



Enhancement of Diagnostic Capacity of Shiga toxin-producing Escherichia coli in the Country of Georgia

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STEC situation in Georgia

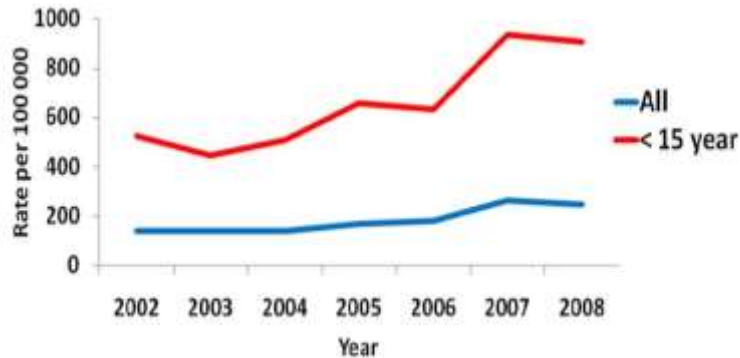


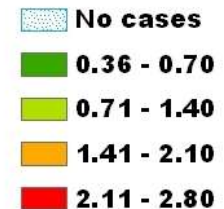
Fig.1 2002-2008 - Incidence rate of diarrhea per 100 000 population among all age groups and under 15 years of age, Georgia



Fig.2 Geographic distribution of HUS rates in the country of Georgia, 2009

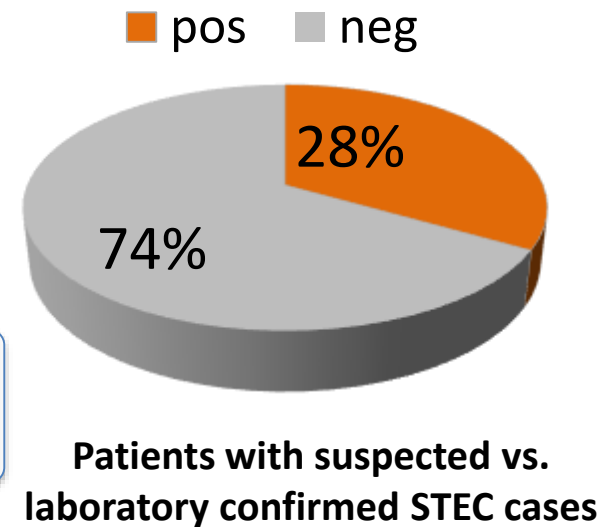
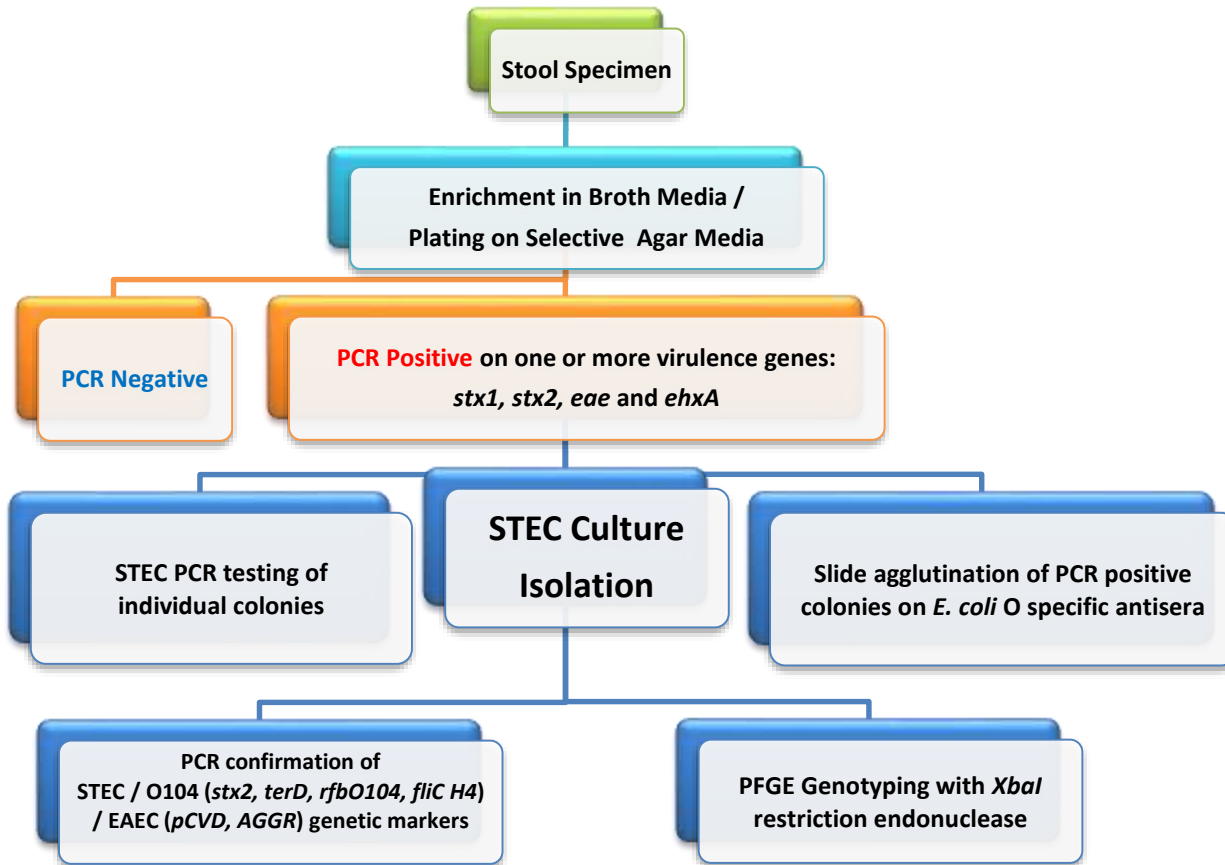
- **STEC-associated HUS was first recognized in Georgia in 2009 following the diagnosis of a cluster of HUS cases in Georgia**
- **Bio-surveillance program launched for monitoring of the occurrence and the etiology of the disease**

