

Integration of Two Acute Paediatric Services During COVID-19

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Abstract

Introduction

To describe our experience during the COVID 19 pandemic when the acute in-patient service in CHI at Tallaght was relocated to CHI at Crumlin.

Methods

We describe the change management and the hospital activity across the two tertiary centres during the early pandemic (March-June 2020) and compared this to the same period in 2019.

Results

We compared activity during the pandemic to the same period in 2019, as the in-patient unit in Tallaght closed but day-care and OPD care continued. In CHI at Tallaght the number of day-cases and the new and review patients at 'face to face' OPD reduced by 76.29% (370), 67.06 % (1899) and 72.58% (2448) respectively. Similarly, in CHI at Crumlin, the admissions from ED, the day-cases, the number of new and review patients at 'face to face' OPD decreased by 21.74% (593), 29.14% (1442), 66.88% (2870) and 67.13% (8009) respectively. However, the number of patients managed in the virtual clinics increased significantly on both sites. All education sessions were delivered online.

Conclusion

With leadership, good decision making and the flexibility of clinical staff, we demonstrated how a rapid integration of services can be achieved. Whilst activity levels reduced initially; new ways of working allowed us to continue to care for patients. Our shared experience was positive as we devised new team-working schedules, delivered remote education, and learned together in the midst of a crisis.

Introduction

The infection rate of COVID-19 disease in paediatric population is generally low with children accounting for <2% of those infected by SARS-CoV-2¹⁻³. Ireland had its first SARS-CoV-2 infection reported on 29th February 2020; with a phased lockdown commenced from March 12th; a full stay-at-home order was communicated on 27th of March 2020. In Ireland only 2.0 % of SARS-CoV-2 cases were in children aged 0-14 years⁴. The characteristic features of COVID 19 infection in children has been published⁵⁻⁸. CHI at Tallaght (Children's Health Ireland) has 42 acute in-patient beds, 10 day-ward beds, a children's Emergency Department (ED) and an outpatient's department (OPD). CHI at Tallaght occupies part of the first floor of the Tallaght University Hospital (TUH) campus that has 562 beds in total. In anticipation of the surge in COVID-19 cases an executive decision was taken in March 2020 to temporarily close our paediatric in-patient facility and relocate to CHI at Crumlin, a larger tertiary hospital with 233 paediatric beds. This provided greater adult in-patient capacity on the TUH site and allowed our paediatric anaesthetic staff to join their adult colleagues in caring for ICU cases. On Friday 20th March this decision was communicated to our staff and we were informed we would join our colleagues at CHI Crumlin on Friday 27th March partaking in their on-call rota that weekend and thereafter for a minimum of 3 months. This relocation was subsequently extended by a further 3 months.

Methods

We describe the change management and the hospital activity across the two tertiary centres during the early pandemic (March-June 2020) and compared this to the same period in 2019. Data collected throughout examined ED, OPD and Day Care attendances for the initial 3 months. The utilisation of new virtual clinics was also tabulated. The clinical activity data was sourced from the Business Intelligence (BI) team at CHI offices.

Results

There were 9 consultants (7.5 WTE) providing acute medical on-call cover in CHI at Tallaght who relocated to CHI at Crumlin. Prior to the pandemic, the team at CHI Crumlin operated their acute medical service with 7 WTE. We organised ourselves into five new teams with three consultants minimum per team. Each team had at least one consultant from the CHI at Crumlin site to facilitate local integration and provide local knowledge and liaison for the new staff.

For the duration, each week was covered by two teams, of whom one covered Monday-Thursday, with a second team commencing Friday morning through until Monday morning. At each change of teams, there was an extended handover twice weekly. In addition, there were at least two shorter daily handovers to coincide with trainees completing their shifts. The nine hospital wards were divided into three clinical pods, each pod managed by a team of one consultant and their NCHDs each day. All the trainee medical staff from both sites operated as a single unit.

The Tallaght consultants and trainee staff continued to provide OPD services on the CHI at Tallaght site. All leave for staff was cancelled for the first 8 weeks of the pandemic.

Table 1 demonstrates clinical activity across the two tertiary centres during the pandemic (March-June 2020) and compared this to the same period in 2019. Activity recorded included ED, In-patient, OPD, and Day Ward attendances.

Table 1: Hospital activities across the two tertiary centres: CHI at Tallaght, CHI at Crumlin.

