growth measurement and growth chart plotting requires improvement.

**P468** ADMISSION TEMPERATURE OF OUTBORN NEWLY BORN INFANTS FOLLOWING NEONATAL TRANSPORT: A LITERATURE REVIEW

1,2Katie Cunningham, PF Colm O'Donnell, 1Lisa K McCarthy. 1National Maternity Hospital, Holles Street, Dublin, Ireland; 2School of Medicine, University College Dublin, Dublin, Ireland

10.1136/archdischild-2019-epa.804

**Background** Infants born at hospitals without neonatal intensive care (NICU) facilities that are transferred to a NICU after birth are referred to as outborn. Ideally all outborn infants are transferred by dedicated neonatal transport services. Abnormal temperature in newborn infants is associated with increased morbidity and mortality. It is an important function of transport teams to maintain normal body temperature (36.5°C–37.5°C) during transport. The aim of this review was to assess the prevalence of abnormal admission temperature in outborn infants following neonatal transport.

**Methods** We searched PubMed (NCBI) and Web of Science from inception to April 2018 using the following search terms; (newborn OR neonate OR 'new born' OR 'premature infant' OR 'preterm infant') AND ((temperature OR hyperthermia) NOT ('therapeutic hypothermia' OR 'passive hypothermia' OR 'hypothermia, induced')) AND ('interhospital transport' OR 'inter-hospital transport' OR 'interface transport' OR 'inter-facility transport' OR 'neonatal transport'). We planned to include randomised trials, case-control studies, prospective and retrospective cohort studies and case series. We excluded studies of infants undergoing therapeutic hypothermia and articles published in a language other than English.

**Results** The initial search identified 66 articles. Twenty articles met inclusion criteria. A further 9 were identified from reference lists. Studies spanned a 45-year period (1973–2018). Definitions of hypo- and hyper-thermia varied considerably, as did patient inclusion criteria with combinations of preterm and term infants, and infants with or without congenital anomalies. Specialised transport services featured in 16 (55%) studies, with a reported incidence of hypothermia ranging from 0.2%–70%. There was significant correlation between birth weight and admission temperature, and gestation and admission temperature, such that incidence of hypothermia on admission increased with decreasing weight and gestation.

The reported incidence of hyperthermia ranged from 0%–19%. Death was more commonly seen in infants who were hypothermic on admission, with moderate hypothermia (32°C–36°C) identified as an independent risk factor for death. Mortality rates appeared to improve when transfers were performed by neonatal transport teams.

**Conclusion** Maintaining normal body temperature in outborn newly born infants during neonatal transport continues to pose challenges for neonatal transport teams. Risk factors for hypothermia and associated adverse outcomes include prematurity, very low birth weight and transfer by non-specialised transport teams. This is especially so in developing countries without established transport services. Hyperthermia also occurs, but is less frequently reported. Using standardised definitions, further study examining temperature in neonatal transport is required.