

Therapeutic Hypothermia Protocol for a limited resource setting

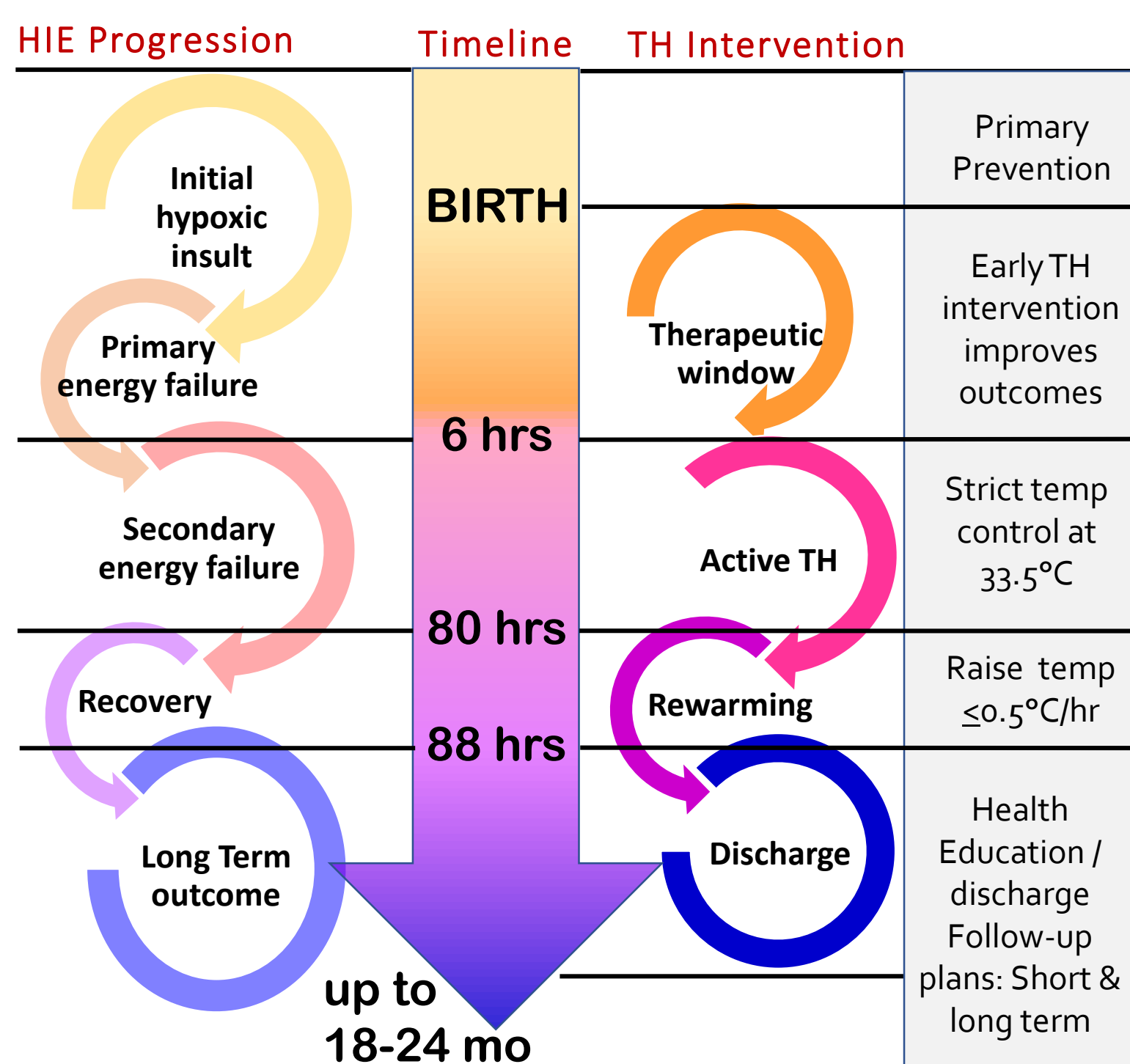
Background

- Neonatal mortality rate in Namibia currently stands at 19/1000 live births ¹
- 39.8% of neonatal deaths in Namibia are attributed to birth asphyxia ²

Aim

- To standardise practice of Therapeutic Hypothermia (TH) using whole body cooling (WBC) in a limited resource setting and align care with international evidence based best practice
- Provide safe and effective treatment for term infants (≥ 37 weeks) with Hypoxic Ischaemic Encephalopathy (HIE) to minimize the risk or severity of negative short term and long term mortality and neurodevelopmental outcomes

