The public health impact of COVID-19 in Latin America

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The public health impact of COVID-19 in Latin America

1. Characteristics of the health system in Uruguay
2. Current Situation of COVID in Uruguay
3. Main health policy actions related to COVID
4. What has worked well
5. What should be improved
6. Main social and economic impacts
7. Future steps
# Uruguay

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Area</strong></td>
<td>176,215 km²</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>3.353.912</td>
</tr>
<tr>
<td><strong>Population density (hb/km²)</strong></td>
<td>20 (5 – 2500)</td>
</tr>
</tbody>
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*Instituto Nacional de Estadística*

[www.ine.gub.uy](http://www.ine.gub.uy)
Uruguay

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<td>20 (5 – 2500)</td>
</tr>
<tr>
<td>GDP per capita (US dollars PPP)</td>
<td>23.581</td>
</tr>
<tr>
<td>Poverty rate (%)</td>
<td>8.8</td>
</tr>
<tr>
<td>Unemployment (% ILO)</td>
<td>8.7</td>
</tr>
<tr>
<td>Informal employment (%NA)</td>
<td>23.7</td>
</tr>
<tr>
<td>Income share by richest 10%</td>
<td>29.7</td>
</tr>
<tr>
<td>HDI index</td>
<td>0.808</td>
</tr>
<tr>
<td>Access to basic sanitation (%)</td>
<td>97</td>
</tr>
<tr>
<td>Access to drinking water (%)</td>
<td>99</td>
</tr>
<tr>
<td>Literacy rate (%)</td>
<td>98.7</td>
</tr>
</tbody>
</table>

UNPD 2019 Human Development Report
https://data.worldbank.org/
Instituto Nacional de Estadística
www.ine.gub.uy
Health at a Glance: Latin America and the Caribbean 2020, OECD.
<table>
<thead>
<tr>
<th></th>
<th>Uruguay</th>
<th>OECD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy (y)</td>
<td>78</td>
<td>80,7</td>
</tr>
<tr>
<td>Population &gt; 65 y (%)</td>
<td>20</td>
<td>17,4</td>
</tr>
<tr>
<td>Obesity (a.s. %)</td>
<td>40</td>
<td>19,5</td>
</tr>
<tr>
<td>Diabetes (%)</td>
<td>8</td>
<td>9,7</td>
</tr>
<tr>
<td>Hypertension (%)</td>
<td>30</td>
<td>21,6</td>
</tr>
<tr>
<td>Death rate CV disease</td>
<td>160</td>
<td>---</td>
</tr>
<tr>
<td>Smoking (%)</td>
<td>20,4</td>
<td>18</td>
</tr>
<tr>
<td>Alcohol (L/cap)</td>
<td>11</td>
<td>8,9</td>
</tr>
<tr>
<td>Vaccinated &lt; 1 y (%)</td>
<td>91-97</td>
<td>91-95</td>
</tr>
</tbody>
</table>
The public health impact of COVID-19 in Latin America

1. Characteristics of the health system in Uruguay
Uruguay health system
Uruguay health system

Sources
- Taxes
- Employees (3-6%)
- Employers (5%)
- Households

Funds
- FONASA
- FNR
- Private

Providers
- ASSE (public)
- IAMC (mutuals)
- IMAE (HT)
- Private clinics

Global capitation system

**Uruguay National Health System (SNIS)**

<table>
<thead>
<tr>
<th></th>
<th>Uy</th>
<th>OECD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population covered (%)</td>
<td>97</td>
<td>98,4</td>
</tr>
<tr>
<td>Public (%)</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Mutuals and private (%)</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Health Care Expenditure (%GDP)</td>
<td>9,4</td>
<td>8,8</td>
</tr>
<tr>
<td>HCE (dol per capita, PPP)</td>
<td>2102</td>
<td>3994</td>
</tr>
<tr>
<td>OOP Health Expenditure (%)</td>
<td>17,5</td>
<td>21</td>
</tr>
</tbody>
</table>

*Gráfico 2* Evolución comparada del gasto total en salud y del PIB para el periodo 2005-2017 (base 2005=100)

