Supplementary Methods

Screening and extraction

References were imported into EndNote (EndNote X9; Clarivate Analytics, Boston, MA, USA) for initial deduplication, then into Rayyan (Rayyan QCRI; Qatar Computing Research Institute (Data Analytics), Doha, Qatar) for further de-duplication. Titles and abstracts were screened independently by two reviewers (LHW 100%, AA/ON 50% each). Full texts were assessed for eligibility by two reviewers (LHW 100%, AA/ON 50% each). Disagreements were discussed and resolved by consensus (LHW/AA/ON). Studies were excluded if: no pathogen breakdown was presented; focus was on a subset of pathogens; infant data were not presented separately from other age groups; sample types other than CSF or blood cultures were included in the total pathogen count; the study focused on infants with specific comorbidities. Studies that did not report either incidence (per 1,000 live births) or aetiology based on >100 positive cultures were excluded.

Quality assessment

The quality of included studies was rated using a nine-item tool adapted from the National Institutes of Health Quality Assessment Tool for Observational Cohort and Cross-sectional Studies (Supplementary Data, online supplemental file 1). Each study was assessed by one reviewer (LHW) and rated as ‘good’, ‘fair’, or ‘poor’ quality. A second reviewer (AA/ON) independently performed quality assessment and data extraction for a randomly sample (15%). Data from studies rated ‘good’ or ‘fair’ were extracted into a spreadsheet, including country, study year, location, culture technique, indication of ‘contaminant’ removal, number of culture positives, incidence, and pathogen breakdown.