

Outbreak of cholera at Dutsen Abba Ward Zaria local government area, Kaduna state, Nigeria 2015: the importance of hygienic practices

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Results: A total of 50 case-patients were recorded, with a median age of 20 years and age range of 1–50 yrs. There were more females 34(68%) than males. Majority of case-patients 26(52%) were under 20 years. Seven deaths were recorded giving a case fatality rate (CFR) of 14%. The CFR was higher in females (14.7%) than in males (12.5%). The outbreak lasted five days. Highest number of cases seen in a day (23) was on third day of the outbreak. Only two cases (4%) had their samples tested using cholera RDT, and both tested positive.

Of the 14 case-patients and 28 controls recruited, those who drank un-boiled water were almost 13 times (OR:12.67, 95%CI: 2.33–68.93) more likely to have cholera while those who practiced regular hand-washing and good waste disposal were less likely to have cholera (OR: 0.22, 95%CI: 0.06–0.90) and (OR: 0.07, 95%CI: 0.02–0.36) respectively.

Table 1: Gender, age group, and case fatality rates for cholera outbreak at Dutsen Abba ward, Zaria LGA Kaduna State, 2015.

Sex	Cases	Deaths	Total (%)	CFR %
Male	14	2	16 (32)	12.5
Female	29	5	34 (68)	14.7
Total	43	7	50 (100)	14.0
Age Group (yrs)	Cases	Deaths	Total (%)	ASCFR %
<10	11	3	14 (28)	21.4
10 - 20	10	2	12 (24)	16.7
21 -50	22	2	24 (48)	8.3
>50	0	0	0 (0)	0.0
Total	43	7	50 (100)	14.0

Table 2: Associated risk factors for cholera outbreak at Dutsen Abba ward, Zaria LGA Kaduna State, 2015.

Hygienic practices	Cases	Controls	OR (95% CI)	P-Value
Drinking unboiled water	12	9	12.67(2.33 - 68.93)	0.001
Practice regular Hand washing	4	18	0.22(0.06 - 0.9)	0.03
Proper Waste disposal	3	22	0.07(0.02 - 0.36)	0.0004
Drinking from Central well	13	23	2.83(0.30 - 26.87)	0.64

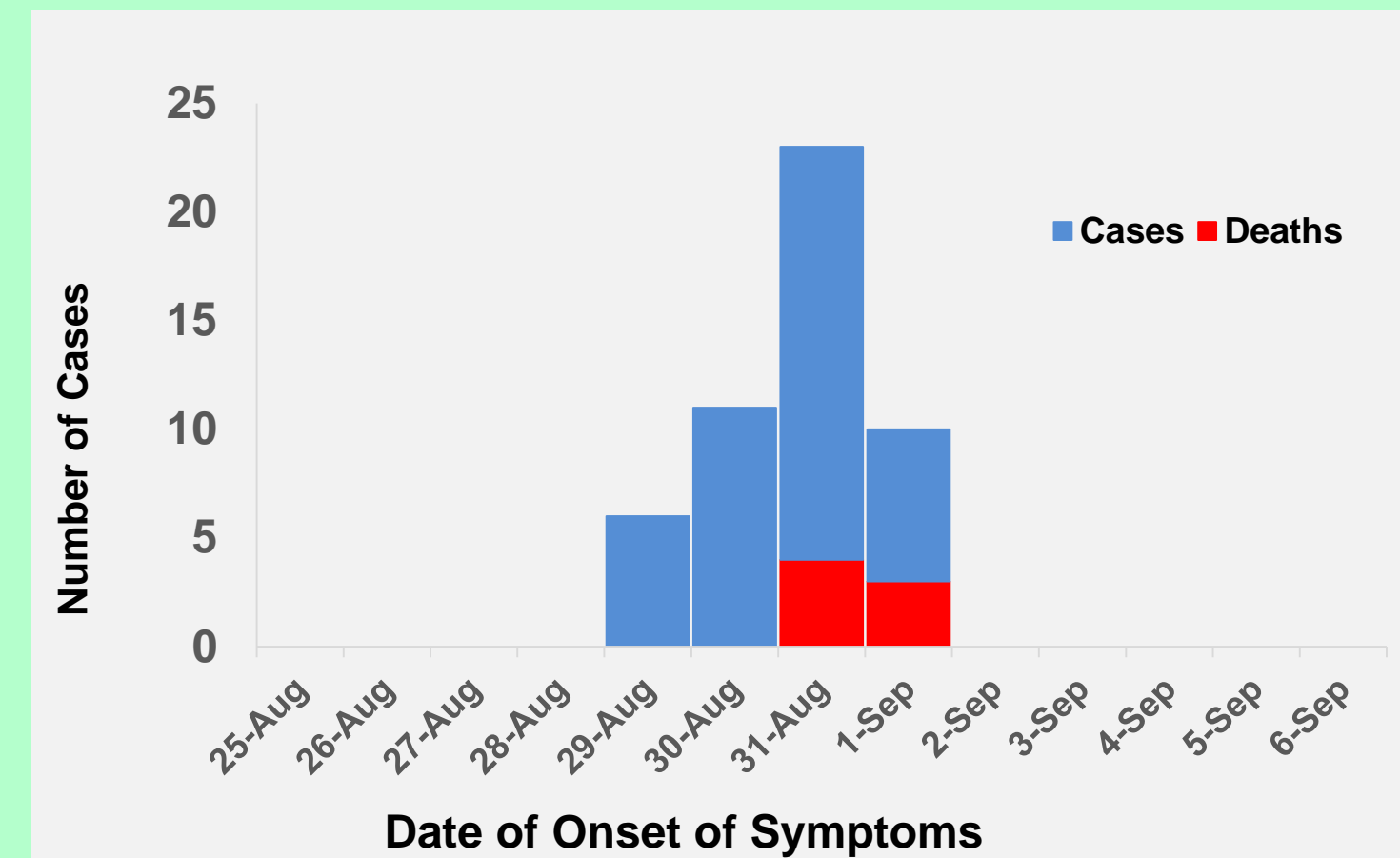


Figure 1: Epidemic curve for cholera cases at Dutsen Abba ward Zaria LGA, Kaduna State, 2015.

Conclusion: Our investigation confirmed a cholera outbreak with a high CFR, especially among females, who understandably take care of the sick at homes. Poor hygienic practices among the populace seem to be the driver for the outbreak.

Public Health Action Taken: We conducted an enlightenment campaign on the importance of boiling drinking water, regular hand washing, and proper waste disposal practices to head of households in affected communities.

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Background: Cholera is still a major health problem in Africa. On August 31, 2015, the Kaduna Ministry of Health received a notification of increase cases of vomiting and diarrhea at Dutsen-Abba in Zaria LGA. We investigated to confirm the outbreak, describe the socio-demographic characteristics and identify possible risk factors for the outbreak.

Material/methods: We defined cases according to the World Health Organization criteria. We reviewed line-lists of case-patients at the health facilities and conducted a descriptive study. We also conducted an unmatched case-control study. We interviewed cases and controls recruited from the community and facility. We analyzed data using Epi-Info-7 and Microsoft Excel-2016.

Reference:
Dalhat MM, Isa AN, Nguku P, Nasir S-G, Urban K, Abdulaziz M, et al. Descriptive characterization of the 2010 cholera outbreak in Nigeria. BMC Public Health [Internet]. 2014 Dec 16 [cited 2016 Dec 25];14(1):1167. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25399402>