

Web Appendix

eSupplement 1. Method for Early Aberration Reporting System (STATA computing)

1. Identify the flu-like syndrome in emergency department software using the main complaint reported by the patient: combine the flu-like syndrome or fever/cough/shortness of breath and isolation droplet depending on the main complaint collected.

```
.gen flu_like_syndrome=1 if fever==1 | shortness_breath==1 | cough==1 & isolation_droplet
```

2. Extract the number of flu-like syndromes by day and the total number of patients attending the ED by day.

```
.collapse (sum) flu_like_syndrome total_ed id, by(date_admission)
```

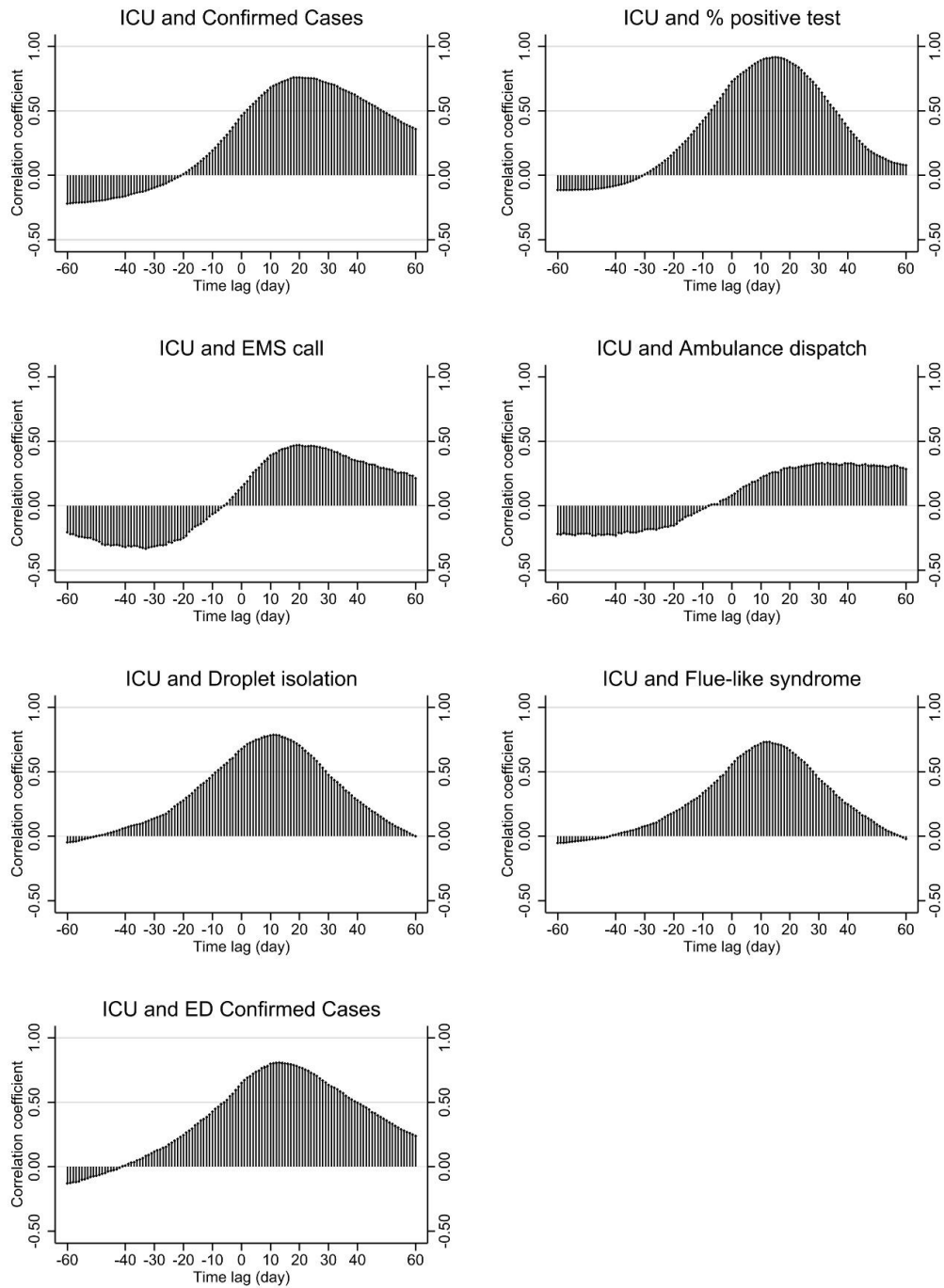
3. Perform a moving average for the number of flu-like syndromes by day (7 days or less).