HUS rates per 100,000



Chokoshvili et.al 2009

Algorithm for STEC Detection and Culture Isolation



Results and Conclusions

| | Quarter 1 No of Cases (%) | Quarter 2 No of Cases (%) | Quarter 3 No of Cases (%) | Quarter 4 No of Cases (%) | Quarter 5 No of Cases (%) | Quarter 6 No of Cases (%) | Quarters 1-6 |
|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------|
| Number of patients tested for STEC | 12 | 17 | 38 | 4 | 5 | 26 | 102 |
| Patients hospitalized | 7 (58%) | 5 (31%) | 36 (95%) | 3 (75%) | 4 (80%) | 24 (92%) | 79 (77%) |
| Patients with HUS | 2 (17%) | 2 (12%) | 9 (24%) | 3 (75%) | 3 (60%) | 5 (19%) | 24 (24%) |
| Patients positive for stx2 | 0 (0%) | 2 (12%) | 8 (21%) | 2 (50%) | 2 (40%) | 4 (16%) | 18 (18%) |
| HUS patients positive for stx2 | 0 (0%) | 0 (0%) | 5 (56%) | 2 (67%) | 2 (67%) | 2 (40%) | 11 (46%) |
| Patients with any evidence of STEC: stx1/2, eae or ehxA | 0 (0%) | 4 (24%) | 11 (29%) | 2 (50%) | 2 (40%) | 9 (35%) | 28 (27%) |
| STEC isolated | 0 (0%) | 1 | 0 | 2 | 2 | 1 | 6 |
| STEC/EAEC O104:H4 isolated | 0 | 0 | 0 | 2 | 2 | 0 | 4 |

- The laboratory capacity for detection, isolation and genetic characterization of toxigenic E. coli was enhanced.
- Enhanced surveillance resulted in better awareness and increased case reporting