



Outbreak investigation and response: Hiraan region, Central Somalia

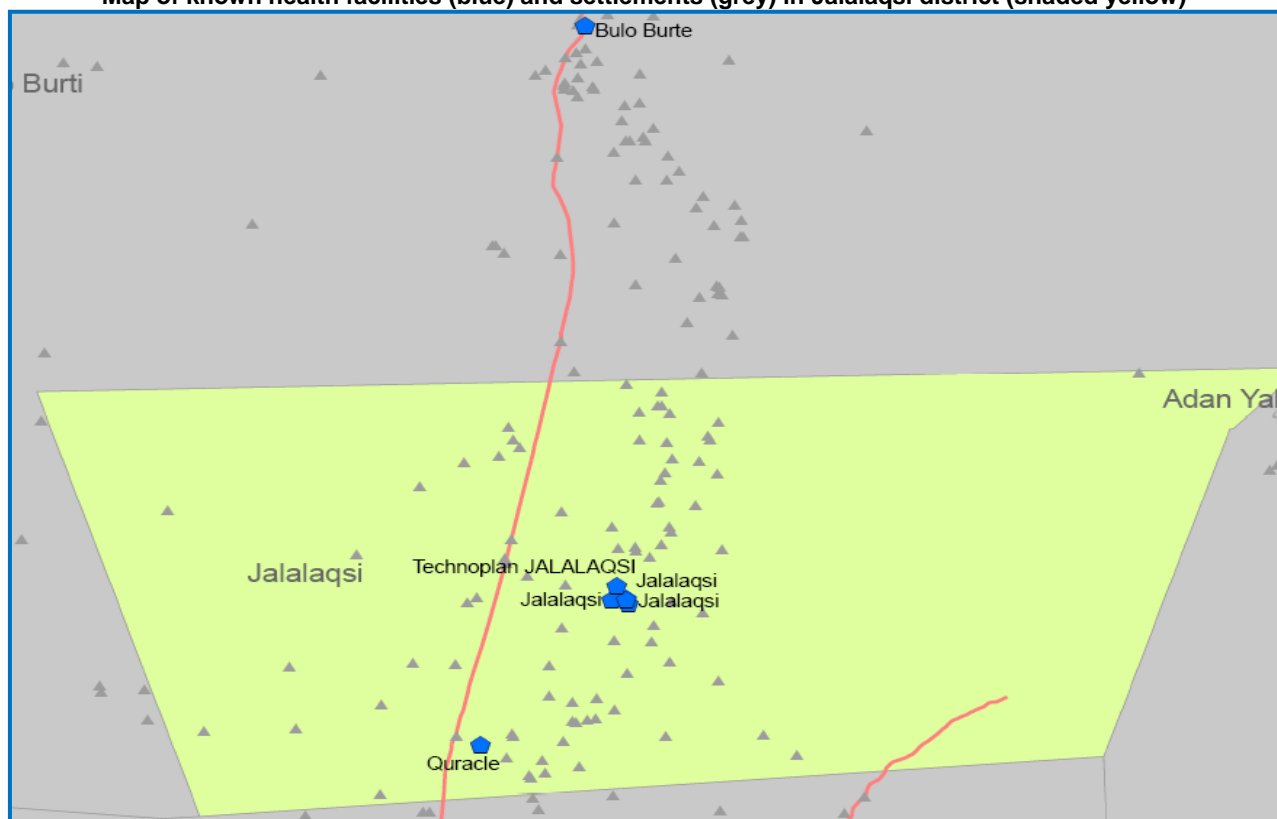
16-22 May 2010

Background: Jalalaqsi district is home for an estimated 40 000 people with over 11 000 reportedly residing in the town, while Beletweyne district is home to an estimated 160 000 people with 90 000 residing in Beletweyne town.

Investigation: During epidemiological week 18¹, health partners in Hiraan region reported cases of suspected whooping cough in five districts: Beletweyne, Buloburte, Jalalaqsi, Mahas and Mataban. These cases reported among children under the age of 5, were detected during the supplementary feeding and out-patient therapeutic feeding programme activities in the region. In Jalalaqsi suspected whooping cough morbidity accounted for 21% (30) of the 141 visits; Mahas 12% (30) of the 249 visits including 4 related deaths; and in Mataban district 17% (40) of the 231 visits.

(Whooping cough is a highly contagious, vaccine-preventable disease that spreads through contact with cough droplets of an infected person. Over 75% of unimmunized household contacts will develop the disease. It is caused by a bacterium known as Bordetella Pertussis for which humans are the only known reservoir. The incubation period is 4–21 days and in some cases up to 42 days. Infected persons are infectious 7 days after exposure to the bacteria, to three weeks on the onset of coughing spasms. The major sign is an inspiration whoop during coughing fits.)

Map of known health facilities (blue) and settlements (grey) in Jalalaqsi district (shaded yellow)



¹ Week 18: 3-9 May 2010
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Map of known health facilities (blue) and settlements (grey) in Beletweyne district (shaded yellow)



Findings: In general, all antigen vaccine coverage in Somalia remains relatively low. Although during the child health days (**Round 1 and 2**) the overall vaccine coverage of the targeted children aged 6 – 12 months was high reporting 89% and 95% coverage respectively. The actual antigen-specific coverage for DPT 3 was low; 26% (3592) and 27% (3482) of the targeted 13 947 and 12 938 children respectively which signifies the low coverage of routine immunization activities and the subsequent small proportion of children who have completed the vaccination schedule by the time they reach their 1st birthday. As such, the number of susceptible children below and above 5 years of age within the population is high hence the increased chance for sporadic outbreaks and severe person to person transmission.

The World Health Organization (WHO) estimated there were over 17.6 million cases of whooping cough and 297,000 deaths worldwide in 2002, making this easy-to-prevent disease one of the leading causes of illness and death. WHO estimated that global vaccination prevented about 38.3 million cases and 607,000 deaths (Mathers *et al.*, 2006).

Response: Joint response activities were initiated by WHO and health partners. WHO team visited Jalalaqsi and Beletweyne districts and provided 3500 courses of erythromycin syrup and a basic health kit and sample collection material to health partners to facilitate response activities. WHO also consulted with partners in Jalalaqsi and Beletweyne districts to collect data of suspected whooping cough cases. Of the 462 cases recorded at 10 health facilities in the two districts 64% (295) were children under the age of 5 (see table 1). Partners have intensified vaccination activities for pertussis which is included in the trivalent vaccine DPT.



Reviewing registers at health facility based patient records

District	1 April – 16 May 2010	Cases < 5 years	Total Cases	Deaths
Jalalaqsi	Jalalaqsi General Hospital	59	121	0
Jalalaqsi	Mercy USA Jalalaqsi MCH	2	3	0
Jalalaqsi	SCF UK outreach SFP/OTP	15	22	0
Jalalaqsi	Shaw Ambulatory	176	265	0
Beletweyne	Bundaweyne SRCS	9	13	0
Beletweyne	Bundaweyne IMC	6	6	0
Beletweyne	Galbeed MCH Geelo LNGO	5	7	0
Beletweyne	Bari MCH Geelo LNGO	2	4	0
Beletweyne	Motherhood MCH IMC	12	12	0
Beletweyne	Koshin MCH IMC	9	9	0
Grand Total		295	462	0

Table 1: Reported cases of whooping cough in Hiraan region

Recommendations: WHO is requesting partners to increase access to routine vaccination by strengthening the existing vaccination programmes through mobile and outreach vaccination activities; and community awareness of the need and importance of completing vaccination schedules on time.