INTRODUCTION: Cholera, a key social development indicator remains an acute global public health threat (Dunkle, 2011; Penguele, 2011). Ghana has seen recurrent epidemics in recent years, posing health system challenge. This study aimed to describe, identify the cause and socio-economic factors associated with 2012 cholera outbreak in Osu-Klottey district for policy recommendations.

METHODS: We conducted descriptive and unmatched 1:2 case-control study. Cholera case-patient was person with acute diarrhea with/without vomiting in the district from 1st March to 30th November 2012. We interviewed participants on socio-economic, household hygiene, food, water exposures with structured questionnaires and mapped their residence geospatially. Data was managed and analyzed in Stata 11/SE.

RESULTS: Index case, 23 year old male Nima resident reported at Ridge hospital on 9th March 2012 after eating street-vendors ‘Waakye’. The outbreak caused by Vibrio cholerae O1 El-Tor bio-type, serotype ogawa had two peaks with total of 494 cases with three mortalities (Attack rate: 383/100,000 populations, 0.61% fatality). Age ranged 2-83; mean and median 31 and 27 years, respectively. Majority of cases were from Ayawaso and Osu-Klottey. Prompt case management, infection prevention practices, contact tracing, sensitization campaigns and proper cadaver disposal were instituted.

Monthly income, daily-food-expenditure ranged 10-500 USD and 0.50-25 USD, respectively among participants (237). Logistic regression analysis (95% confidence interval) showed age below 18 years (AOR = 7.69, CI 1.38–42.73), education below tertiary (AOR = 2.96, CI 1.16–7.54), exclusive household toilet facility (AOR = 0.289, CI 0.12–0.70), cold/warm food (AOR = 3.11, CI 1.34–7.23), home-food (AOR = 0.083, CI 0.39–0.18) and community pipe-borne water (AOR = 2.15, CI 1.04–4.44) were associated. Hand washing with soap-water, slum residence, and daily-food-expenditure below 5.0USD and alcohol ingestion showed significant association only with bivariate analysis.

CONCLUSIONS: Sanitary reforms and infrastructural development is crucial to combat recurrence of cholera epidemic, however multi-sectorial approach including oral cholera vaccine for the under-18 year olds would make significant impact.