

# Impact of the COVID-19 pandemic on the 2-week-wait referral pathway

Carola Maria Bigogno, Karishma Mahtani, Brihitejas Patel and Sophie Dong

**Background**

The 2-week-wait (2ww) referral pathway from primary care was established to ensure urgent specialist assessment of individuals with “red-flag” symptoms.<sup>1</sup> We investigated the impact of COVID-19 in 2020 on the number of urgent referrals, the interval between presentation and referral, and the interval between referral and specialist appointment for patients presenting to Star Lane Medical Centre (SLMC), Newham, London.

**Methods**

Population Reporting lists were run on EMIS system for patients registered at SLMC who were coded as “fast-track” or “2-week-wait referral” from January 2020 (pre-COVID-19) to January 2021. The primary outcome investigated was the delay in the 2ww referral pathway. Secondary outcomes included the number of 2ww referrals made in primary care and the delay between presentation of “red-flag” symptoms and referral. We compared the delay in the 2ww referral pathway to data obtained from the Newham Care Commissioning Group (CCG) for 2015-2019 using a Mann-Whitney U test<sup>2</sup>. We also used linear regression on the CCG data to forecast and compare the delays for 2020.

**Results**

When compared to the previous five years the number of 2ww pathway delays per month in 2020 were significantly higher ( $p < 0.0001$ ). On linear regression analysis, the percentage of delays in the 2ww pathway for each month (excluding August 2020) was higher than those forecasted. The percentages for March 2020 and December 2020 were significantly higher than those forecasted, corresponding to the first lockdown and the end of the second lockdown respectively. Results show a decrease in the number of referrals made from February 2020 to January 2021 compared to pre-COVID-19. The delay between presentation with “red-flag” symptoms and referral was consistently higher across this period compared to pre-COVID-19. Breast and skin cancers represented 48.1% of the delays in referral.

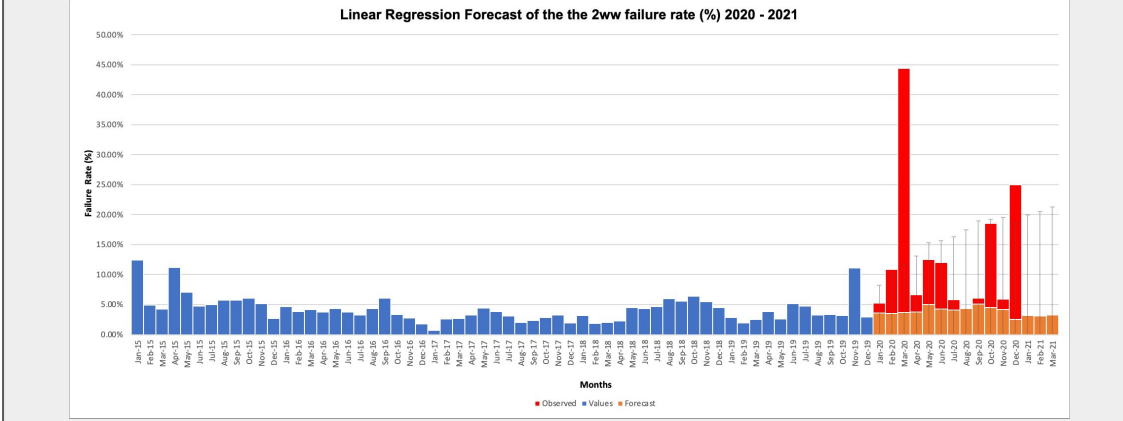


Figure 2: Linear Regression forecast of 2ww failure rate (orange) vs. observed 2ww failure rate for 2020 (red bars)

