Aims We aimed to conduct a case series review of severe sepsis episodes in patients with sickle cell disease at a large regional paediatric centre in the UK. We aimed to examine sickle cell disease prior to episode, compliance with sepsis prevention, type of infection including the organism isolated, sequelae, and outcome.

Methods Retrospective cumulative case series of severe sepsis admissions over the last 5 years among our cohort of patients with sickle cell disease at a large paediatric regional centre in the UK. Data was extracted from the department’s sickle cell database and from clinical records.

Results We present 5 cases of severe sepsis among our regional cohort of 388 children with sickle cell disease. The patients presented within a 2 year period between May 2015 and May 2017. The ages of the patients ranged from 2 to 11 (median age 3 years). It was the first admission to hospital in 3/5 cases. One patient was on hydroxyurea, and all 5 had a normal TCD. Four out of 5 were compliant with penicillin and had received childhood vaccines, and 3/5 had received the polysaccharide pneumococcal vaccine. The organisms isolated were Strep. pneumoniae (3 cases), E. coli (1 case), and Salmonella durham (1 case). Sepsis was often rapidly progressive and presented atypically. Two of the 5 patients died following sepsis episode. Both had pneumococcal sepsis. There was significant morbidity in survivors. Complications included osteomyelitis (2 cases), pathological fracture (1 case), hearing impairment and central diabetes insipidus secondary to meningocencephalitis (1 case) and necrosis of the fingertips. In the pneumococcal cases, either patient was not covered with vaccination, or the organism had partial resistance to penicillin.

Conclusion Despite advances in recent years following introduction of sepsis prevention measures, sepsis remains an important cause of mortality and morbidity in paediatric patients with sickle cell disease. Sepsis often presents rapidly and atypically in this group of patients.

Background and aims Allogeneic haematopoietic stem cell transplantation (HSCT) is widely used to treat non-malignant conditions. Mixed chimerism (MC) is an increasingly observed phenomenon in such cases. This study’s purpose was to explore predictors of MC and graft failure, variations in outcome between patients with complete chimerism (CC) and MC, and the utility of lineage-specific chimerism in predicting graft outcomes.

Methods Our patient sample included 284 HSCTs performed in children with non-malignant conditions between July 2000 and March 2017 at our centre. The following variables were considered in each patient: gender, age at transplant, date of transplant, disease, conditioning regimen, T-cell depletion, donor and stem cell source, alive/deceased status, chimerism status. Variables were assessed using univariate and multivariate logistic regression analysis. The relationship between myeloid