

The Impact of COVID-19 on the Frequency of Blood Draws Ordered by Family Physicians in Eastern Health (2020)

Objectives

1. To determine the degree of reduction in blood draws ordered by family physicians (FPs) in Eastern Health (EH) during the first 36 weeks of the COVID-19 pandemic.
2. To assess the extent of the reduction for individual FPs.

Practice Points

1. The reduction in blood draws in the first four weeks of the pandemic was 73% and by week ten it was 49%.
2. By week ten, very few FPs exceeded the 75th centile of ordering observed in the pre-COVID-19 era.
3. Following the first six weeks of the pandemic, there were three small clusters of the virus in NL in 2020.

Methods

1. Weekly quantity of blood draws ordered by FPs in EH from 6 Jan – 15 Mar 2020 (10 weeks pre-COVID-19) and from 16 Mar – 1 Dec 2020 (35 weeks during COVID-19) were obtained from EH.
2. The number of blood draws ordered by individual FPs on week 35 of the pandemic was compared to the average number they ordered during the ten weeks pre-pandemic.

Results

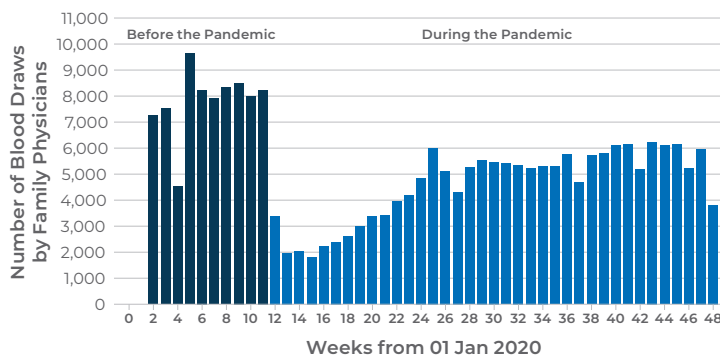
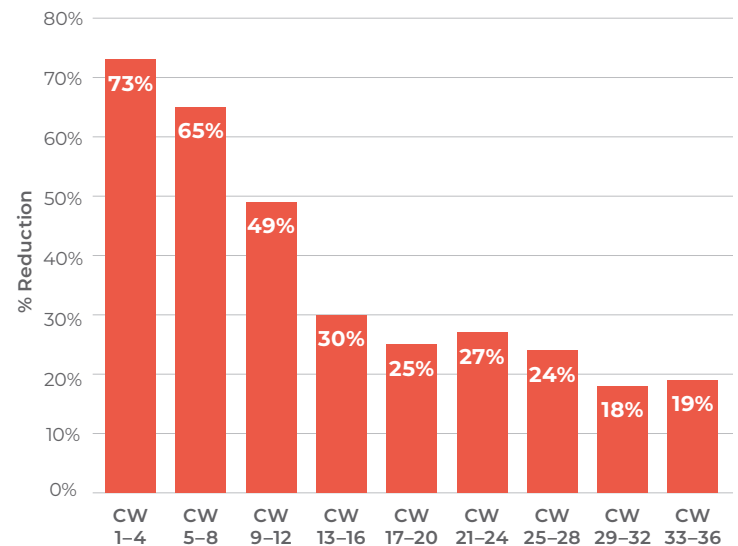


Figure 1. Number of Blood Draws Ordered Weekly by FPs in EH in 2020

- At weeks 13–16 after the start of the pandemic, the reduction in blood draws was 30%, and at weeks 33–36 it was 19%.

Table 1. Average Weekly Draws During the Ten Weeks Before COVID-19 and Four-week Blocks During the COVID-19 Pandemic

Average Weekly Blood Draws Before the Pandemic	Four-Week Blocks During the Pandemic	Average Weekly Draws in Each Four-Week Block
7,212	1	1,947
	2	2,527
	3	3,707
	4	5,051
	5	5,401
	6	5,277
	7	5,464
	8	5,899
	9	5,834



CW = COVID Week

Figure 2. The Per Cent Reduction in Blood Draws for Each Four-Week Block Following the Start of COVID-19 Restrictions

- After the first 12 weeks of COVID-19 (CW 1–12), the number of blood draws was consistently 18–30% less than in the pre-COVID-19 era.

