

Supplemental Materials: The Implementation of a Provincial Acute Stroke Pathway and Its impact on Access to Advanced Stroke Care in Saskatchewan

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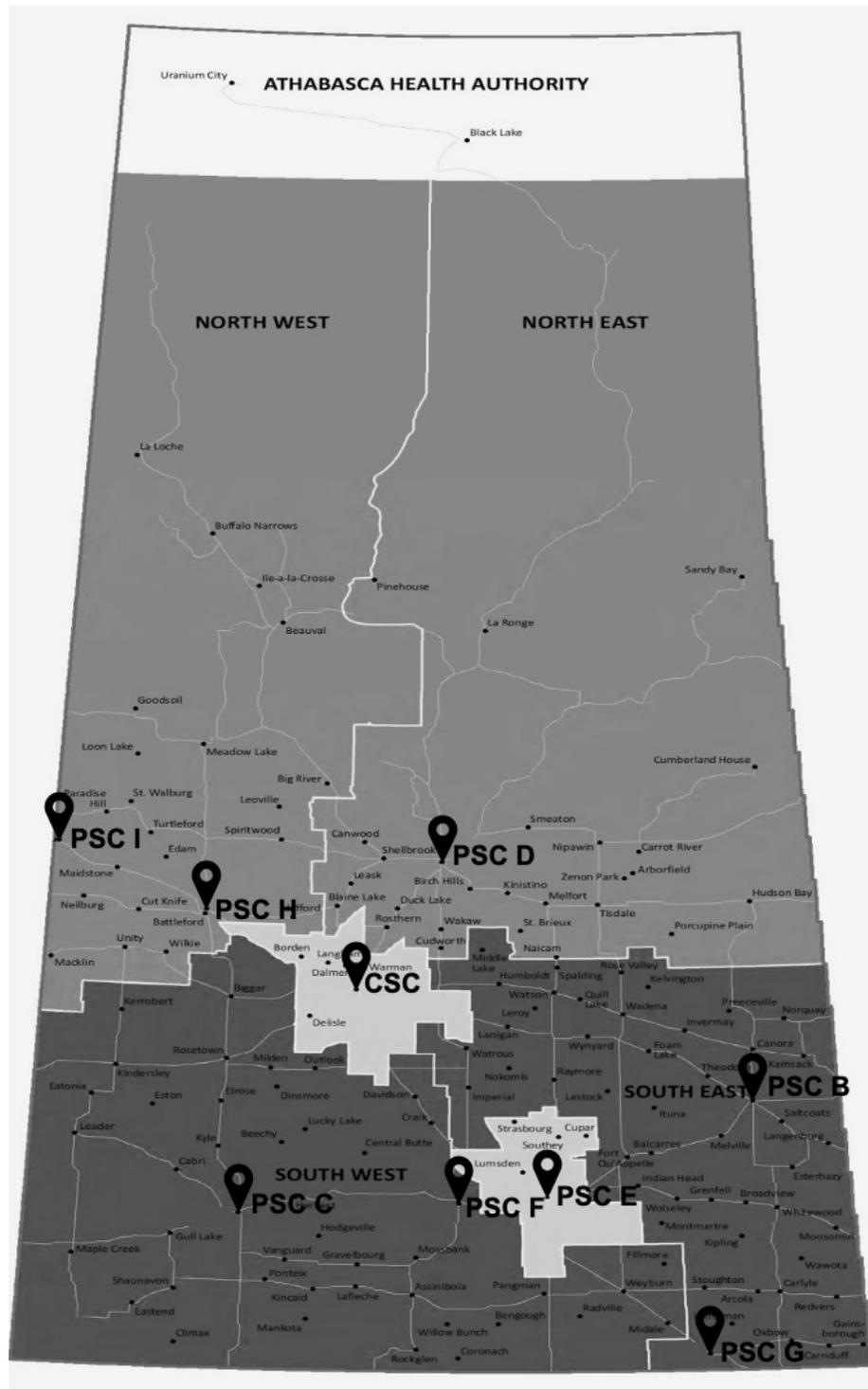


Figure 1. Map of Saskatchewan displaying the location of all stroke centres.

