The Public Health Impact of COVID-19 in Latin America Webinar Series

The case of Mexico

Eduardo Lazcano-Ponce

November, 2020
COVID-19 in Mexico

- First COVID-19 case in the U.S.: January 20
- China confirms the presence of the novel coronavirus: January 7
- First COVID-19 case in Mexico: February 28
- Lockdown measures begin in Mexico: March 23
- Start of reconversion of COVID-19 hospitals: April 1
- Economic activities were limited to those of an essential nature
- Easing of social distancing restrictions: May 30

Population
- There are no enforcement measures
- Dialogue and persuasion measures

Public spaces
- Constraint approach

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Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.
Burden of Covid-19 Disease at global level, November 11, 2020

# of accumulated cases

US 8,636,011
India 5,699,005
Brazil 1,914,377
France 1,822,345
Russia 1,417,709
Spain 1,262,476
Argentina 1,260,192
United Kingdom 1,156,675
Italy 1,028,424
Mexico 978,531
Canada 925,431
Brazil 742,394
Peru 726,176
South Africa 715,068

# of accumulated Deaths

US 240,838
India 162,802
United Kingdom 127,571
France 95,842
Spain 50,457
Brazil 42,953
Argentina 42,599
United Kingdom 40,105
France 39,964
Argentina 34,992
Brazil 34,183
Russia 33,312
Indonesia 31,326
Iran 20,011
Peru 14,836

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The case of Mexico
Total number of COVID-19 tests per confirmed case, Sep 25, 2020

Mexico
2,537,044 tests
39% positivity
Nov 10, 2020

Source: Our World in Data: European CDC - Situation Update Worldwide
Note: Comparisons of testing data across countries are affected by differences in the way the data are reported. Details can be found at our Testing Dataset page.
Analytical dashboard until November 13, 2020

Tests performed by age and sex

Epidemic curve by state

Number of tests per state

Hospitalized by age and sex

Tests performed by age and sex

Higher population density
### COVID19: Mortality by country

#### Mortality: Deaths per 100,000 population

<table>
<thead>
<tr>
<th>Country</th>
<th>Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>62.00</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>53.71</td>
</tr>
<tr>
<td>Spain</td>
<td>53.71</td>
</tr>
<tr>
<td>US</td>
<td>52.87</td>
</tr>
<tr>
<td>UK</td>
<td>52.77</td>
</tr>
<tr>
<td>Chile</td>
<td>48.31</td>
</tr>
<tr>
<td>France</td>
<td>48.31</td>
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<tr>
<td>Argentina</td>
<td>48.31</td>
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<tr>
<td>Iran</td>
<td>40.13</td>
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<tr>
<td>South Africa</td>
<td>29.25</td>
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<tr>
<td>Romania</td>
<td>29.25</td>
</tr>
<tr>
<td>Iraq</td>
<td>24.39</td>
</tr>
<tr>
<td>Russia</td>
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<tr>
<td>Turkey</td>
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<td>India</td>
<td>3.36</td>
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<td>Philippines</td>
<td>2.57</td>
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<tr>
<td>Indonesia</td>
<td>1.11</td>
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</tbody>
</table>

#### Mortality: Observed case-fatality ratio

<table>
<thead>
<tr>
<th>Country</th>
<th>Mortality Rate</th>
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<tr>
<td>Mexico</td>
<td>10.4%</td>
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<tr>
<td>United Kingdom</td>
<td>5.7%</td>
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<tr>
<td>Iran</td>
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<tr>
<td>France</td>
<td>2.5%</td>
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<tr>
<td>Spain</td>
<td>9.0%</td>
</tr>
<tr>
<td>Peru</td>
<td>4.0%</td>
</tr>
<tr>
<td>Romania</td>
<td>3.7%</td>
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<tr>
<td>Indonesia</td>
<td>3.7%</td>
</tr>
<tr>
<td>Colombia</td>
<td>2.1%</td>
</tr>
<tr>
<td>Brazil</td>
<td>2.0%</td>
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<tr>
<td>US</td>
<td>2.8%</td>
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<tr>
<td>Chile</td>
<td>2.8%</td>
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<tr>
<td>Argentina</td>
<td>2.5%</td>
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<tr>
<td>Turkey</td>
<td>2.5%</td>
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<tr>
<td>Iraq</td>
<td>2.2%</td>
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<tr>
<td>South Africa</td>
<td>1.5%</td>
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<td>Ukraine</td>
<td>4.0%</td>
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<tr>
<td>Philippines</td>
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<tr>
<td>Russia</td>
<td>1.2%</td>
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<tr>
<td>India</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

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>500,000 missing deaths: True toll of excess mortality

**Mexico**
122,100+ excess deaths from March 16 to Aug. 2

**Brazil**
95,900+ excess deaths from March 1 to July 25

**Peru**
86,700+ excess deaths from March to September

**Ecuador**
36,200+ excess deaths from March to September

**South Africa**
30,500+ excess deaths from March 4 to Sept. 16

**Bolivia**
22,900+ excess deaths from March to August
Excess mortality from all causes, Mexico 2020

Epidemiological week

Fuente: Secretaría de Salud. Canal endémico calculado con las defunciones por semana epidemiológica de ocurrencia y entidad de registro, 2015 a 2018, INEGI y el exceso de mortalidad estimado con las actas de defunción por semana epidemiológica de ocurrencia y entidad de registro, 2020, Renapo
Excess mortality from all causes by age groups and sex, Mexico 2020
Excess mortality for COVID-19 by sex, Mexico 2020

Excess mortality by sex

Fuente: el exceso total de mortalidad fue calculado con las actas de defunción por año de ocurrencia y sexo de 2020 e incluyen las defunciones por COVID-19, y las defunciones Covid19 en color rojo son los registros de defunciones en el SISVER reportados a la Semana 1 a 39.
Covid-19 Mexico: Positive, Suspicious and Negative Cases

National stage

Performed tests Positivity

November 10, 2020

Negative Confirmed

1,191,522

978,531

Epidemiological week

Cases

2,537,046

50%

40%

30%

20%

10%

0%
COVID19 Mexico
Availability of hospital beds with mechanical ventilation

610 hospitals Converted to Covid19 attention until November 7, 2020
Reopening after lockdown

Following a nation-wide, 70-day lockdown, Mexico eased restrictions through a gradual strategy named “New Normality” (Nueva Normalidad).

Four-color, bi-weekly traffic light that determines industry activity linked to transmission rates:

- **MAXIMUM HEALTH ALERT**
- **HIGH**
- **INTERMEDIATE**
- **LOW**

Color is determined by:
- ✓ Level of health risk (hospital occupation and rate of change)
- ✓ Transmission rate (increase in the number of cases and % sero-positivity rate)

Mexico risk map for COVID19 based on the traffic light

*November 11, 2020*
Conclusions

✓ COVID-19 has exposed:
  • The lack of preparedness: limited stockpiling
  • Mexican healthcare system weakness: segmentation and fragmentation
  • The ‘new normal' may not be working for a majority of our society, for example for informal workers whose minimum income needed for subsistence is obtained on a day-to-day income.
  • Social distancing and personal protective equipment remains the remit of those with the means to comply.

✓ What are some lessons learned?
✓ Stress test for health systems
  • Find, test, trace, isolate, support
  • Invest in surveillance and public health

✓ “Covid19 is already out of fashion, the important thing is to eat” a person in public transport