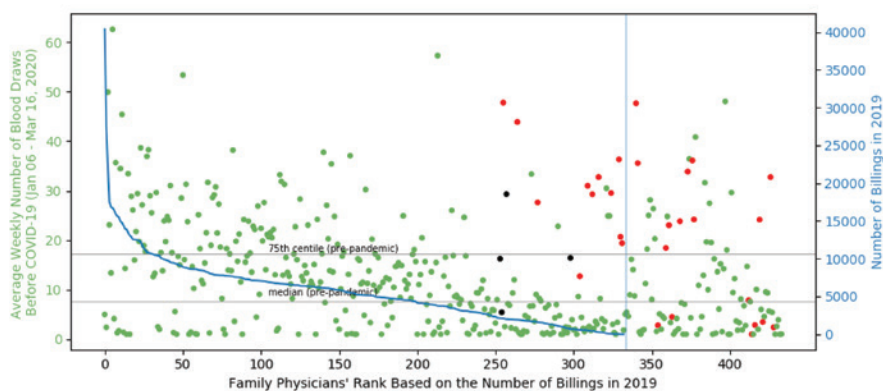


Figure 3. Average Weekly Number of Blood Draws by Individual FPs in the Ten Weeks Pre-COVID-19 (Y-axis Left) for Doctors Who Bill and Don't Bill, and Number of Billings for Doctors in 2019 (Y-axis Right)

Legend: The x-axis is the ranking of FPs based on the number of billings in 2019 (person with rank 1 has the highest number of billings in 2019), the green dots are clinic doctors, the red dots are ER doctors, and the black dots are unknown. The vertical line separates the doctors who bill from those who do not. The horizontal lines represent the median and 75th centile for blood draws pre-pandemic.

- 18.4% of 333 FPs who billed, ordered >18 blood draws on average each week pre-COVID-19.
- 15.1% of 101 FPs who did not bill ordered the same quantity of blood draws as those who billed.

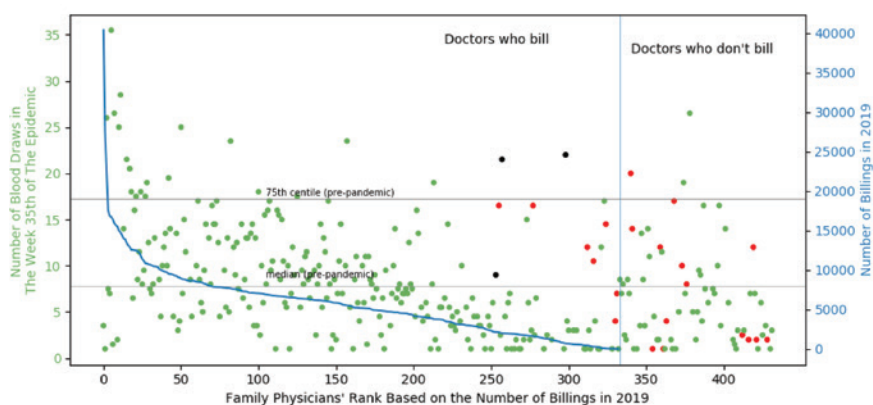


Figure 4. Number of Blood Draws Ordered by FPs Who Billed and Who Did Not Bill During Week 35 of the Pandemic (Y-axis) and the Ranking of FPs Based on Number of Billings in 2019 centile.

Legend: The x-axis is the ranking of FPs based on the number of billings in 2019 (person with rank 1 has the highest number of billings in 2019), the green dots are clinic doctors, the red dots are ER doctors, and the black dots are unknown. The vertical line separates the doctors who bill from those who do not. The horizontal lines represent the median and 75th centile for blood draws pre-pandemic.

- 5.7% of FPs who billed (N=19) ordered more than the pre-COVID-19 75th centile of blood draws.
- 3% of FPs who did not bill (N=3) ordered more than the pre-COVID-19 75th centile

Conclusions

1. The substantial reduction of blood draws ordered by FPs during the first 12 weeks of the pandemic was ameliorated during the following 24 weeks, but the size of the reduction compared to pre-pandemic era persisted at 19% for weeks 33–36. The next summary examines the actual tests involved in the blood draws.
2. By week 35 of the pandemic, most FPs remained below the 75th centile of pre-pandemic blood draw ordering.