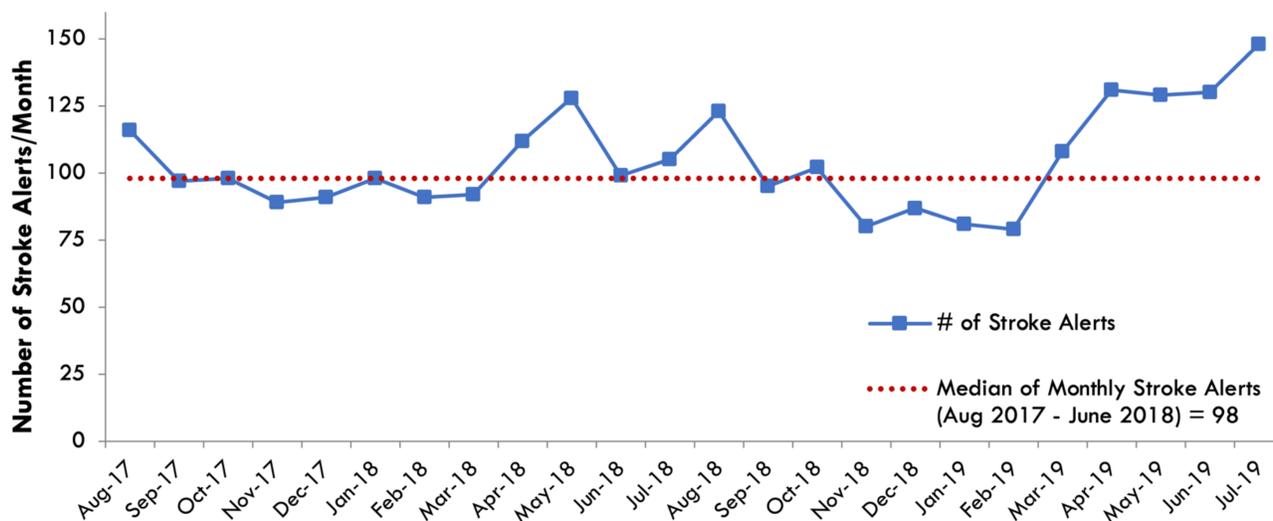


Figure II. Run chart displaying the number of stroke alerts per month in Saskatchewan between August 2017 and July 2019. The red line on the graph indicates the median number of stroke alerts per month in the first year of the initiative (August 2017 to June 2018) which was 98. While the number of alerts begins to increase near the end of the study no clear upward trends (5 or more consecutive data points all moving in the same direction) are seen