	CHI at Tallaght - 2019*	CHI at Crumlin -2019*	CHI at Tallaght 2020**	CHI at Crumlin - 2020**	CHI at Tallaght: difference%	CHI at Crumlin- difference %
Day Cases	485	4948	115	3506	-76.29%	-29.14%
Inpatient Admissions	1327	2728	43	2135	-96.76%	-21.74%
Emergency Department (ED) Attendances	8581	9903	264	8820	-96.92%	-10.94%
Admissions from ED	1013	1405	35	1104	-96.54%	-21.42%
New OPD Attendances (Face to Face)	2832	4291	933	1421	-67.06%	-66.88%
Return OPD Attendances (Face to Face)	3373	11930	925	3921	-72.58%	-67.13%
New OPD Attendances (Virtual)	3	612	347	1174	Increase >100%	91.83%
Return OPD Attendances (Virtual)	465	46	2565	4982	Increase >100%	Increase >100%

* March-June 2019; ** March-June 2020

CHI at Tallaght: during that period the number of day-cases significantly reduced by 76.29% (370) (Table 1). The number of OPD new and return patients who attended ‘face to face’ visits decreased by approximately 67.06% (1899) and 72.58% (2448) respectively. There was a shift to new virtual telephone clinics. We adapted to this new way of working with many staff concluding that telemedicine suited many consultations, particularly review appointments but were not appropriate for new referrals.

CHI at Crumlin: during the same period, the inpatient admissions from ED decreased by 21.74% (593) admissions and the day cases decreased by 29.14% (1442). Moreover, during this period the number of new and review patients at ‘face to face’ OPD clinics decreased by 66.88% (2870) and 67.13% (8007) respectively. There was a significant increase in the number of patients managed in the virtual clinics however.

All journal clubs, grand rounds, and departmental education sessions were delivered online. Whilst a significant change there was a huge benefit in that each of us now had access to education from the other hospital sites. Also, rather than each site preparing a grand round weekly, one site was scheduled on a Friday lunchtime with Zoom access codes circulated to all beforehand.

Staff Nurses had a choice of relocating to ward service or the ED in CHI at Crumlin. Seven nurses including one nurse manager took up ward duties on the new site. In addition, 19 nurses including five shift leaders (CNM 2), moved to the ED department in CHI Crumlin. There was an increased onus on the remaining liaison nurses and nurse specialists working in general paediatrics to prepare OPD virtual clinics in advance, to follow up laboratory results, and answer telephone queries from parents and GPs alike, while maintaining continuity on the CHI at Tallaght site each week.

Discussion

The medical and nursing staff adapted to the relocation to CHI at Crumlin in the shortest of periods. This transition created flexibility in the system demonstrating how beds and services can be reorganised quickly. The move was facilitated as the Children's Health Ireland (CHI) had been legally established as a single organisation in accordance with the Children's Health Act 2018, to provide children's health services in Dublin. Children's services in the city continue to evolve with new models of care, care pathways, and better integration of subspecialties in anticipation of the opening of a new national children's hospital in 2024 that is currently under construction.

Each site had its own directorate team. We continued to meet virtually every second week with our Clinical Director to discuss any clinical or professional issues during this transition period. The initial perception was that this closure could have a negative impact on patients' care as well as staff welfare. However, the team instead took this an opportunity to explore a new way of working in a different location with new teams. Almost akin to the stages of loss⁹, as the weeks passed, we started to accept the transition arrangements and frankly enjoyed our new work environment and developed closer working relationships with new team members.

People had a positive attitude and every effort was made to ensure safe care. Social distancing was paramount; lunches were eaten in solitude and IT support was offered to facilitate working from home as required. However, some clinicians found that this was quite a lonely time at work and found new work patterns difficult to adapt to.

There was a marked reduction in clinical activity over this period both in Dublin and in international centres¹⁰. Whilst virtual clinics were offered on both sites, these did not always obviate the need for in-person consultation at a later date. The virtual clinics were deemed to suit review appointments more appropriately than new appointments. Elective activities including day care were significantly curtailed.

In conclusion, this relocation was successfully implemented and allowed a continuance of clinical care and staff education during the pandemic. The new cross-city working fostered collaboration and teamwork. Old silos were dismantled, and new teams formed. There was a great sense of solidarity throughout and a foundation built for more integration and cross-city working into the future. Further challenges will include having surge capacity into the future, managing deteriorating OPD waiting lists, and allowing better access to OPD and elective day care over the 2020/2021 winter period.

Declaration of Conflicts of Interest:

The authors declare no relevant conflicts of interest

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