Optimal cut-offs for sensitivity and specificity for the maximum proposed National PEWS at 24 and 12 hours prior to CDE was ≥6, and at 6 and 4 hours prior, was ≥5.

**Conclusion** All PEWS evaluated, including the National PEWS demonstrated excellent discrimination for CDEs. This single centre study supports the widespread roll out of proposed National PEWS, for predicting the occurrence of CDEs in hospitalised children, but further validation is required in other settings.

## Abstracts

### 1055 A CASE FOR LEVELLING-UP THE LOCAL: AN AUDIT OF CRITICAL CARE PATIENTS AT A LONDON DGH

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10.1136/archdischild-2022-rcpch.589

**Aims** Provision of paediatric Critical Care is divided into three levels: Critical Care Level 1 (CCL1) accounts for most District General Hospitals (DGHs), Critical Care Level 2 was previously defined as High Dependency Unit (HDU) care, and Critical Care Level 3 refers to hospitals with a Paediatric Intensive Care Unit (PICU).

Hospitals are allocated a level and are commissioned to care for patients who fulfil criteria in accordance with that level.

**Methods** Data was collected through a variety of platforms: the Emergency Department database was searched to identify patients who required treatment for a prolonged period in the Resuscitation Room, and the ward matron’s list of CCL2 patients, ward handover lists and local Morbidity and Mortality meeting lists were reviewed.

CCL2 patients were identified based on the NHS England Service Specifications for Paediatric Critical Care. Physical patient records were requested and screened.

**Results** Over the 13 month period reviewed, 108 out of a total of 2338 ward admissions fulfilled CCL2 criteria. 79 of these (73%) occurred in period between November 2019 and September 2020. Secondary outcomes looked at reasons for satisfying CCL2 criteria and duration of time cared for as a CCL2 patient.

CCL2 patients were managed in an appropriate setting with appropriate availability of trained staff, medical equipment, and expertise. This data shows that 88% of patients qualifying for higher-level care were managed in this CCL1 unit; the majority over the busy winter period when CCL2 and CCL3 units are saturated. This implies an argument for enhancing existing CCL1 services. Commissioned provision of infrastructure, training and support would help to facilitate effective and safe care of these patients within the CCL1 locality, where they commonly present and are managed. Meeting the needs of this patient population where it occurs will improve continuity of care for those local to CCL1 units, reduce the need for risky patient transfers, reduce costs within the network and, most importantly, have a considerable positive impact upon quality of care for these critically unwell patients.

### 827 LONG-TERM MILRINONE THERAPY IN CHILDREN WITH DCM PHENOTYPES: SAFETY, EFFICACY, AND IMPACT ON RECOVERY OF CARDIAC FUNCTION

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10.1136/archdischild-2022-rcpch.590

**Aims** The management of paediatric decompensated dilated cardiomyopathy (DCM) is challenging. Mechanical circulatory support (MCS) and heart transplantation (HTx) are lifesaving but limited by availability, safety, and suitability in small children. Milrinone has unique inodilatory properties useful in acute heart failure (HF) treatment but evidence for its prolonged use is lacking. Our objective was to evaluate the safety and efficacy of long-term milrinone therapy and its impact on the recovery of cardiac function in children with severe HF due to DCM.

**Methods** A single-centre retrospective study (2008-2021) of children (<16 years) with severe HF due to DCM treated with intravenous milrinone for ≥7 consecutive days. Patients with structural heart disease were excluded. Escalation to MCS and HTx occurred in the event of deterioration. Clinical evaluation, serial echocardiograms and biomarkers assessed recovery.

**Results** Forty-eight patients were identified, with a median age of 3.3 months (Interquartile range IQR 1.0-18.1), a weight of 5.7kg (IQR 4.3-10.1) and an ejection fraction of 25.7% (±9.4). All patients were admitted to intensive care and 83% required invasive ventilation. Nineteen were male (40%) and 38% weighed under 5kg. Myocarditis (n=19) and idiopathic DCM (n=17) were the most common diagnoses, four others had defined causative genetic mutations and three had anthracycline-induced DCM (table 1).

The median milrinone infusion duration was 24 days (IQR 10-48, range 7-290). During this period, paired fractional shortening (FS) significantly increased from 12.4% (±4.99) to 16.8% (±4.39) (p<0.001) whilst concurrently NT-proBNP dropped from 38201 to 4727 (p<0.001) in patients who later recovered echocardiographic cardiac function. The only recorded adverse effects of long term milrinone infusion were line infections (n=4) and hypotension (n=1), neither of which led to the cessation of therapy. Seven patients required escalation to MCS, five of which were ventricular assist devices (VAD).