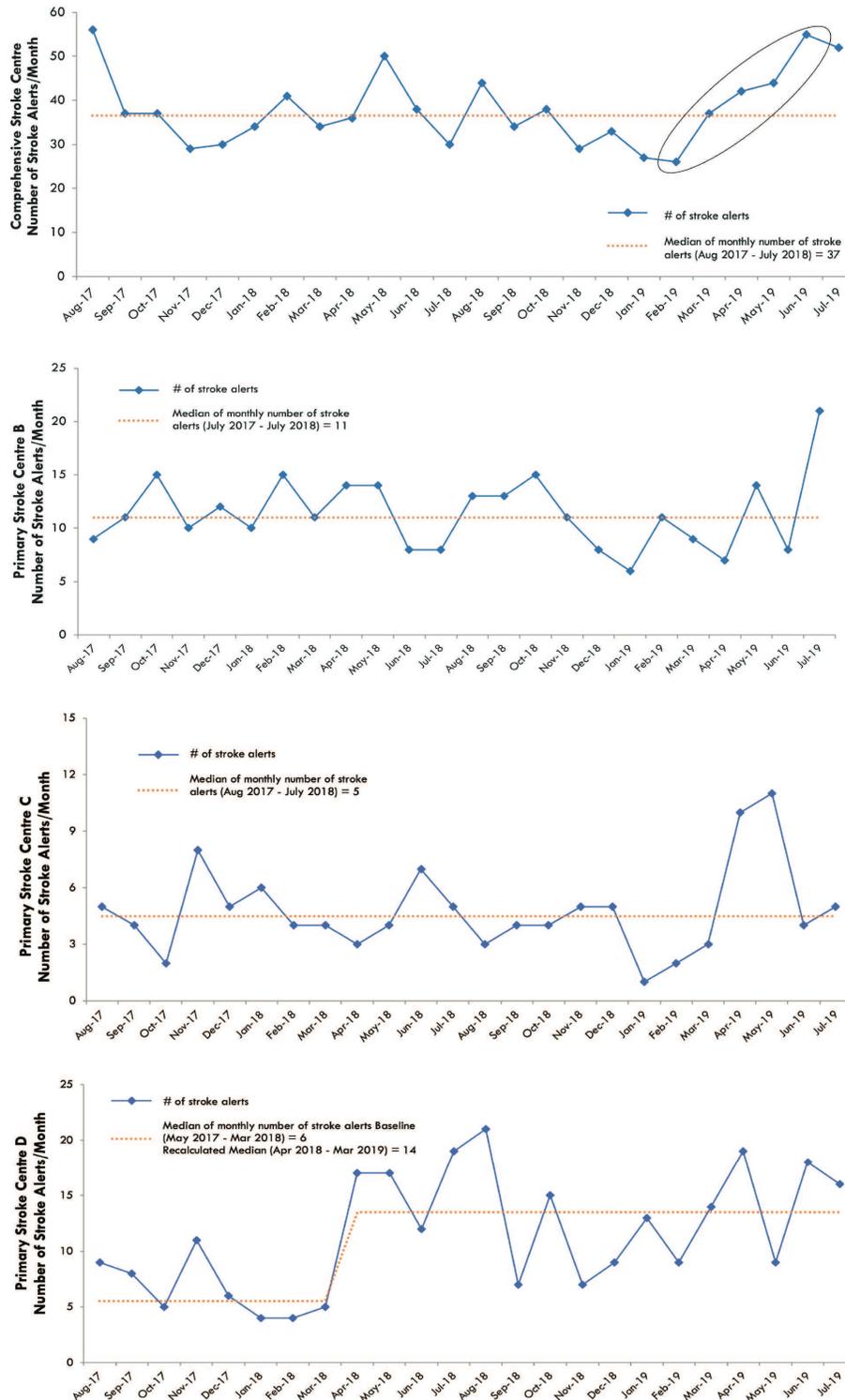


Figure III. Run charts displaying the number of stroke alerts presenting to the Comprehensive Stroke Centre and Primary Stroke Centres B – D between August 2017 and July 2019. The blue markers indicate the number of stroke alerts presenting to each centre per month. The red line on the graph indicates the median number of stroke alerts per month at each centre calculated during the first year of the study. A clear trend is seen at the Comprehensive Stroke Centre between February 2019 and June 2019 (circled). A trend is defined as 5 or more consecutive data points all moving in the same direction. No clear trends or shifts are seen at Primary Stroke Centres B or C. After a sustained shift above the median the median for Primary Stroke Centre D was recalculated.