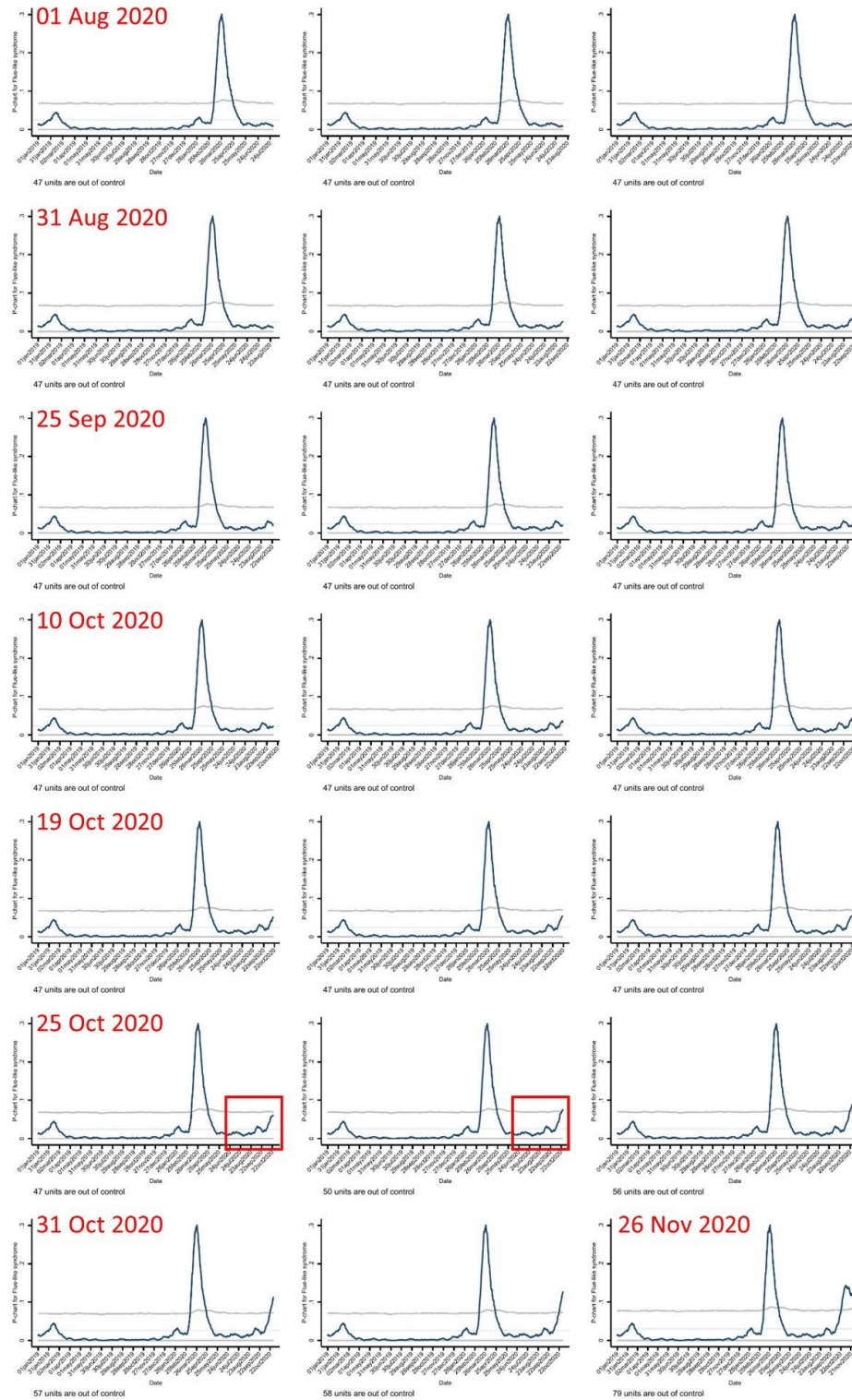
```
.tssmooth ma flu_like_sd_ma= flu_like_syndrome, window(7 1 7)
```