Fuente: Economía de la Salud, MSP.
## Uruguay National Health System (SNIS)

<table>
<thead>
<tr>
<th>Service</th>
<th>Uy</th>
<th>Scaled up</th>
<th>OECD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital beds (per 1k hb)</td>
<td>2,8</td>
<td></td>
<td>4,7</td>
</tr>
<tr>
<td>ICU beds (per 100k hb)</td>
<td>21</td>
<td>33</td>
<td>--</td>
</tr>
<tr>
<td>Ventilators (per 100k hb)</td>
<td>18</td>
<td>29</td>
<td>--</td>
</tr>
<tr>
<td>Physicians (per 1k hb)</td>
<td>5,1</td>
<td></td>
<td>3,5</td>
</tr>
<tr>
<td>Nurses (per 1k hb)</td>
<td>7</td>
<td></td>
<td>8,8</td>
</tr>
</tbody>
</table>

*Figure 5.1. Doctors per 1 000 population, 2017 or latest year available*

*Health at a Glance: Latin America and the Caribbean 2020, OECD*

*Hospital Español-ASSE*
Uruguay National Health System (SNIS)
The public health impact of COVID-19 in Latin America

1. Characteristics of the health system in Uruguay
2. Current Situation of COVID in Uruguay
## Current Situation of COVID in Uruguay
### November 9th

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>per 1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total tests (PCR)</td>
<td>302334</td>
<td>90.114</td>
</tr>
<tr>
<td>Positive Tests (%)</td>
<td>&lt; 5</td>
<td></td>
</tr>
<tr>
<td>Total confirmed cases (PCR)</td>
<td>3.309</td>
<td>987</td>
</tr>
<tr>
<td>Active cases</td>
<td>434</td>
<td>129</td>
</tr>
<tr>
<td>Daily new cases (7 d.m.a./100k)</td>
<td>1,2</td>
<td></td>
</tr>
<tr>
<td>Adm Hosp</td>
<td>167 (7%)</td>
<td></td>
</tr>
<tr>
<td>Adm ICU</td>
<td>65 (2.1 %)</td>
<td></td>
</tr>
<tr>
<td>Health care workers</td>
<td>396 (16,8%)</td>
<td></td>
</tr>
<tr>
<td>Case fatality ratio</td>
<td>1,8 %</td>
<td></td>
</tr>
<tr>
<td>Mortality (100k pop)</td>
<td>1,6</td>
<td></td>
</tr>
</tbody>
</table>

[globalepidemics.org/key-metrics-for-covid-suppression/](globalepidemics.org/key-metrics-for-covid-suppression/)
Cumulative COVID-19 tests, confirmed cases and deaths per million people, Uruguay

The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.

Cumulative tests per million tests performed
Confirmed cases per million tests performed
Confirmed deaths per million tests performed

Source: Official data collated by Our World in Data; European CDC – Situation Update Worldwide OurWorldInData.org/coronavirus • CC BY

Mar 15, 2020  Nov 6, 2020
Positive PCR tests

The share of daily COVID-19 tests that are positive

Shown is the rolling 7-day average. The number of confirmed cases divided by the number of tests, expressed as a percentage. Tests may refer to the number of tests performed or the number of people tested – depending on which is reported by the particular country.
## PCR tests in Health Personnel

**Nov 4th**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health workers</td>
<td>81,141</td>
</tr>
<tr>
<td>Total tests (PCR)</td>
<td>22,406</td>
</tr>
<tr>
<td>Positive Tests (%)</td>
<td>1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home and Emergency</td>
<td>141</td>
</tr>
<tr>
<td>Hospital ward</td>
<td>101</td>
</tr>
<tr>
<td>ICU</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total confirmed cases**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>15,049</td>
</tr>
<tr>
<td>Nurses</td>
<td>24,700</td>
</tr>
<tr>
<td>Technicians</td>
<td>12,836</td>
</tr>
<tr>
<td>Administrative and services</td>
<td>28,556</td>
</tr>
</tbody>
</table>

**División Evaluación y Monitoreo del Personal de Salud**
Cumulative confirmed COVID-19 cases

The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Source: European CDC – Situation Update Worldwide – Last updated 6 November, 10:06 (London time), Official data collated by Our World in Data
CC BY
Cumulative cases without exposure notion
Daily new cases and outbreaks
Daily new cases per 100K hb
(7days moving average)
COVID Risk Level map

Uruguay

Confirmed Cases

1 cases per 100k people
(7 day moving avg.)