Timeline for HIE and TH



Limitations of limited resource settings

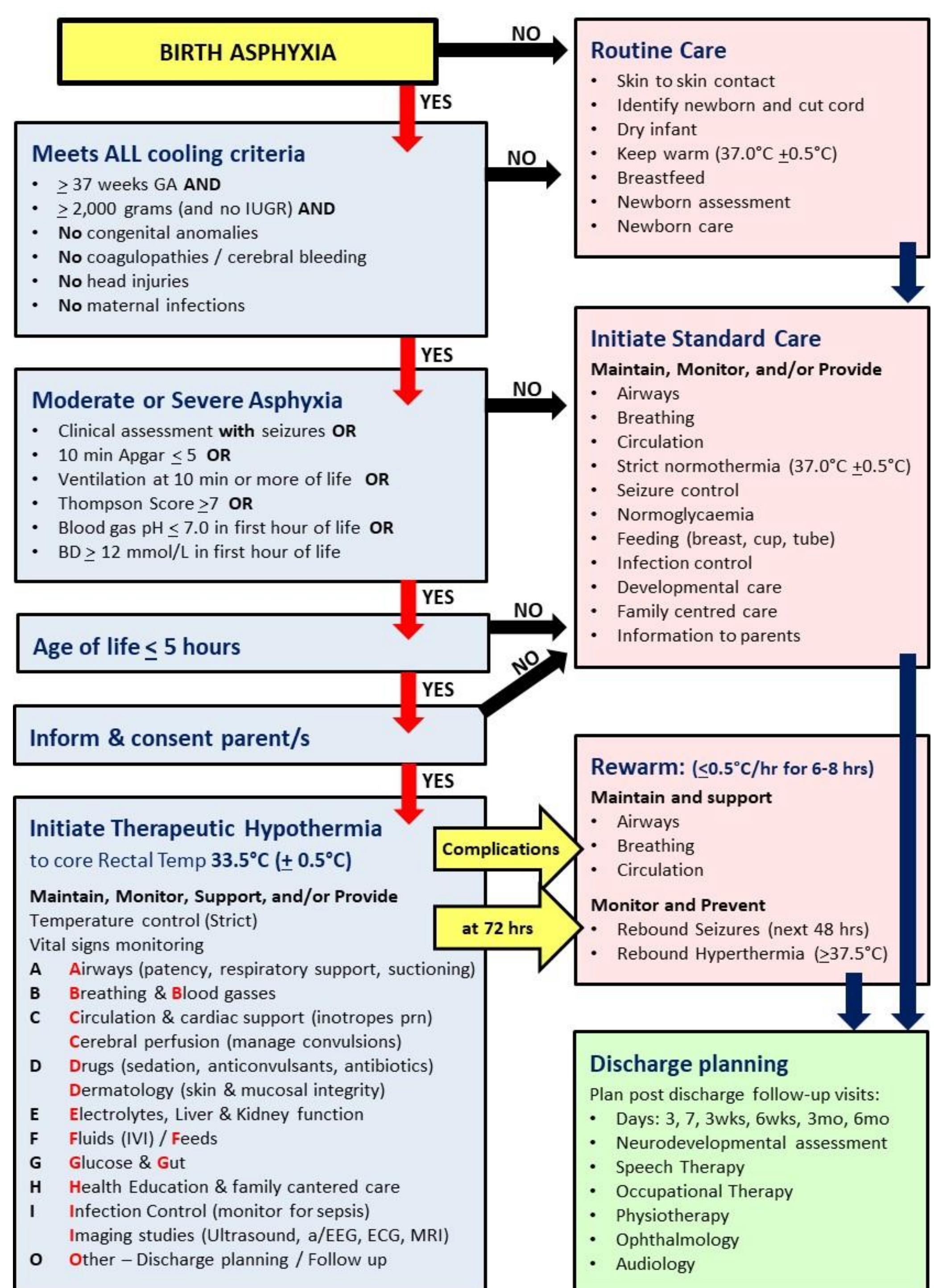
- Poor antenatal and obstetric history may have a confounding negative effect on longterm outcomes⁴
- Multidisciplinary team involvement and intensive care support are necessary to ensure optimal TH management but are unavailable in some settings
- The effect of sepsis on outcomes of TH is unknown³

TH in asphyxiated newborns

TH maintains core body temperature at 33.5°C for 72 hrs in newborns (<6hrs of age) with birth asphyxia for the benefit of:

- Significant reduction in death or major neurodevelopmental disability in survivors of TH [RR 0.75 (95% CI 0.68-0.83)] ³
- Significant reduction in mortality after receiving TH [RR 0.75 (95% CI 0.64-0.88)] ³
- Significant reduction in severe neurodevelopmental disability after receiving TH [RR 0.24 (95% CI 0.06-0.92)] ³

Protocol for a limited resource setting



References: [1] UNICEF Namibia. (n.d.). Survival of Newborns & Mothers. Retrieved from https://www.unicef.org/namibia/health_nutrition_13649.html; [2] Ministry of Health and Social Services. (n.d.). Namibia National Strategy for Women's, Children's & Adolescents' Health [DRAFT]; [3] Jacobs, S., Berg, M., Hunt, R., et al. (2013). Cooling for newborns with hypoxic ischaemic encephalopathy. *Cochrane Database of Systematic Reviews*(1). doi:10.1002/14651858.CD003311.pub3; [4] Flemmer, A. W., Maier, R. F., & Hummler, H. (2014). [Treatment of neonatal asphyxia with a special focus on therapeutic hypothermia]. *Klin Padiatr*, 226(1), 29-37. doi:10.1055/s-0033-1361104

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