



Mater Misericordiae
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The Impact of the COVID-19 Pandemic on referrals to the National OPAT Programme

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Feidhmeannacht na
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Health Service
Executive



Introduction

- Outpatient Parenteral Antimicrobial Therapy (OPAT) is a safe, effective and cost-efficient means of treating patients out of hospital¹.
- COVID-19, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has placed unprecedented pressure on healthcare systems worldwide.
- Nosocomial outbreaks of SARS-CoV-2 are well described.
- OPAT offers a way to safely treat patients away from the acute hospital setting.
- The onset of the COVID-19 pandemic in March 2020, forced the health service to focus on the immediate objective of caring for those critically ill with COVID-19.
- One UK study has estimated a 50-80% decrease in outpatient, routine diagnostics and screening services due to the pandemic.²
- The aim of this project was to investigate the impact of COVID-19 on the National OPAT programme.

Methods

- A retrospective analysis was carried out on all referrals to the National OPAT programme in Ireland between September 1st 2019 and 31st August 2020.
- Anonymous Data were collected including hospital referral, mode of OPAT delivery, infection site, antimicrobial choice and duration of treatment.
- Statistical analyses were carried out using SPSS.

Results

- **1,563** referrals were made to the OPAT service in a 12-month period between 1st September 2019 and 31st August 2020
- **1129 (72.2%)** were for Healthcare Personnel Provided OPAT (H-OPAT); **434 (27.8%)** via self administered OPAT (S-OPAT).
- Mean duration of therapy was **20.2** days.
- Compared to the first six months, a mean **21.3%** decrease across all centres in referrals to the OPAT service was observed between March – May 2020, at a time when COVID-19 hospitalisations were at their peak (figure A).
- A mean decrease of **4.07%** was observed between June – August 2020.