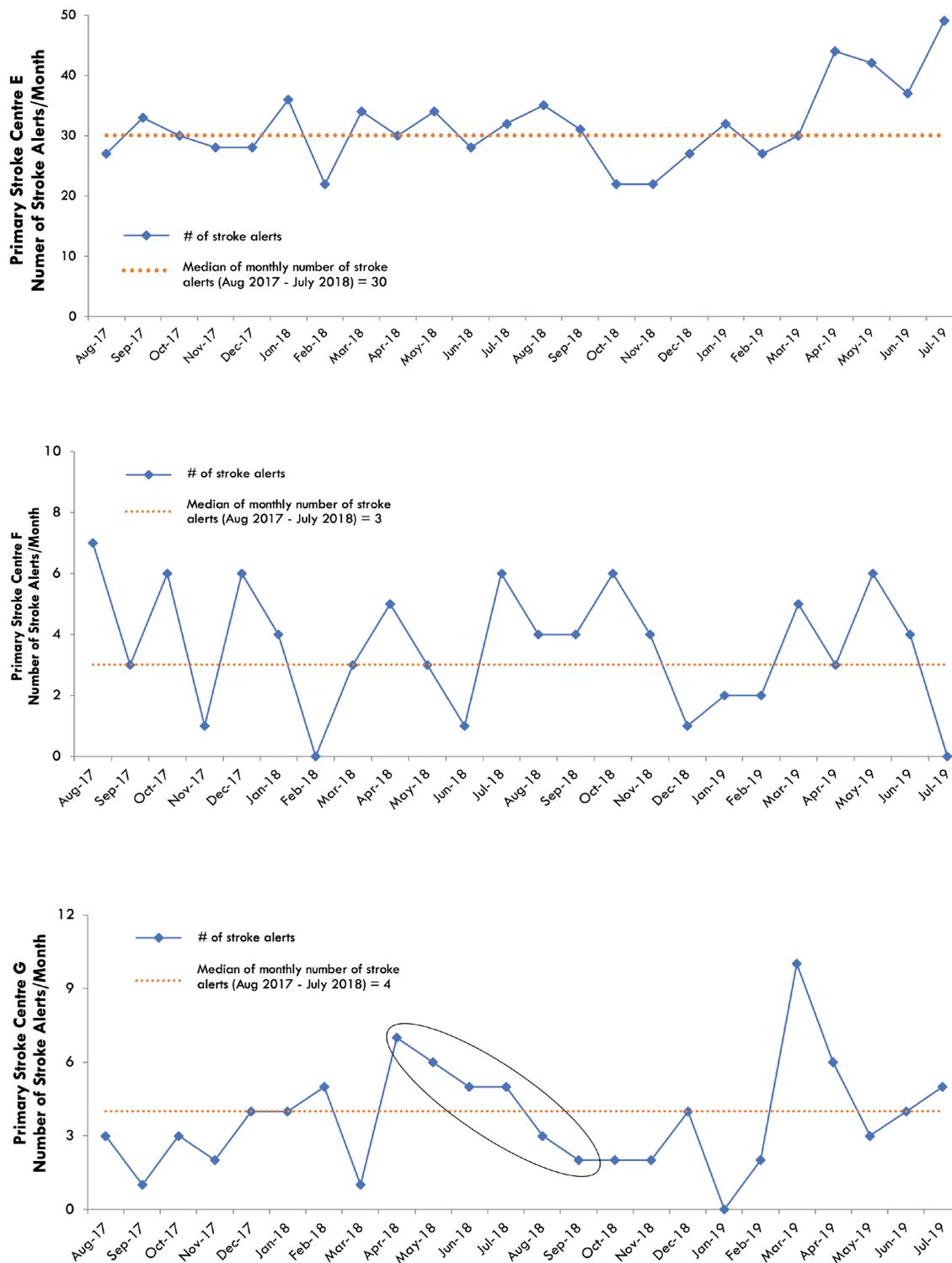


Figure IV. Run charts displaying the number of stroke alerts presenting to Primary Stroke Centres E – G between August 2017 and July 2019. The blue markers indicate the number of stroke alerts presenting to each centre per month. The red line on the graph indicates the median number of stroke alerts per month at each centre calculated during the first year of the study. A downward trend is seen between April 2018 and September 2018 at Centre G (circled), no other trends or shifts are seen at these centres.