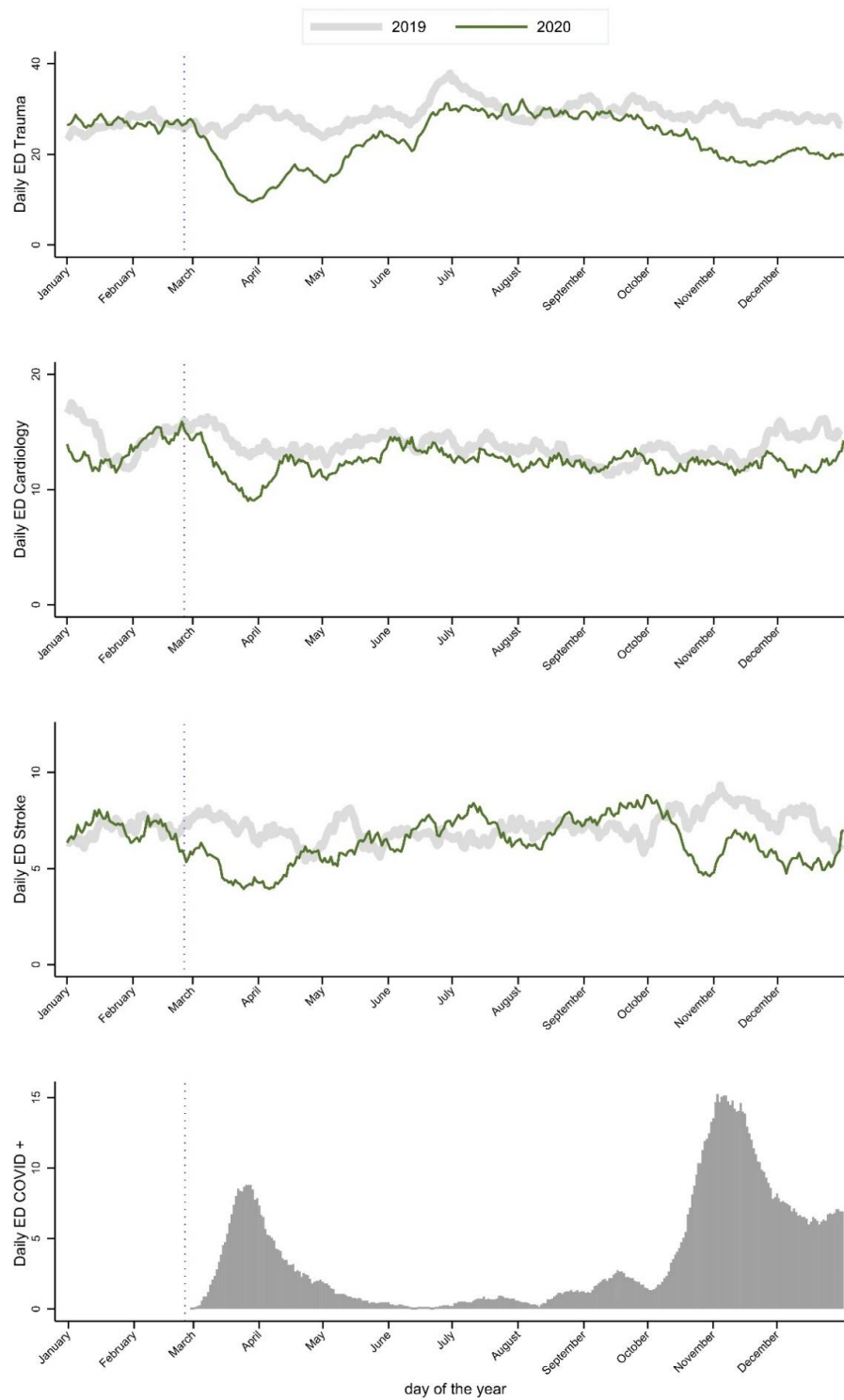
```
.tssmooth ma total_ed_ma= total_ed, window(7 1 7)
```

