County-Level 14-Day COVID-19 Case Trajectories
Fred Ulrich, BA; and Keith Mueller, PhD

Background

Data on confirmed COVID-19 cases were obtained from the Johns Hopkins University COVID-19 Data Repository1. The number of cases in each county was aggregated for each week in the two-week period, and the totals for each week were compared. To minimize the impact of counties with very minor real variation in weekly counts, those with a change in case count of two or fewer (either increase or decrease) were coded as “Same number, both weeks.” Counties that saw more than a 25 percent increase or decrease in number of cases between the weeks were labelled “notable” (including counties that went from 3 or more to none [notable decrease] and counties that went from none to 3 or more [notable increase]). Counties in the 50 states and the District of Columbia were classified as metropolitan, nonmetropolitan, or noncore based on Urban Influence Codes2.

Table 1. 14-day trendsb in newly confirmed COVID-19 cases, by county geography: 8/29/2021 – 9/11/2021

<table>
<thead>
<tr>
<th></th>
<th>Metropolitan (n = 1,166)</th>
<th>Nonmetropolitan (n = 641)</th>
<th>Noncore (n = 1,335)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No cases reported</td>
<td>15 (1.3%)</td>
<td>19 (3.0%)</td>
<td>72 (5.4%)</td>
</tr>
<tr>
<td>Decreasing, notableb</td>
<td>211 (18.1%)</td>
<td>140 (21.8%)</td>
<td>364 (27.3%)</td>
</tr>
<tr>
<td>Decreasing, not notable</td>
<td>483 (41.4%)</td>
<td>205 (32.0%)</td>
<td>262 (19.6%)</td>
</tr>
<tr>
<td>Same number, both weeks</td>
<td>59 (5.1%)</td>
<td>54 (8.4%)</td>
<td>202 (15.1%)</td>
</tr>
<tr>
<td>Increasing, not notable</td>
<td>259 (22.2%)</td>
<td>120 (18.7%)</td>
<td>154 (11.5%)</td>
</tr>
<tr>
<td>Increasing, notable</td>
<td>139 (11.9%)</td>
<td>103 (16.1%)</td>
<td>281 (21.0%)</td>
</tr>
</tbody>
</table>

aComparison of number of new cases in first week of 14-day period with new cases in second week.
b"Notable" trends indicate weekly changes in new cases exceeding (either increasing or decreasing) 25 percent.
cIncludes counties with an absolute change in count of two or fewer.
Table 2. 14-day trends\textsuperscript{a} in newly confirmed COVID-19 cases, in counties with any cases, by county geography: 8/29/2021 – 9/11/2021

<table>
<thead>
<tr>
<th></th>
<th>Metropolitan (n = 1,151 of 1,166)</th>
<th>Nonmetropolitan (n = 622 of 641)</th>
<th>Noncore (n = 1,263 of 1,335)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any decrease</td>
<td>694 (60.3%)</td>
<td>345 (55.5%)</td>
<td>626 (49.6%)</td>
</tr>
<tr>
<td>Notable decrease\textsuperscript{b}</td>
<td>211 (18.3%)</td>
<td>140 (22.5%)</td>
<td>364 (28.8%)</td>
</tr>
<tr>
<td>Same number, both weeks\textsuperscript{c}</td>
<td>59 (5.1%)</td>
<td>54 (8.7%)</td>
<td>202 (16.0%)</td>
</tr>
<tr>
<td>Any increase</td>
<td>398 (34.6%)</td>
<td>223 (35.9%)</td>
<td>435 (34.4%)</td>
</tr>
<tr>
<td>Notable increase\textsuperscript{b}</td>
<td>139 (12.1%)</td>
<td>103 (16.6%)</td>
<td>281 (22.2%)</td>
</tr>
<tr>
<td>Increase of 100% or more</td>
<td>10 (0.9%)</td>
<td>14 (2.3%)</td>
<td>83 (6.6%)</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Comparison of number of new cases in first week of 14-day period with new cases in second week.
\textsuperscript{b}“Notable” trends indicate weekly changes in new cases exceeding (either increasing or decreasing) 25 percent.
\textsuperscript{c}Includes counties with an absolute change in count of two or fewer.

Figure 1.

All County Confirmed COVID-19 Cases
Week-to-Week Count Changes: 08/29/2021 - 09/11/2021

Data source: Johns Hopkins University CSSE COVID-19 Data
https://github.com/CSSEGISandData/COVID-19

Nebraska stopped providing county breakdowns of cases 9/9/2021
Figure 2.

**Metropolitan County Confirmed COVID-19 Cases**

*Week-to-Week Count Changes: 08/29/2021 - 09/11/2021*

![Map showing metropolitan county confirmed COVID-19 cases with color coding for Week-to-Week Count Changes.]

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Figure 3.

**Nonmetropolitan County Confirmed COVID-19 Cases**

*Week-to-Week Count Changes: 08/29/2021 - 09/11/2021*

![Map showing nonmetropolitan county confirmed COVID-19 cases with color coding for Week-to-Week Count Changes.]

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Data source: Johns Hopkins University CSSE COVID-19 Data

https://github.com/CSSEGISandData/COVID-19

Nebraska stopped providing county breakdowns of cases 5/31/2021

Rural Policy Research Institute (RUPRI)

University of Iowa, College of Public Health
COVID-19 case and death data for this ongoing report were previously obtained from USAFacts.org. Reports after 8/15/2020 use data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. While both sources employ similar approaches and resources to produce their data, the Johns Hopkins data is released in a more timely fashion making it more suitable for use in these reports.

Additional changes were made to the report starting 4/26/2021 to better account for the Utah practice of providing aggregated incidence and mortality data for less populous counties.

Nebraska stopped reporting county-level case and mortality data on 5/25/2021. Therefore, total cases/deaths for metropolitan and nonmetropolitan counts are undercounts.

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