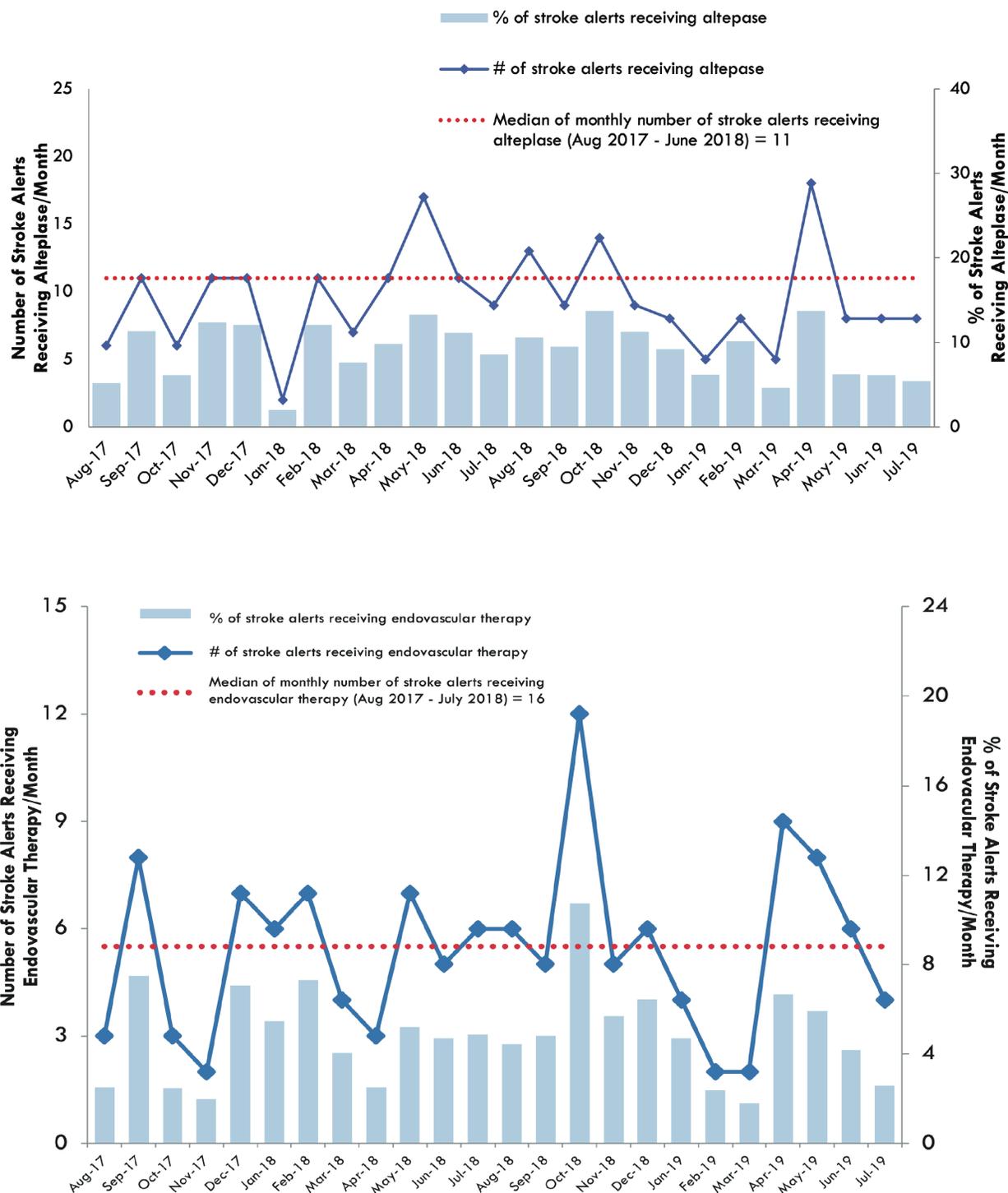


Figure V. Run chart displaying the number and percent of stroke alerts receiving alteplase (top) and endovascular therapy (bottom) per month in Saskatchewan. The number of stroke alerts treated is displayed using the dark blue line and the percentage of total stroke alerts treated is displayed using the light blue bars. The red line indicates the median of the monthly number of treated patients in the first year of the initiative.