Figure A: OPAT Referrals: Sep 2019 – August 2020

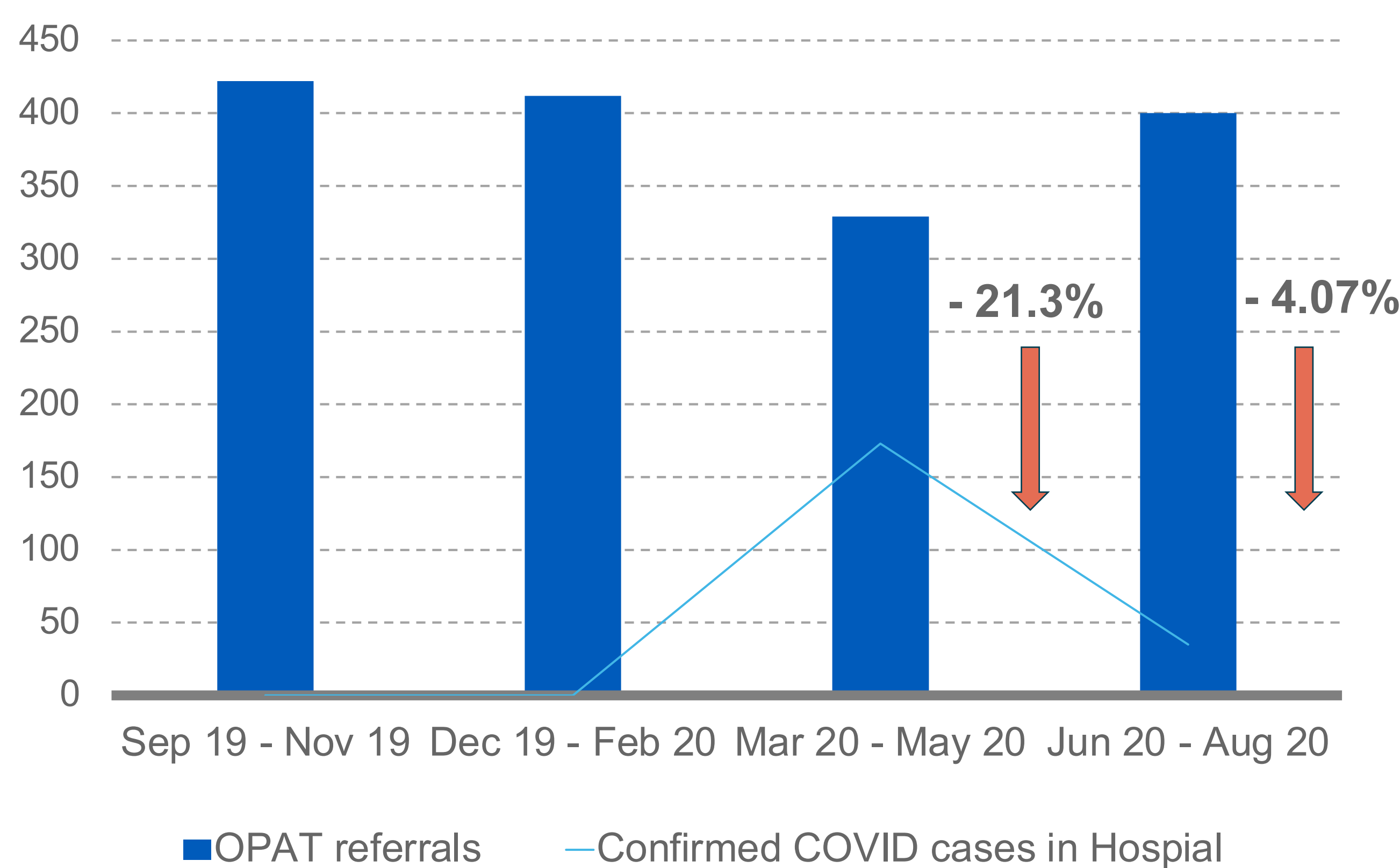
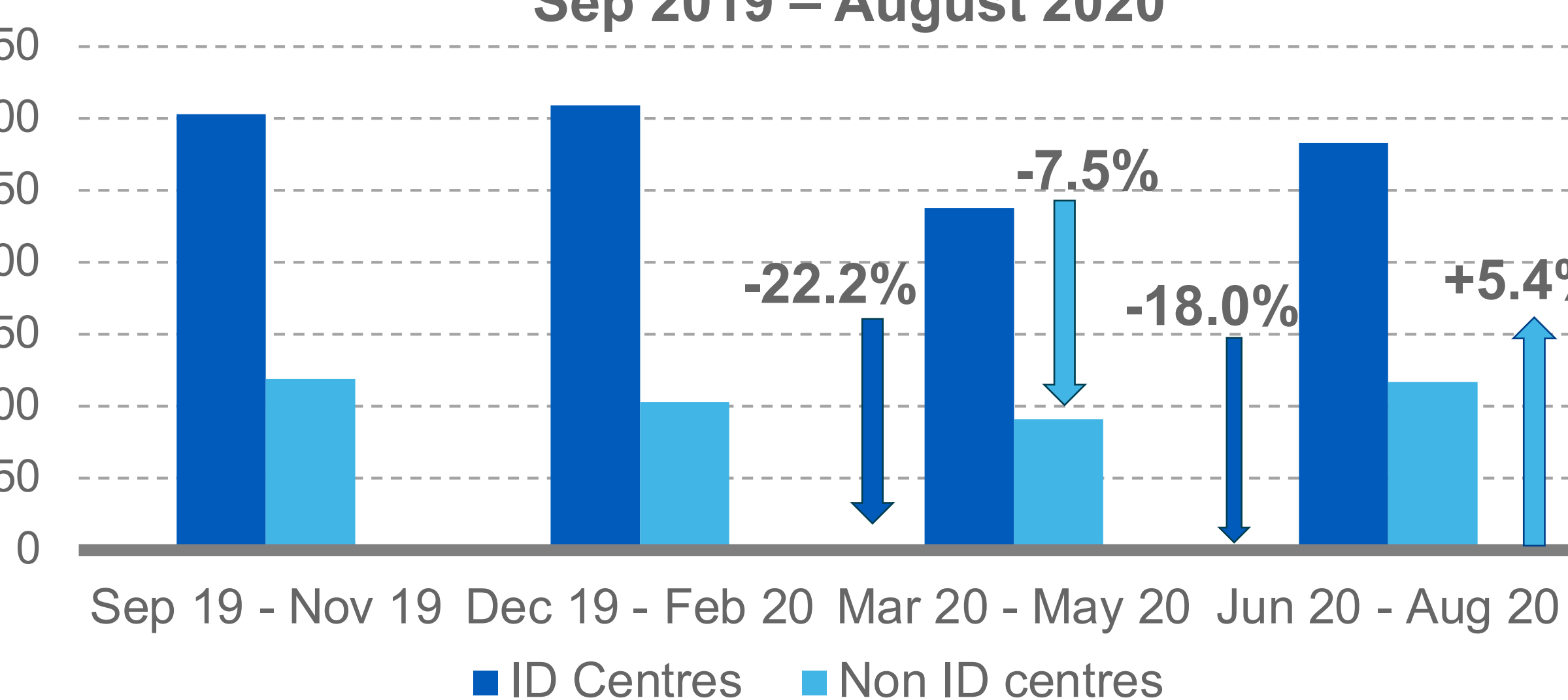


