Background Alder Hey Children’s Hospital has a tertiary acute general paediatric service with a very high number of admissions. In the context of reduced community-based support for mothers with young infants to establish and sustain breastfeeding or other appropriate infant feeding strategies, we were concerned that some of our neonatal admissions were inappropriately exposing infants to potentially life-threatening infections, whilst having an adverse impact on mothers and their families. We therefore conducted an audit to describe the population of neonates < 7 days admitted to our acute general paediatrics services following discharge from maternity units in Merseyside, North West England. The aim was to identify potential targets of intervention that could avoid unnecessary admissions.

Objectives To evaluate causes of admission to acute general paediatric services for infants < 7 days at Alder Hey Children’s hospital to ascertain proportion with feeding problems amenable to community-based support.

Methods A retrospective audit of all infants less than 7 days of age admitted to Alder Hey Children’s hospital, Liverpool from March to September 2019. All the infants were born and discharged from maternity units in Merseyside county, UK. Anonymised data was extracted from the electronic clinical records by three members of the clinical team. Implausible entries were discussed with all the audit team members at monthly meetings and excluded.

Results During the 6 months, there were 411 admissions, 160 (39%) were surgical, and 251 (61%) were medical. The majority of the medical admissions were to the acute general paediatric services 241 (59%). Of these 93 (23%) had feeding problems. The majority were exclusively bottle-fed 42 (45.2%), 35 (37.6%) were exclusively breast fed and 16 (17.2%) were mixed feeders. The majority had jaundice 41 (44%) but only half of them required phototherapy (21, 22.6%) and a quarter (23, 24.7%) underwent a septic screen. However, 29 (31.2%) presented solely with poor feeding.

The majority of infants with poor feeding didn’t require any investigations or treatment 44 (47.3%). The mean birth weight of 3.19 kg (SD 0.48), mean admission weight of 3 kg (SD 0.48) and mean discharge weight was 3.12 kg (SD 0.46). The mean difference between birth weight and admission weight was 7.3% and only 12 (12.9%) had lost >10% birth weight at admission.

Conclusions Although feeding problems may be a sign of severe illness among infants, our audit showed that nearly a quarter (23, 24.7%) underwent a septic screen. During the 6 months, there were 411 admissions, 160 (39%) were surgical, and 251 (61%) were medical. The majority of the medical admissions were to the acute general paediatric services 241 (59%). Of these 93 (23%) had feeding problems. The majority were exclusively bottle-fed 42 (45.2%), 35 (37.6%) were exclusively breast fed and 16 (17.2%) were mixed feeders. The majority had jaundice 41 (44%) but only half of them required phototherapy (21, 22.6%) and a quarter (23, 24.7%) underwent a septic screen. However, 29 (31.2%) presented solely with poor feeding.

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Conclusions Although feeding problems may be a sign of severe illness among infants, our audit showed that nearly a third of infants who were admitted in the first week of life to our acute tertiary general paediatric services, did not have any other features of severe illness. These admissions expose mothers and their infants to hospital acquired infections whilst disrupting the ‘rooming-in’ process that enhances the establishment of breastfeeding. These admissions could potentially be averted by optimising community infant feeding support services and discharge criteria from maternity care in the region. Engagement with these services will be a crucial next step in developing strategies to enhance infant feeding support particularly in impoverished communities in the region.