

## Effect of Covid-19 on Emergency Sore Throat Presentations

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The Covid-19 pandemic resulted in changes to Emergency Department (ED) presentations. Anecdotally we noted that certain presentations such as tonsillitis and Infectious Mononucleosis (IM) had decreased during this time. Prior to the pandemic, presentations with a sore throat and significant dysphagia would often be managed in our ED's short-stay unit (clinical decision unit (CDU)). This would facilitate 12-24 hours of IV-therapy, ENT review if necessary and avoid formal inpatient admission. Perhaps, due to the desire to keep patients at home during the pandemic, management of this cohort changed. IM is a highly contagious viral disease caused by the Epstein-Barr virus and transmitted via body secretions<sup>1</sup>. Consequently, we postulated that IM incidence may have decreased due to social distancing policies after the first "stay-at-home order" in Ireland on the 7<sup>th</sup> of March 2020<sup>2</sup>.

A single centre retrospective review was conducted of all sore throat presentations from January 2019 to December 2020 inclusive. As the pandemic required a split ED ("COVID" and "non-COVID" areas), the CDU was closed on the 13<sup>th</sup> of March 2020, and that floor-space was incorporated into a new ED layout to accommodate more isolation cubicles. This date was used as the cut off mark between pre-pandemic (control) and pandemic periods. Patient disposition (admission to hospital or CDU or discharged) was recorded. Monospots performance rate and results were collected for the same period.

There were 784 presentations in the control period (50.85/month) and 557 presentations in the Covid period (64.91/month). Sore throat presentations peaked in April (n=85) and September 2020 (n=88). In the pre-pandemic group there was 288 CDU admissions, with 142 ward admissions. 354 patients (45.1%) were discharged from ED. In the pandemic period, with the CDU closed, 452 patients (81.1%) were discharged from ED. The discharge rates increase of 45.1% vs 81.1% was statistically significant ( $p < 0.001$ ). The monthly mean of Monospots sent decreased from 26.26 to 8.04 ( $p < 0.001$ ). Positive Monospots also fell from 4.34 per month (n=67) to 1.86 (n=16) ( $p < 0.001$ ).

Sore throat presentations increased during this period despite the Economic and Social Research Institute (ERSI) report showing a 32.5% attendance reduction to Irish hospitals between March 2020 and 2019<sup>3</sup>. Ireland saw its peaks of Covid-19 prevalence for 2020 in April and October<sup>4</sup>, coinciding with our peaks in sore throat presentations. The discharge rate significantly increased between the two periods. This is despite sore throat presentations increasing and the CDU closing.

This is contrary to what we postulated which was a higher admission rate without the CDU. The reasons for this may be two-fold. Firstly, there may have been an increase in lower acuity patients presenting concerned about contacting Covid-19. Secondly, without the back-up of a CDU, the ED staff may have discharged patients earlier.

In conclusion, the Covid-19 pandemic saw a dramatic decrease in the number of Infectious Mononucleosis diagnoses in the ED, however sore throat presentations increased. Despite this increase and the CDU closure, discharge rates significantly increased. This is likely due to earlier decision making and lower acuity of illness.

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