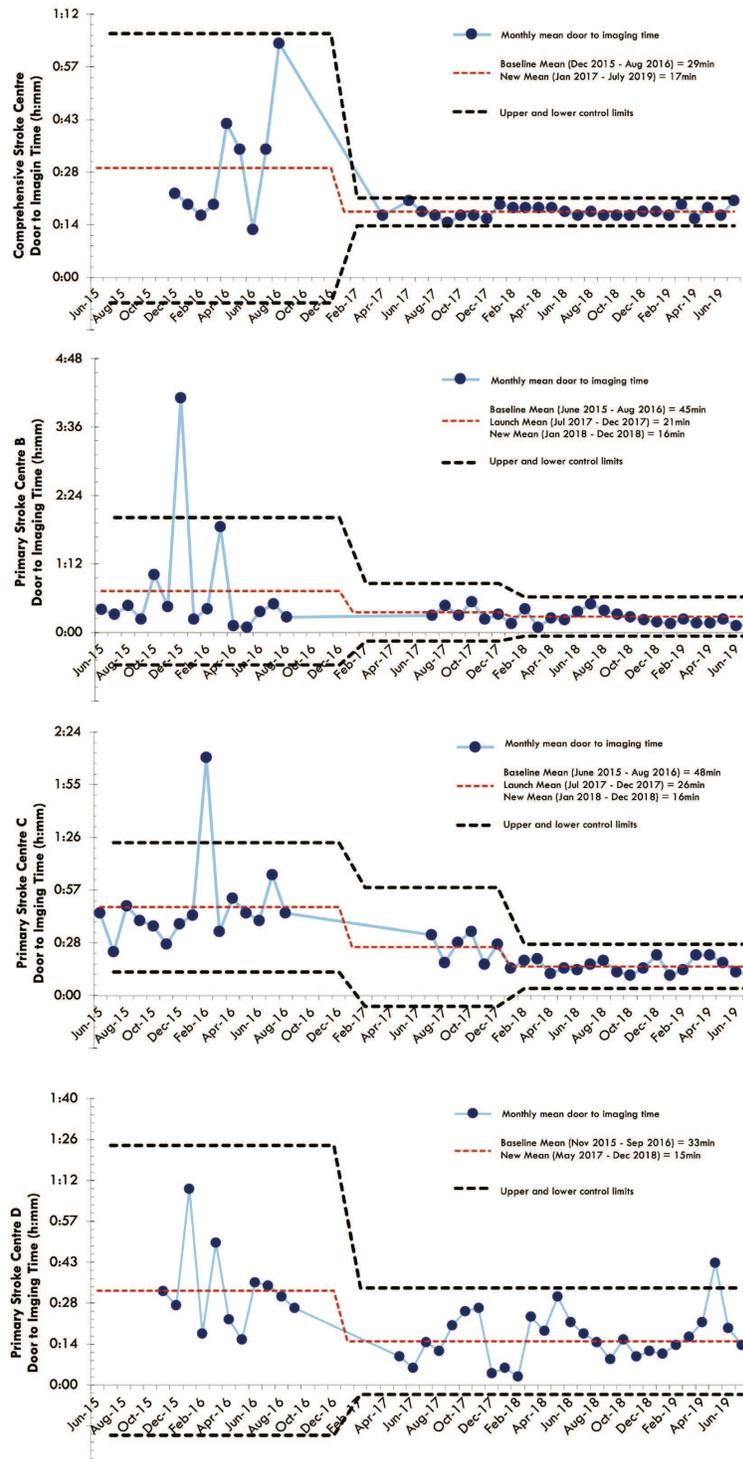


Figure VI. Individuals control chart displaying the monthly mean door to imaging time at the Comprehensive Stroke Centre and Primary Stroke Centres B – D. The monthly mean door to imaging time is displayed using the blue dots. The longer-term mean at baseline, launch, and after launch is displayed using the red dashed line. The upper and lower control limits are displayed using the black dashed lines. All four centres displayed wide control limits at the start of the acute stroke pathway and experienced a decrease in door to imaging time and narrower controls limits over the course of the study.

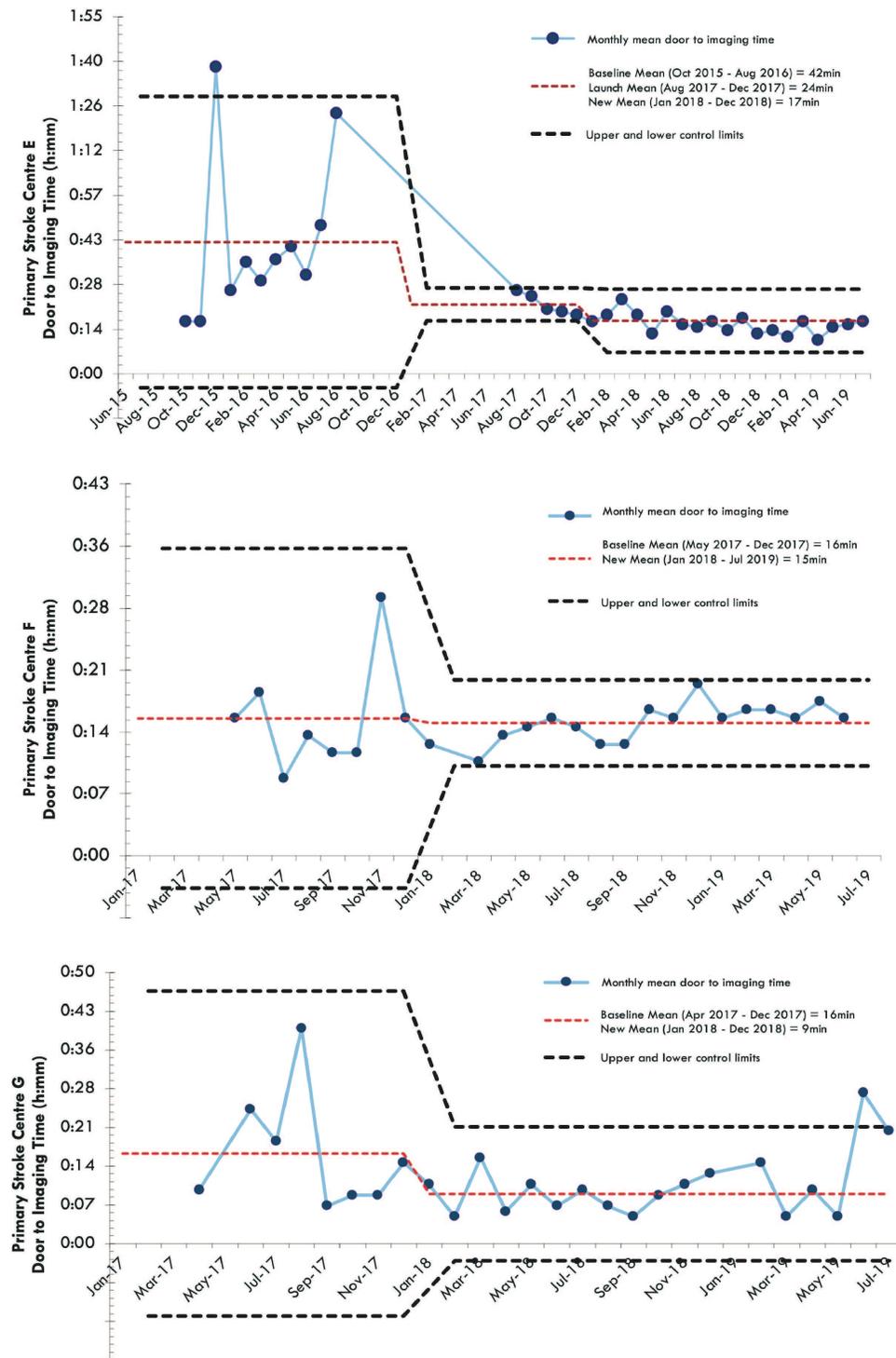


Figure VII. Individuals control chart displaying the monthly mean door to imaging time at Primary Stroke Centres E – G. The monthly mean door to imaging time is displayed using the blue dots. The longer-term mean at baseline, launch, and after launch is displayed using the red dashed line. The upper and lower control limits are displayed using the black dashed lines. Centre E and G displayed wide control limits at the start of the acute stroke pathway and experienced a decrease in door to imaging time and narrower controls limits over the course of the study. Centre F only experienced a 1-minute improvement in door to imaging time but did see more stability in door to imaging time and a decrease in control limits over the course of the study.

