore intended to alert the health professionals to timely diagnose the Chicken Pox disease, manage the cases and undertake standard prevention and control measures including awareness/ education and vaccination to minimize its incidence in upcoming summer season.

Background:

- Chickenpox (varicella) is a very contagious disease caused by the varicella-zoster virus (VZV) of herpesvirus family, which is an exclusively human virus and is present worldwide.
- It causes chickenpox (varicella), a disease most commonly affecting children, teens and young adults and herpes zoster (shingles) in older adults; shingles is rare in children.
- Primary infection leads to acute varicella or "chickenpox", usually from exposure either through direct contact with a skin lesion or through airborne spread from respiratory droplets. After initial infection, VZV establishes lifelong latency in cranial nerve and dorsal root ganglia, and can reactivate years to decades later as herpes zoster (HZ) or "shingles"

Mode of Transmission: The virus can spread from person to person by direct contact, sneezing or cough or by contact with the clothing, bed linens or oozing blisters of an infected person. A person with varicella is contagious from 1-2 days before rash onset until the lesions have crusted. The onset of symptoms is 10 to 21 days after exposure. The disease is most contagious a day or two before the rash appears and until the rash is completely dry and scabbed over. About 90% susceptible close contacts may get varicella after exposure to persons with disease.

Incubation period: The incubation period is 14 to 16 days after exposure to a varicella or a herpes zoster rash, with a range of 10 to 21 days. A mild prodrome of fever and malaise may occur 1 to 2 days before rash onset, particularly in adults.

Clinical presentation: Blister-like rash (appears first on the stomach, back and face and can spread over the entire body), itching, tiredness, and fever. It usually takes about one week for all the blisters to become scabs. Chickenpox illness usually lasts about 5 to 7 days. Chickenpox can be serious, in infants, adults and immunocompromised. Vaccinated people can still get the disease however, the symptoms are usually milder.

Complications may include cerebellar ataxia, encephalitis, viral pneumonia, hemorrhagic conditions, septicemia, toxic shock syndrome, necrotizing fasciitis, osteomyelitis, bacterial pneumonia, and septic arthritis. Pregnant women are at risk for serious complications and may die. If pregnant women gets varicella during 1st or early 2nd trimester, the baby may be born with congenital varicella syndrome having scarring on the skin; abnormalities in limbs, brain, and eyes; and low birth weight. The newborn may develop neonatal varicella if mother gets varicella from 5 days before to 2 days after delivery.

Case Definition:

- **Probable Case:** An illness with acute onset of diffuse (generalized) maculo-papulo-vesicular rash without other apparent cause, not laboratory confirmed and is not epidemiologically linked to another probable or confirmed case.
- **Confirmed case:** An acute illness with diffuse (generalized) maculo-papulo-vesicular rash and is epidemiologically linked to another probable or confirmed case and confirmed by lab tests.

Note: Two probable cases that are epidemiologically linked are considered confirmed, even in the absence of laboratory confirmation.

Laboratory Diagnosis: Serological tests for IgG and IgM confirm the disease.

Treatment: There is no specific treatment for chickenpox. It generally resolves within 1-2 weeks without treatment. However symptomatic treatment can be given to relieve pain and plenty of fluids to prevent dehydration. Antiviral medications (Acyclovir, valacyclovir and famciclovir) may reduce the severity of symptoms but do not cure the disease and may be prescribed for people at risk of serious disease including:

- Healthy people older than 12 years of age
- People with chronic skin or lung disease
- People receiving steroid therapy
- Pregnant females

Preventive & Control Measures:

- Strategies for controlling disease includes confirming the outbreak, identifying cases, implementing control measures, conducting case investigations and strengthen surveillance activities.
- The best way to prevent chickenpox is to get the chickenpox vaccine, which is very safe and effective at preventing the disease.
- Persons without evidence of immunity to varicella and who do not have a contraindication to vaccination should be vaccinated.
- Age-appropriate vaccination for preschool-aged children aged ≥ 12 months is 1 dose and School-aged children, adolescents, and adults is 2 doses with an interval of 4–8 weeks.
- If a vaccinated person does get chickenpox, it is usually mild, with fewer red spots or blisters and mild or no fever.
- Do not use aspirin or aspirin-containing products to relieve fever from chickenpox. The use of aspirin in children with chickenpox has been associated with Reye's syndrome, a severe disease that affects the liver and brain and can cause death.

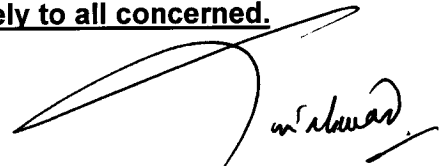
Post Exposure Prophylaxis (PEP):

- Vaccine administered within 3 days of exposure to rash is most effective in preventing disease ($\geq 90\%$); however, vaccine administered within 5 days of exposure to rash is about 70% effective in preventing disease and 100% effective in decreasing the severity and intensity of disease.
- **Infection control:** In residential and healthcare settings, take full standard precautions along with airborne and contact precautions.

NIH support:

- Laboratory samples may be collected (blood/ serum), packaged and transported as per guidelines to Department of Virology, Public Health Laboratories Division, NIH, Islamabad.
- For any further assistance in this context, the Field Epidemiology & Disease Surveillance Division (FE&DSD) (051 – 9255237 and Fax No. 051-9255575) and Virology Department of Public Health Laboratories Division (051-9255082), NIH may be contacted.

The above 'Advisory' may please be circulated widely to all concerned.



(Dr. Mukhtar Ahmad)
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