

Evaluating an Early Warning Tool: setting the standard of safe care for infants with complex heart conditions at home.

Great Ormond Street Hospital for Children
NHS Foundation Trust

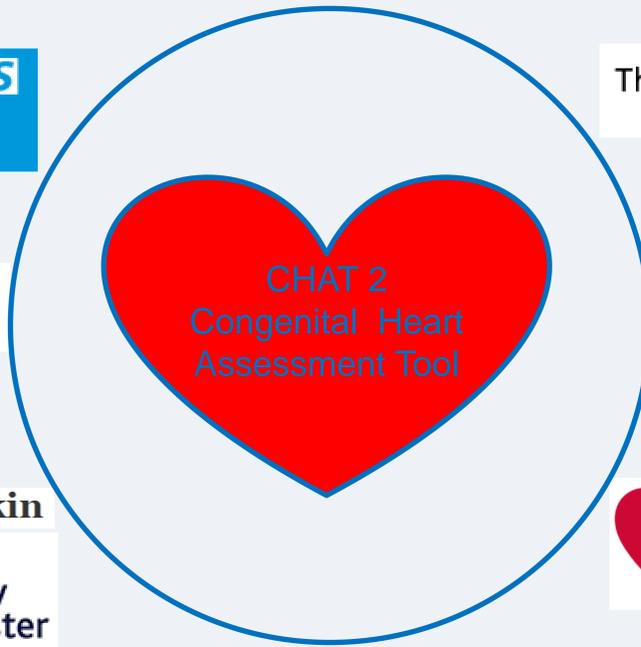
The Newcastle upon Tyne Hospitals
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Little Hearts Matter
Half a heart, not half a life

The Aim

The aim of the collaborative improvement project is to implement in the clinical setting the CHAT 2 Early Warning Tool for infants with complex congenital heart disease home across 4 national cardiac children's centres. The tool is expected to be part of a bundle of care for a national home monitoring programme (HMP), including a training and education programme. The tool will support decision making by families and children's community teams to improve safety, quality of care and standardize care provision

Evaluation

- Organisation of key domains into mutually agreed visual formatted tool
- focus group work with parents and stakeholders acceptability to families, understanding of the tool
- trial of the tool using retrospective clinical record review
- scenario based (table top) with stakeholders and clinical experts
- correctly triggers with escalation plan in the clinical setting within local HMP bundle

Progress to date

Standardizing & review of the HMP at each centre
Review of tool and discussion against national guidelines
Scenarios to trial tool across professional groups
Clinical simulation scenario (Worcester)- very positive event using telephone consultation & discharge preparation. Outcomes included training time & package for tool use, changes to the tool layout, how would it sit in the discharge bundle

Planned

Focus & feedback work with parents - acceptability, design, training & education support plan, understanding of words used (Little Heart Matters)

Background

Congenital heart disease (CHD) affects 7/1000 UK live births (Knowles 2005). National CHD data shows there were 888 operations/interventions in the neonatal group (CCAD 2016), with 30 day survival of 98.2%. ~150 infants a year have extremely complex CHD associated with the highest risk of mortality and morbidity. Home Monitoring Programs (HMP) have been shown to reduce the risk of mortality & morbidity in this group (Ghanayem 2004, Giardini 2015) and there is evidence of the vigilance of families / carers in optimising the outcome of infants in the first year of life (Rempel, 2012, Gaskin 2016).

