

A National Survey of Thermal Care for Very Preterm Infants at Birth

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Dear Editor,

Abnormal temperature is an independent risk factor for death in preterm infants.¹ The Neonatal Task Force of the International Liaison Committee on Resuscitation (ILCOR) advise a combination of delivery room (DR) interventions to reduce heat loss and prevent hypothermia after birth. In 2015, ILCOR recommended waiting one minute from birth before clamping the umbilical cord in uncompromised preterm infants.² Since the introduction of delayed cord clamping (DCC), the time to initiate warming interventions has increased at one Irish neonatal unit³, and the incidence of hypothermia has increased from 6% to 54%⁴.

We aimed to describe the routine thermal care provided to very preterm infants after birth in level 2 and 3 neonatal units in Ireland in the era of DCC.

In October 2020, we emailed a 15-question survey to Consultant Neonatologists / Paediatricians and Advanced Neonatal Nurse Practitioners (ANP) at the ten level 2 and level 3 hospitals in Ireland where babies < 32 weeks are routinely born. We collected data on the warming interventions routinely used, the timing of CC and the time to initiation of warming interventions for infants born before 32 weeks' gestation. If no reply was received within one week, we followed up with a telephone call.

We received responses from 9 of the 10 units surveyed (3 responded to email, 6 with follow-up phone call). Radiant warmers, hats and a plastic bag/wraps are used at all hospitals. Thermal mattresses and heated humidified gases are used at 3 and 2 hospitals respectively. None of the centres routinely use a mobile resuscitation trolley. DCC is routinely performed at 8 centres; after 45 seconds at 2 hospitals and after 60 seconds at 6 hospitals. No hospital reported initiating thermal care before the cord is clamped.

The ambient temperature of the DR is routinely measured at 6 hospitals. Infant temperature is measured in the DR at 3 hospitals. Infant temperature is measured at the axilla on admission to the NICU at all centres; the Welch Allyn Sure Temp is used at 8 hospitals and an electronic digital thermometer is used at one.

While the majority of neonatal units in Ireland now practice DCC for very preterm infants, none routinely provide thermal care during DCC. This may be because there is a paucity of research examining the efficacy of warming interventions immediately after birth and before cord clamping; and the resuscitation guidelines have not changed to consider thermal care during DCC. Recent studies at our centre have reported an increase in time to initiate warming interventions and an increase in admission hypothermia in very preterm infants since the introduction of DCC.^{3,4} In this new era of DCC, the question of when to initiate thermal care in the DR deserves consideration. Examination of the feasibility and efficacy of initiating thermal care before the cord is clamped is warranted, and the resuscitation guidelines may need to be revised to reflect this.

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