subgroup has their own different pathogenetic patterns and therefore may respond to anti-complement therapies differently.¹ Current strategies involve treatment with RAAS blockade, immunosuppressive medication and complement inhibition, albeit with a lack of randomised controlled trials for any of the above.

Objectives The objective of establishing this clinic, designed to assess and manage children with C3 glomerulopathy, is to evaluate the efficacy of a harmonised treatment approach. Thereafter, attempt to define management therapies and review who may benefit from enrolment in clinical trials with complement inhibitors.

Methods Sixteen children with the diagnosis of C3 glomerulopathy were followed in the last two years at GOSH. Clinical, histological characteristics, estimated glomerular filtration rate (eGFR), albuminuria, serum C3 and C4, genetic and biochemical analysis were assessed before and after treatment.

Results At onset, the median [IQR] age was 9.5 [8.0–11.5] years, with an eGFR of 108 [88–129] mL/min/1.73m², serum albumin of 26 [23–35] g/L and urine albumin:creatinine ratio of 616 [262–825] mg/mmol. All patients had microhaematuria and five presented with macrohaematuria. Oedema was present in 69%. C3/C4 levels were low in 93%/37% of the patients and C3 nephritic factor was positive in four cases (25%). The majority (15/16) of patients demonstrated immune complex glomerulonephritis with C3 predominance associated with IgG, C1q and IgM positivity. Electron microscopy revealed that only 3 cases had intra-membranous lesions.

Twelve were treated with oral prednisolone, five of whom also received mycophenolate mofetil (MMF) and one with cyclophosphamide.

At twelve months of follow-up, all patients were on ACE inhibitors (ACEI) with improvement of albuminuria in all, except one (table 1). Six patients continue with prednisolone, eight with MMF and two commenced Tacrolimus (one due side effects of MMF and other due to renal impairment).

At present, three patients are in remission, two who were treated with immunosuppressive medication, the third was only treated with ACEI and had spontaneous recovery.

One patient is in stage 3 CKD and two patients are in ESRD. These latter two were treated with Rituximab without success.

Abstract 1704 Table 1

	Serum Albumin (g/L)	eGFR (mL/min/1.73m ²)	Urine Albumin: Creatinine (mg/mmol)
At 6 month follow up (Median[IQR ^a], N ^b)	-	116 [96–140], 15	153 [88–331], 15
At 12 month follow up (Median[IQR ^a], N ^b)	-	114 [102–128], 13	155 [80–181], 11
Most recent follow up (Median[IQR ^a], N ^b)	37 [32–41], 14	112 [96–133], 14	69 [14–315], 15

Table of outcomes: ^aIQR = interquartile range, ^bN=number of values

Conclusions Establishing this clinic, learning to identify which of these clusters the patients fall into and collating further data will help predict treatment response and therefore create more personalised management plans and guide prognosis.

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Association of Paediatric Emergency Medicine

1705

THE IMPLEMENTATION OF PEDIATRIC EARLY WARNING SYSTEM IN SIDRA PEDIATRIC EMERGENCY, QATAR

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10.1136/archdischild-2021-rcpch.806

Background Establishing paediatric early warning system in a paediatric emergency department is a complex process and more so with COVID-19 pandemic. PUMA {PEWS Utilisation & Morality Avoidance} is a qualitative system assessment survey tool which assess the strengths and weaknesses of the patient care safety processes and systems within a department.¹ This model draws together evidence from two theoretically informed systematic reviews.^{1 2}

Objectives To establish a Paediatric early warning system in the Sidra Paediatric Emergency Department

Methods The Sidra Medicine ED Quality group surveyed online 200 staff in the department (physicians/nursing team) focussing on processes of monitoring patients and documentation, communication amongst the team and parents, staff empowerment, situational awareness, escalation processes and response to deteriorating child in the three broad domains of Detect, Prepare, and Act with further seven smaller domains (monitor, record, interpret, review, prepare, escalate and evaluate) (figure 1). Survey analysis enabled us to review our current practice, identify areas that are working well, and areas for improvement.

Results The online survey platform helped us to achieve 85% return rate and to identify seven areas for improvement in our system. The spider diagram (Figure 2) illustrates the areas of strength and weakness in the seven domains of Detect, Prepare, and Act. We collaborated with Cerner team, created automatic documentation of vital signs from triage and treatment areas to patient Electronic Medical Record by associating patient's cardiac monitors to reduce manual errors and for the timely vitals monitoring. 'Back to Basics Training', a one day refresher course for nursing team has been conducted. A Senior Nurse as a watcher in the triage and treatment area identified children at high risk of deterioration. A Pediatric ED Situational Awareness Tool (PEDSAT) was developed locally and is in trial in the department to help manage sick children effectively.

Conclusions PUMA, a novel system assessment tool empowered our emergency department to tailor a quality program with an aim to deliver effective and efficient patient care.