Congenital Heart Assessment Tool 2 (CHAT2) HCP version						
Patient Name:	Diagnosis:	Person calling:	Date:			
			Time:			
Behaviour	<input type="checkbox"/> Behaves normally e.g. content, smiles <input type="checkbox"/> Stays awake or awakens quickly (as normal) <input type="checkbox"/> Normal crying, easily soothed e.g. by feeding, comfort	<input type="checkbox"/> Quieter than usual <input type="checkbox"/> Sleeping more than normal or less easy to settle <input type="checkbox"/> Less responsive during normal activity <input type="checkbox"/> Slightly irritable, unable to comfort	<input type="checkbox"/> Not responding to usual interactions <input type="checkbox"/> Does not wake or if roused does not stay awake <input type="checkbox"/> Weak or floppy <input type="checkbox"/> High-pitched or continuous cry or no crying at all			
Skin Colour Warmth	<input type="checkbox"/> Your baby's usual colour of skin, tongue, especially lips and nails <input type="checkbox"/> Your baby's usual warmth of hands and feet <input type="checkbox"/> Normal body temperature between 36.5 – 37.5 °C	<input type="checkbox"/> Blue tinge around mouth or finger tips, paler than usual, or skin is mottled <input type="checkbox"/> Sweaty skin or cooler hands and feet than usual <input type="checkbox"/> Temperature more than 37.5 – 38 °C or below 36 °C	<input type="checkbox"/> Very mottled, pale, blue or grey skin <input type="checkbox"/> Very cold, sweaty or clammy <input type="checkbox"/> Very puffy eyes, hands, feet or tummy <input type="checkbox"/> Very sunken 'soft spot' <input type="checkbox"/> Temperature more than 38°C			
Breathing	<input type="checkbox"/> Usual breathing rate and effort for your baby <input type="checkbox"/> No cold symptoms, such as runny nose	<input type="checkbox"/> More breathless, faster or slower breathing rate <input type="checkbox"/> Has cold symptoms, runny nose, cough, noisier breathing than normal <input type="checkbox"/> Sucking in skin below ribs or in the neck area more than normal <input type="checkbox"/> Nasal flaring	<input type="checkbox"/> Not breathing or struggling to breathe or exhausted, ◦ cannot cry <input type="checkbox"/> Very noisy breathing, grunting or gasping <input type="checkbox"/> Severe 'sucking in skin' below ribs or tracheal tug, head bobbing			
Oxygen saturation	<input type="checkbox"/> Oxygen saturation range normal for your baby (Add individual details) <input type="checkbox"/> 70 – 75 % Oxygen saturation	<input type="checkbox"/> Oxygen saturation above or below the range for your baby on two consecutive readings 30 minutes apart	<input type="checkbox"/> If oxygen saturations constantly above or below the normal range for your baby <input type="checkbox"/> Or you are unable to obtain an oxygen saturation reading			
Feeding Nappies	<input type="checkbox"/> Baby feeding normally <input type="checkbox"/> Regularly wet and dirty nappies <input type="checkbox"/> Wakes for feeds and is hungry <input type="checkbox"/> No vomits, unless small posits are normal <input type="checkbox"/> Weight increasing as expected: (Add individual)	<input type="checkbox"/> Any diarrhoea or vomiting, including vomit after medications or not keeping feeds down <input type="checkbox"/> Struggling to feed, taking longer to feed, breathless on feeding, or sweaty during feeding <input type="checkbox"/> Nappies not wet or dirty with usual nappy changes <input type="checkbox"/> Has lost weight or weight unchanged or more weight increase than expected	<input type="checkbox"/> Vomiting or diarrhoea much more than normal (or twice in a row) <input type="checkbox"/> Cannot feed <input type="checkbox"/> Dry nappies for 4 hours or more <input type="checkbox"/> Blood in nappy			
Parent response	<input type="checkbox"/> Parents/ carers happy with their baby	<input type="checkbox"/> Parents / carer concerned about their baby <input type="checkbox"/> There may be no visible changes in the baby condition	<input type="checkbox"/> Extreme worry - Baby very unwell/not breathing <input type="checkbox"/> Parents Start Basic Life Support assessment			
	<div style="background-color: green; color: white; padding: 5px; text-align: center;">Carry on normal care</div>	<div style="background-color: orange; padding: 5px; text-align: center;">Parents Contact Cardiac Ward</div>	<div style="background-color: orange; padding: 5px; text-align: center;">Advise to Contact Cardiac Nurse Specialist Team</div>	<div style="background-color: orange; padding: 5px; text-align: center;">Advise to Attend Clinic for Review</div>	<div style="background-color: orange; padding: 5px; text-align: center;">Advise to Attend Local Hospital</div>	<div style="background-color: red; color: white; padding: 5px; text-align: center;">Advise parents to ring 999 straight away</div>

230617/CHAT2/HCP Version/V7/KG