COVID-19 Epidemic: US Update and Outlook

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Outline
1. Data as of this morning
2. Estimates of R-effective
3. Short-term forecasts
4. Policy-dependence of medium-term forecasts
Cases and deaths through July 10

New York, New Jersey, Connecticut, Massachusetts

Weekly COVID-19 cases and deaths

Rest of U.S.

Weekly COVID-19 cases and deaths

Source: Johns Hopkins University
Cases and deaths through July 10

Weekly COVID-19 cases and deaths: Massachusetts

Weekly COVID-19 cases and deaths: New York

Weekly COVID-19 cases and deaths: California

Weekly COVID-19 cases and deaths: Arizona

Weekly COVID-19 cases and deaths: Texas

Weekly COVID-19 cases and deaths: Florida

Source: Johns Hopkins University
Estimates of $R_{\text{effective}}(t) = R_0(t) \times (S/N)$

Source: Rt.live (updated 7/10/20)

<table>
<thead>
<tr>
<th>State</th>
<th>Rt.live (7/10/20)</th>
<th>F-V &amp; Jones (6/21/20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>0.93</td>
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<td>CA</td>
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<td>AZ</td>
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</tr>
<tr>
<td>FL</td>
<td>1.18</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Source: Baqae, Farhi, Mina, & Stock (2020), updated 7/10/10
Short-term forecasts and the case fatality rate

Forecasts of Weekly Death Rate, 0-4 weeks ahead
Point forecasts from 19 models, updated 7/10/2020


Time-varying CFR:
- Improvements in treatment
- Relaxation of testing eligibility rules
- Protections for elderly (changing age composition of those infected)
Forecasts: 6-month

- Relaxed social distancing, limited masks
- Close schools, economic shutdown

The narrative should be “smart containment,” not deaths v. economy

- Endogenous response (consumers won’t return until it is safe)
- Unlike most economic problems, we have more instruments than targets
  - The “economic lockdown” tool is by itself not especially effective, and very costly
- Economists collectively need to do a better job advocating for non-economic NPIs
  - Masks and personal distancing; Testing & isolation; protections for elderly; etc.
Weekly US COVID-19 confirmed cases and deaths

United States

Source: Johns Hopkins University
-0.9 pp/yr
-0.5 pp/yr
-0.5 pp/yr
-0.7 pp/yr

Source: U.S. Bureau of Labor Statistics