4. Plot the P-chart (using the usual limit $Pr \pm 3 \sqrt{\frac{Pr(1-Pr)}{N}}$).

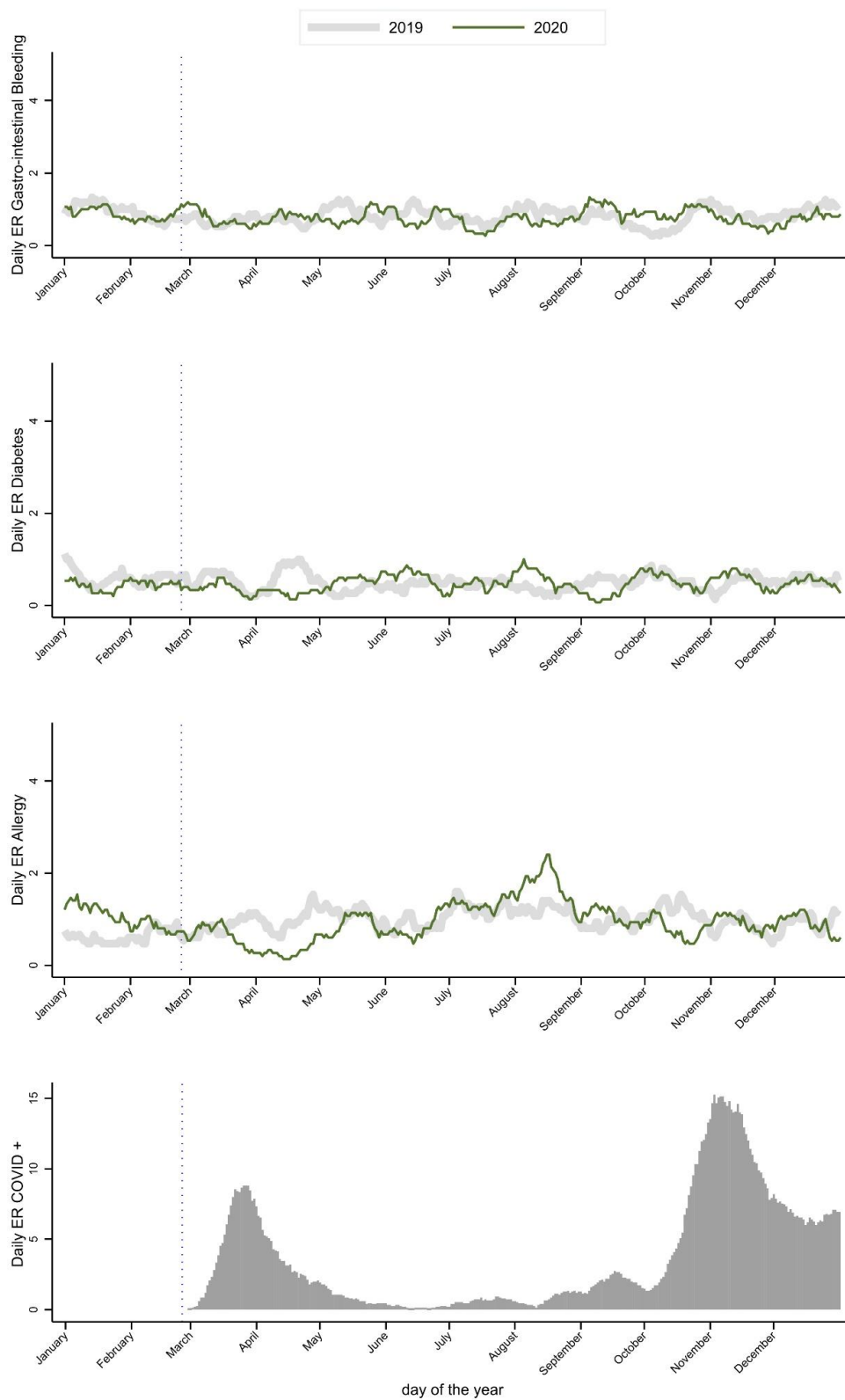
```
. pchart flu_like_sd_ma date_admission total_ed_ma, sta recast(line) ytitle("Daily Flu-like syndrome in the ED",size(small)) title("P-chart moving average fraction defective", size(small)) xtitle("date",size(small)) ylabel(, labsize(small)) axis(1) ylabel(, labsize(small))
```

eSupplement 2. Correlogram between ICU occupancy and surveillance indicators at Lausanne University Hospital.

eSupplement 3. Daily P-charts of emergency department flu-like syndrome during the second wave of the COVID-19 outbreak at Lausanne University Hospital.

eSupplement 4. Time series by daily ED specific activity at Lausanne University Hospital (trauma, cardiology and stroke).

eSupplement 5. Time series by daily ED specific activity at Lausanne University Hospital (GIB, diabetes, allergy).



eSupplement 6. Time series by ED length of stay and waiting time at Lausanne University Hospital.