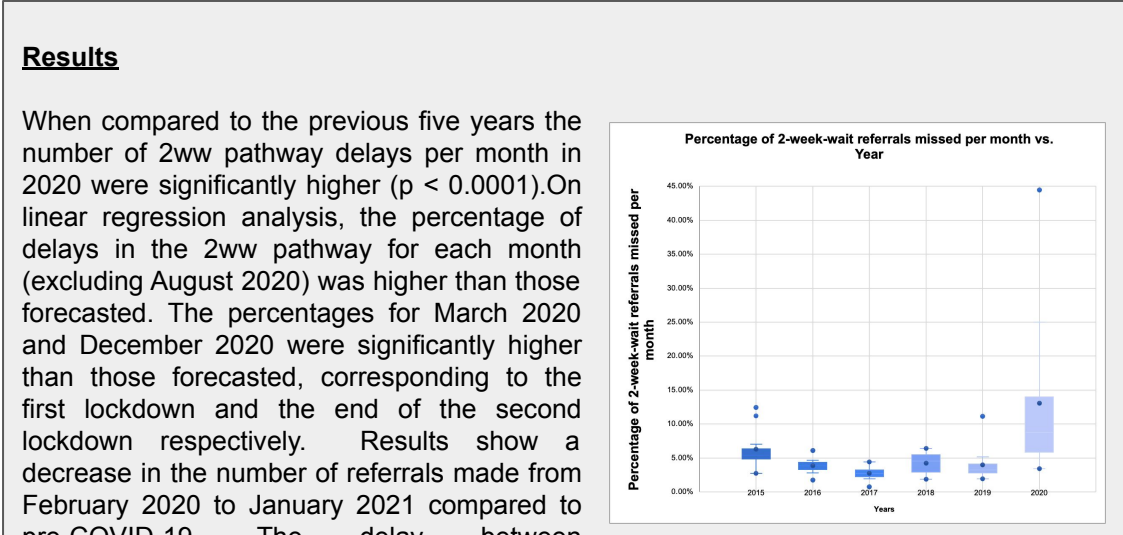


Figure 1: Box-plot comparison of 2020 vs. previous years 2015 - 2019

Month	Number of patients referred	Number of delays in 2ww (%)	Number of delays in referral (%)
Jan 2020	63	3 (5.26%)	6 (10.52%)
Feb 2020	46	5 (10.87%)	8 (17.39%)
Mar 2020	27	12 (44.44%)	4 (14.81%)
Apr 2020	15	1 (6.67%)	4 (26.67%)
May 2020	17	2 (12.50%)	2 (12.5%)
Jun 2020	25	3 (12.00%)	11(44.00%)
Jul 2020	34	2 (5.88%)	10 (29.40%)
Aug 2020	29	1 (3.45%)	12 (41.38%)
Sep 2020	34	2 (6.06%)	11 (33.33%)
Oct 2020	27	5 (18.52%)	5 (18.52%)
Nov 2020	34	2 (5.88%)	12 (35.29%)
Dec 2020	36	9 (25.00%)	19 (52.77%)
Jan 2021	37	2 (5.71%)	11 (31.43%)

Table 1: Data collected from the SLMC EMIS system for Jan 2020 - Jan 2021

**Conclusion**

Delays in the 2ww referral pathway significantly increased during the year 2020 compared to the previous 5 years. Additionally, the number of 2ww referrals made decreased, and the delay between presentation and referral increased during this period. Delays in referral from primary care may reflect doctor uncertainty concerning referral guidelines, hesitancy towards exposing patients to high risk environments, as well as challenges adapting to the online triage system.<sup>3</sup>

References:  
1. Riera, R., Bagattini, A., Pacheco, R., Pachito, D., Roitberg, F. and Ilbawi, A. 2021. Delays and Disruptions in Cancer Health Care Due to COVID-19 Pandemic: Systematic Review. JCO Global Oncology, (7), pp.311-323.  
2. England.nhs.uk. 2021. Statistics » Cancer Waiting Times. [online] Available at: <https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/> [Accessed 21 April 2021].  
3. Baxter, M., Murphy, J., Cameron, D., Jordan, J., Crearie, C., Lilley, C., Sadozye, A., Maclean, M., Hall, P., Phillips, A., Greger, A., Madeleine, J. and Petty, R., 2021. Correction to: The impact of COVID-19 on systemic anticancer treatment delivery in Scotland. British Journal of Cancer.