The objective of this study was to estimate the prevalence of Sexually Transmitted Infections and to explore the general understanding of transmission and prevention of these infections among the homeless in Goiânia, Central Brazil.

Methods This is a cross-sectional study. Between August 2014 and June 2015, residents of a public homeless shelter were recruited in Goiânia, Goiás, in Central Brazil. Survey items included demographics and knowledge of STIs. Blood samples were submitted to rapid tests for HIV, syphilis, and hepatitis B (HBV), and a positive result on any one or more of these tests indicated the presence of an STI. This study was approved by the Research Ethics Committee of the Federal University of Goiás.

Results The sample included 209 homeless persons. The mean age of participants was 38 years. The prevalence of STI was 27.8% (58/209), for HIV 3.3% (7/209), syphilis 24.9% (52/209) and hepatitis B 1.0% (2/209). When asked about transmission of HIV, syphilis, and hepatitis B in public restrooms, 4.8%, 8.6% and 10.5% reported that this can occur, respectively. On syringe sharing as an IST transmission route, 78%, 11.5% and 23.9% believe that HIV, syphilis and hepatitis B can be acquired through this parenteral media, respectively. The male condom was investigated as a method of prevention for these sexual infections, and 73.7%, 38.3% and 14.4% affirmed the efficacy of condom use for protection against HIV, syphilis and hepatitis B, respectively. It was found that age (PR: 1.01; 95% CI: 1.00–1.03) and confirming HIV transmission through syringe sharing (PR: 0.47; 95% CI: 0.27–0.81) were statistically significant associated with STI positivity (p<0.05).

Conclusion The dissemination of knowledge about STIs is an important tool for breaking the chain of transmission of sexual infections. In Brazil, access of the homeless population to health and sexuality education services can be improved using mobile health teams, known as Street Outreach Offices.