Risk level: Yellow

Daily new cases per 100k people
7d moving avg.

Risk Levels:
- Green
- Yellow
- Orange
- Red

Harvard Global Health Institute
Figura 1. Distribución de casos confirmados según severidad y cuidados requeridos. Uruguay, 2020, al 30/10/2020).

Nota: Leve= casos de manejo ambulatorio; Moderado= ingreso a cuidados moderados; Severo= ingreso a CI/CTI. Fuente: elaborado por Departamento de Vigilancia en Salud con datos del Sistema de Gestión.

DEPARTAMENTO DE VIGILANCIA EN SALUD - DIVISIÓN EPIDEMIOLOGÍA – COVID-19 Actualización al 30 de octubre de 2020
**Tabla 5. Distribución de casos fallecidos con diagnóstico de SARS-CoV-2 según sexo y grupo de edad. Uruguay, 2020 (al 30/10/2020).**

<table>
<thead>
<tr>
<th>Grupo de edad</th>
<th>F</th>
<th>M</th>
<th>Total</th>
<th>Letalidad (*)</th>
<th>Mortalidad (**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menor a 15</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>15 a 24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>25 a 34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>35 a 44</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>45 a 54</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0.62</td>
<td>0.71</td>
</tr>
<tr>
<td>55 a 64</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>2.10</td>
<td>2.34</td>
</tr>
<tr>
<td>65 a 74</td>
<td>3</td>
<td>15</td>
<td>18</td>
<td>8.29</td>
<td>6.48</td>
</tr>
<tr>
<td>75 y más</td>
<td>8</td>
<td>20</td>
<td>28</td>
<td>13.59</td>
<td>11.79</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>42</td>
<td>58</td>
<td>1.88</td>
<td>1.64</td>
</tr>
</tbody>
</table>

* por 100 casos.** por 100.000 habitantes. ***Un caso corresponde al ciudadano filipino llegado en el crucero Greg Mortimer. Fuente: elaborado por Departamento de Vigilancia en Salud con datos del Sistema de Gestión.
COVID 19 death cases per 100k hb

https://coronavirus.jhu.edu/data/mortality
COVID 19 Reproductive number

Figura 8. Estimación del número reproductivo ($R_t$) de COVID-19 en Uruguay. 03/03/2020 al 30/10/2020.
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Early Government’s Decisions
First Stage

- **March 3-6:** Four cases arrived from Milano, Italy
- **March 13th:**

  **Mitigation and containment**
  - Health Emergency declaration
  - Borders were closed to non-Uruguayan residents
  - Quarantine for travelers coming from at-risk countries
  - Suspension of public events
  - Schools and universities were closed to face-to-face assistance.
  - “Stay at home” directive (no mandatory lock down)
  - Exhortation to >65y to comply with preventive quarantine
  - Hygiene measures, face mask and sustained physical distance of 2 meters.
  - Responsible use of public spaces
Early Government’s Decisions
First Stage

March 15th:
• chatbot to evacuate queries through the domain <coronavirus.uy>
• application for cell phones with georeference of cases and an alert when they are near a risk area

March 23th:
• set up a telephone line (0800 1920) to provide psychological help
• Testing:
   Centralization of information from public and private laboratories, with the aim of having information on all positive and study cases in the country. Initially testing capacity was limited.

• Tracing: Tracing capability had to be developed.

• Isolation: widespread availability of home medicine, testing at home.
Timing and Stringency of measures

COVID-19: Government Response Stringency Index
This is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.

