**Supplementary file – Study definitions**

BSI was classified as *infection present on admission* (IPOA) if PA was cultured from a blood culture specimen obtained on the day of admission to RCWMCH (calendar day 1), 2 days before admission or the calendar day after admission (calendar day 2) or *healthcare-associated infection* (HAI) if PA was isolated from a blood culture specimen obtained on or after the 3rd calendar day of admission to RCWMCH[1].

*Date of onset of PABSI*: The date on which the first positive blood culture for PA was performed.

*Site of infection:* The clinical site of infection as determined by the attending clinician

*Antipseudomonal antibiotics* included gentamicin and amikacin (aminoglycosides), piperacillin (antipseudomonal penicillin), ciprofloxacin (quinolone), ceftazidime and cefepime (cephalosporins), meropenem and imipenem (carbapenems), and colistin (polymyxin).

A PA isolate was classified as (1) *multidrug-resistant (MDR)* if it was non-susceptible to at least one agent in three or more antipseudomonal antibiotic categories, (2) *extensively drug-resistant (XDR)* if it was non- susceptible to at least one agent in all but two or fewer antipseudomonal antibiotic categories, or (3) *pan drug-resistant (PDR)* if it was non-susceptible to all agents in all antipseudomonal antibiotic categories[2].

*Appropriate empiric antibiotic therapy:* antibiotic therapy with *in vitro* activity against the PA isolate that was commenced at the onset of bloodstream infection before the antibiogram of the isolate was known.

*Definitive antibiotic therapy:* antibiotic therapy with *in vitro* activity against the PA isolate that was administered after the antibiogram of the isolate was known.

*Recurrent bloodstream infection:* The re-isolation of PA on blood culture more than 14 days after completion of effective antibiotic therapy for the initial or previous PABSI.

*Central venous access device (CVAD):* An indwelling venous catheter that was inserted into the central venous system with the catheter tip positioned within the superior/inferior vena cava or right atrium, such as Hickman, Port-A-Cath, or central venous pressure (CVP) catheters

*Fever:* An axillary temperature greater or equal to 38 degrees Celsius.

*Anaemia:* Blood haemoglobin concentration <11 g/dl [3].

the onset of bloodstream infection before the antibiogram of the isolate was known.

HIV status was classified as (1) *HIV-infected* in a child <18 months of age with a positive HIV DNA PCR result confirmed by either a quantitative HIV RNA PCR or repeat HIV DNA PCR on a separate sample, or a child ≥18 months of age with 2 positive serological test results (HIV ELISA or HIV rapid test) or a positive HIV DNA PCR result confirmed by either a quantitative HIV RNA PCR or repeat HIV DNA PCR test, (2) *HIV-uninfected* ina child with a negative HIV serological test (HIV ELISA or HIV rapid test) or a negative virological test for HIV (e.g. HIV DNA PCR) or (3) *Unknown* in a child with no history of HIV testing, no record of HIV testing in the NHLS laboratory database and whose mother’s HIV status was unknown.

*Moderate and severe underweight* were defined as weight-for-age Z-score (WAZ) between -2 and -3 standard deviations (SD) and a WAZ <-3 SD below the median WHO growth reference standards, respectively.

*Coagulopathy:* A prothrombin time of ≥2 seconds, an activated partial thromboplastin time of ≥60 seconds or a fibrinogen level of <2 µmol/L.

*Respiratory failure:* the need for mechanical ventilatory support.

*Renal dysfunction:* aserum creatinine concentration above the normal age-related range [4, 5].

*Liver dysfunction:* a ≥2-fold increase of serum aspartate aminotransferase and/or serum alanine aminotransferase concentration and/or a total bilirubin in a child more than 28 days old of >70 µmol/L [6, 7].

*Shock*: The presence of any one of the following criteria – hypotension for age; or any two of the following signs of inadequate tissue perfusion such as prolonged capillary refill, oliguria, metabolic acidosis or elevated tissue lactate.

References

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