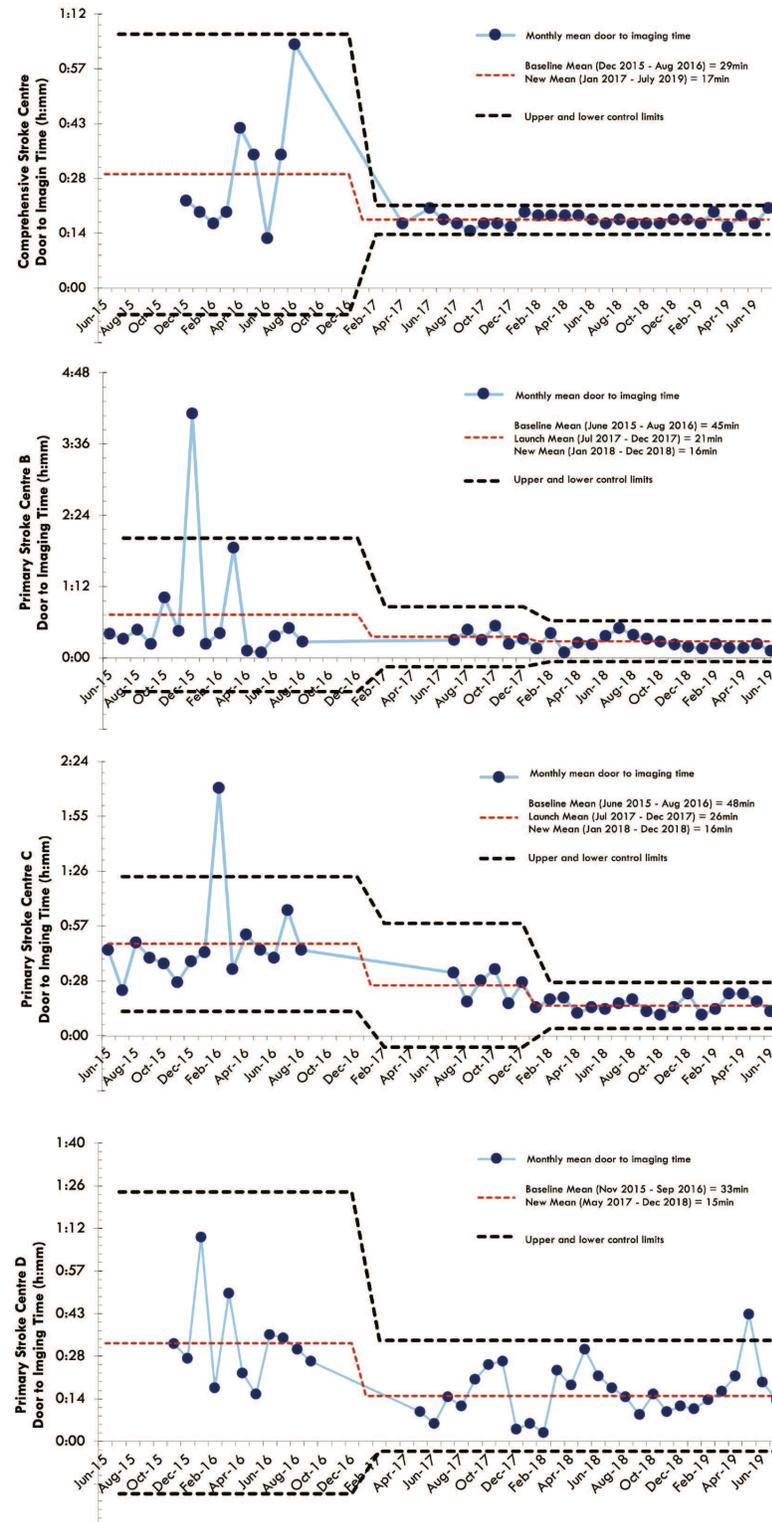


Figure VIII. Individuals control chart displaying the monthly mean door to needle time at the Comprehensive Stroke Centre and Primary Stroke Centres B – D. The monthly mean door to needle time is displayed using the blue dots. The longer-term mean at baseline, launch, and after launch is displayed using the red dashed line. The upper and lower control limits are displayed using the black dashed lines. Three of the centres displayed wide control limits at the start of the acute stroke pathway and experienced a decrease in door to needle time and narrower controls limits over the course of the study. While Centre D saw an increase in door to needle time.