Note: This index simply records the number and strictness of government policies, and should not be interpreted as ‘scoring’ the appropriateness or effectiveness of a country’s response.
OurWorldInData.org/coronavirus • CC BY
Government’s Decisions
Second Stage

• April 16th:
• Honorary Scientific Advisory Group (GACH) 55 *pro bono* experts
  Exclusively advisory role
  No political interference
  Health planning and mathematical models
• **Main duty** is to advise the government:
  – on the management of the pandemic
  – how to transit to the “new normal”:
    • Resume activities following these criteria:
      – progressiveness
      – regulation
      – monitoring
      – evidence-based
Consortium:
Universidad de la República
Institut Pasteur de Montevideo
ATG Biotec
Funds: ANII, IDB, MSP

- local development and manufacturing of PCR tests
- sequenced the first complete genomes of SARS COV 2 from 10 patients with COVID-19 in Uruguay.
- Extensive random testing and community tracking in outbreak areas followed by quarantine of all contacts with personalized tracking
- local development of LAMP tests
Health policy actions

• Central coordination of information
• Massive testing (from 30/day, in March, to 4000/day in november)
• Extensive tracing
• Home assistance was encouraged
• Telephone and telemedicine is generally available
• Clear cut protocols for hospital consultations
• Surgical procedures restricted to emergencies and oncology
COVID-19: Containment and Health Index

This is a composite measure based on eleven policy response indicators including school closures, workplace closures, travel bans, testing policy and contact tracing, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.

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What has worked well

• Border closure and isolation measures taken immediately and voluntarily carried out by the population.
• Test availability rapidly developed
• Decisions taken by the political system in conjunction with the scientific community.
• Progressive opening of schools and resuming public activity.
• Transparency in the handling of data and trust of the population.

Severe Acute Respiratory Infections surveillance


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Interventions to limit the spread of the coronavirus also carry negative health effects

- **Excess deaths:**
  Research in low and middle income countries, has found higher mortality rates during economic recessions.

- **Negative health effects:**
  delayed treatment and investigations

- **Effect on vulnerable populations**
  low wage workers who depend on their daily income
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Social and economic impact

• Sudden contraction in economic activity was experienced in the first 2 months of pandemic.
• This recession will have negative effects on employment, incomes, poverty and inequality.
• Due to global and regional uncertainty in the drop in GDP is expected at 4.7% and an increase of 3.7% in 2021
• Therefore a rapid recovery (“V” shaped) is not expected.
Labour market

*Figure 13. Applications for unemployment insurance*

Source: Social insurance bank.

*UNDP LAC C19 PDS N°. 10 Social and economic impact of COVID-19 and policy options in Uruguay
By Alfonso Capurro, Germán Deagosto, Federico Ferro, Sebastián Ithurralde and Gabriel Oddone*
Social and economic impact

Measures designed to protect the most vulnerable population

- Expanding and facilitating access to unemployment insurance.

- COVID-19 declared as an occupational disease. This covered insurance for dependent workers, medical and non-medical who become infected.

- Generating sickness subsidy for private workers over the age of 65 years and announcement that public workers in this age group do not have to come to work.

- Coronavirus Fund, discount of 5, 10 and 20%, public officials salaries 15,000 officials discount of 20% will be applied to the nominal salary.

- Deferring payment of taxes and social security contributions for micro and small enterprises.

- Expand Internet access to homes.
Social and economic impact

• Children
  • School closure in critical contexts and in children with adaptive disorders increased their educational gap.

• Elderly
  • Isolation and reduction of face-to-face medical care aggravated physical, cognitive and emotional deterioration

• “Shadow pandemic”
  • Widespread, gender-based violence has been exacerbated by domestic isolation
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Summer tourist season
Future steps

• Containment and mitigation to return to “green zone”
  – Early Detection, Isolation, Tracing and Surveillance
  – Implement serological tests for epidemiological purposes
    (WHO recommends 80% S+S)

• Borders will remain closed during summer (SARS-CoV-2 has shown a non seasonal behavior)

• Strong recommendation to maintain social distancing measures (Christmas celebration, holiday season, beaches)

• Uruguay signed the COVAX Facility (PAHO-WHO) to acquire vaccines for 20% of the population