Factors influencing participation in controlled human infection models: a pooled analysis from six enteric fever studies

Blanche Oguti, MM Gibani, C Darlow, CS Waddington, C Jin, E Plested, D Campbell, C Jones, TC Darton, AJ Pollard

BACKGROUND: Enteric fever is an acute febrile-illness caused by infection with the human-restricted Salmonella serovars Typhi and Paratyphi. Controlled human infection models (CHIM) of S. Typhi and Paratyphi infection are used to accelerate vaccine development and to better understand host-pathogen interactions. The primary motivations for participants to take part in these studies are unknown. We studied participant motivations, attitudes and the factors influencing CHIM study participation.

METHODS: Participant surveys were nested in six enteric fever CHIM studies conducted at a single centre in Oxford, UK, between 2011 and 2017. All eligible participants received one invitation to complete an anonymous, self-administered paper or online survey on either day 28 or 60 after challenge. A descriptive analysis was performed on these pooled data. All studies were included, to minimize selection bias.

RESULTS: Survey response rates varied from 33.0%-86.1%, yielding 201 participants. In the cohort, 113/198 (57.0%) were educated to bachelor’s level, 61.6% were employed, 30.3% were students and 4.6% were unemployed. The most commonly cited motivations for CHIM study participation were a desire to contribute to the progression of medicine (170/201; 84.6%); the prospect of financial reimbursement (166/201; 82.6%) and curiosity about clinical trials (117/201; 57.2%). The majority of respondents (139/197; 70.6%) reported that most people advised them against participation.

CONCLUSION: Motivation to participate in a CHIM study was multi-factorial and heavily influenced by internal drivers beyond monetary reimbursement alone. High educational attainment and employment may be protective factors against financial inducement; however, further research is needed, particularly with CHIM studies expanding to low-income and middle-income countries.