Background: Half of severely injured trauma patients screen positive for alcohol use. Barriers for screening include language and administration time. We developed Computerised Alcohol Screening and brief Intervention (CASI) to address these barriers.

Objectives: To assess drinking patterns in trauma patients using the Alcohol Use Disorder Identification Test (AUDIT), examine self-reported readiness-to-change scores after brief intervention, and to evaluate the CASI feasibility in a trauma population.

Methods: A retrospective study was conducted in a tertiary care university hospital, level I trauma centre. CASI was administered to adult trauma patients (age ≥18), using a bilingual (English/Spanish) tablet. We analysed data using the $\chi^2$ test for independence and descriptive statistics.

Results: Out of 1145 trauma patients, 286 (25%) patients drank more than recommended (AUDIT score ≥8) and 92 (4%) patients were dependent. More Spanish-speaking males compared to English-speaking males drank above recommendation and were dependent. Half of patients reporting an AUDIT ≥8 rated themselves eight or higher on a 10-point readiness-to-change scale. No statistically significant difference ($p>0.05$) in readiness-to-change score was found among age, gender, and language. Trauma patients found CASI easy (92%) and a comfort in use (87%). Median length of implementation time ranged from 3–9 min.

Significance: CASI identified and provided personalised feedback to trauma patients who drank above recommendation. Half of trauma patients with an AUDIT score ≥8 were ready to change their drinking behaviour after CASI administration. Bilingual CASI improved alcohol screening and feasibility by reducing the language barrier and administrative time.