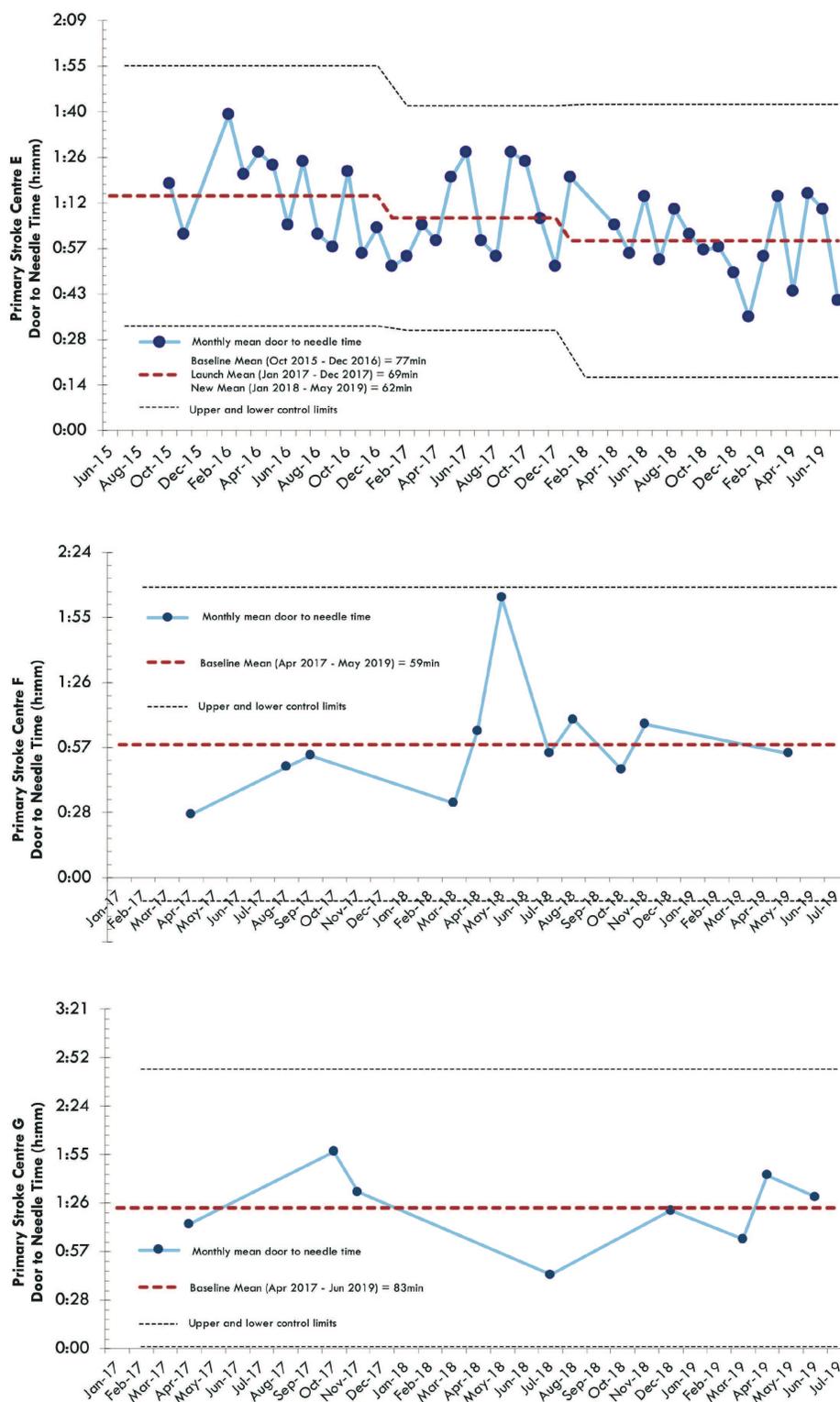


Figure IX. Individuals control chart displaying the monthly mean door to needle time at Primary Stroke Centres E – G. The monthly mean door to needle time is displayed using the blue dots. The longer-term mean at baseline, launch, and after launch is displayed using the red dashed line. The upper and lower control limits are displayed using the black dashed lines. While Centre E experienced improvement over the course of the study Centres F and G saw no improvement.