Table 1: Referral by Hospital (Top 7 OPAT Centres)

Hospital	Quarter 1	Quarter 2	Mean Q1/Q2	Quarter 3	Quarter 4
Beaumont	74	83	78.5	46 (↓41.4%)	61 (↓22.3%)
Mater	66	60	63	46 (↓26.9%)	41 (↓34.9%)
St James	33	32	32.5	23 (↓29.2%)	35 (↑7.7%)
Cork UH	32	18	23	18 (↓28%)	25 (↑8.7%)
St Vincents	38	45	41.5	43 (↑3.6%)	44 (↑6%)
UH Limerick	38	47	42.5	33 (↓22.3%)	49 (↑15.3%)
UH Galway	18	17	17.5	23 (↑31.4%)	23 (↑31.4%)

- Among the seven largest OPAT centres, there was a wide variation in decline of referrals to the OPAT service during the period March 2020 – May 2020 (Q3) (table 1).
- Beaumont Hospital had the largest decline in referral numbers (↓41.4%) during this time.
- 2 centres increased the numbers of referrals; University Hospital Galway and St Vincent's University Hospital.
- There was no statistical difference between ID centres and non-ID centres (figure B).

Figure B: OPAT Referrals ID vs Non ID centres: Sep 2019 – August 2020



Discussion

- Despite the huge impact of COVID-19 on acute hospital services, the Irish OPAT service continued to operate at almost 80% normal capacity during the peak of the pandemic.
- OPAT services resumed to near normal service just three months after the first cases of COVID-19 entered Irish hospitals.
- Across the 7 largest OPAT centres, all but two centres (Mater Hospital and Beaumont Hospital) had returned to above average OPAT referral numbers between June – August 2020. Both of these centres are responsible for the largest number of OPAT referrals, and also cared for the majority of COVID-19 cases in Ireland.
- Several studies have demonstrated increased mortality associated with increased age, diabetes, obesity and cardiac disease among those infected with SARS-CoV-2.³ Each of these risk factors is common among OPAT patients, making this group a high-risk population.
- Faced with a “second wave” of infection, the above findings indicate the OPAT programme is a vital part of hospital services which limits vulnerable patient's exposure to the acute hospital system.

References

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3. Hamad, Y, Joynt Maddox, K, Powderly, W. COVID-19 and Outpatient Parenteral Antimicrobial Therapy: The Need to Protect Vulnerable Medicare Beneficiaries. Annals of internal Medicine. 2020, 13; M20 -1774.