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British Society of Paediatric Endocrinology and Diabetes

1707

PROFILE OF THYROID DISORDERS IN CHILDREN WITH DOWN SYNDROME

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10.1136/archdischild-2021-rcpch.807

Background The prevalence of thyroid disorders in children with Down syndrome is 6–10%. Guidelines on thyroid disorders in children and young people with Down syndrome: surveillance and when to initiate treatment in April 2020 were published by the Down Syndrome Medical Interest Group U.K & Ireland in 2020. The spectrum of thyroid disorders in children with Down syndrome includes congenital hypothyroidism and autoimmune thyroid disorders.

Objectives We undertook a retrospective study to review the profile of thyroid disorders of children with Down syndrome currently served by our child development centre serving a child population (0–19 years) of 64,500 children.

Methods A retrospective electronic case notes review was undertaken of 69 children with Down syndrome attending the child development centre, to identify children with a diagnosis of thyroid disorder and assess their biochemical and clinical presentation.

Results One infant (male) was diagnosed with congenital hypothyroidism. Six children were diagnosed with autoimmune hypothyroidism. Prevalence rate 8.8 percent. The median age at diagnosis was 6.6 years. The gender ratio was 3 female: 4 male. Two of these children had a borderline TSH for prolonged period before formally receiving a diagnosis of hypothyroidism, this ranged between 8 months and 45 months, the thyroid function was monitored every 6–12 months during this period. At the time of the initial raised TSH levels the TPO antibodies were normal and increasing to 997 and >1300. Two children have free T4 levels above the normal range (21) despite their TSH levels being above the local reference range and good compliance with medication. There was a rise in BMI at the time of diagnosis in six children (data not available for remaining children). Symptoms noted at diagnosis of thyroid disorder were weight gain, tiredness and sleep disturbance particularly in female patients. None of the children were recorded to have goitre. Two additional children were noted to have persistently raised TSH levels currently undergoing close monitoring, interestingly both these children have a slight rise in their TPO levels but less than 100 and a marginal increase in their BMI at the time of the initial rise in TSH levels, both sets of parents declined repeat serum thyroid testing within 1–5 days as recommended in the updated guidelines. There were no children diagnosed with hyperthyroidism or Graves' disease.

Conclusions Thyroid disorders in children who have Down syndrome appear to follow a more insidious course with

borderline or subclinical hypothyroidism being more commonly present than the general population. It is important to closely monitor the thyroid function to prevent additional disability. With the introduction of earlier thyroid surveillance at 4–6 months as per the updated DSMIG guidelines, it is important to undertake large-scale prospective population studies to evaluate the developmental outcomes in children with Down syndrome and subclinical hypothyroidism.

Quality Improvement and Patient Safety

1709

THE IMPACT OF COVID-19 ON PARENTAL EXPERIENCE IN A TERTIARY NEONATAL UNIT

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10.1136/archdischild-2021-rcpch.808

Background All neonatal units, have implemented policies designed to prevent the spread of COVID-19 infection. Parents of babies admitted to neonatal units have had to make adjustments to comply with such guidance and visiting restrictions. Only one parent could visit their baby at a time and they were required to wear a surgical mask while on the neonatal unit. On site parent accommodation was not available.

Objectives

1. To assess parental experience on a tertiary neonatal unit during the COVID-19 pandemic.
2. To determine if the support received was deemed adequate.
3. To identify ways to improve family experiences.

Methods Parents of babies who had been admitted to the neonatal unit for at least one week, were asked to complete a questionnaire regarding their experience during the Covid-19 pandemic. Parents of babies receiving palliative care were excluded from the study. One questionnaire was completed by each household. The questionnaire took into account guidance from RCPCH, BAPM and the charity Bliss. Data were collected prospectively over approximately six weeks between 25/6/20 to 5/8/20. The data was analysed using Microsoft excel software. Differences were assessed for statistical significance using the chi square test.

Results A total of 38 questionnaires were completed. Thirty four (89.5%) parents felt either quite involved or fully involved in caring for their babies (e.g. feeding, bathing, skin care, taking the temperature and changing their nappy), while four parents (10.5%) felt a little involved ($p < 0.05$). There were 21 parents (62%) out of 34, who stated that there was no impact on the amount of time they spent giving kangaroo care and 13 parents (38%) felt it had decreased as a result of the pandemic.

Most parents (70%) did not experience any effect on the time spent breast feeding. Twenty four (63%) parents expressed concern with the quality of time they were able to spend with their babies. Thirty one parents (97%) were moderately to very satisfied with the updates from the neonatal team ($p < 0.05$). Fifty percent of parents had no problems visiting their babies in hospital, while 50% found it difficult.

Parents, generally felt they received excellent care. Concerns were expressed over the visiting restrictions and the impact of this on bonding with their babies. Some parents believed that