



# *Peru's COVID-19 response – an insight to health security in Latin America*

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2021



# Peru: Lay of the Land

Peru, a wonderful country!



# Charming people from an array of ethnic origins





## Peru's basic profile

- ❑ Surface Area: **1,285,215 km<sup>2</sup>**
- ❑ Peru is the **third largest country in South America**
- ❑ There are **24 administrative regions**
- ❑ **Lima** is the capital city
- ❑ There are **33 million inhabitants** (Rural 27%, Urban 73%)
- ❑ Official languages are **Spanish & Quechua** (50+ other)
- ❑ Peru has **28 of world's 32 climates**.
- ❑ More than 76% is Catholic, 14% evangelic, 5% non religious





# COVID-19 health impact



# Was Peru, and the world and Latin America, prepared to respond to pandemics?



Launched on October 2019  
Washington D.C.



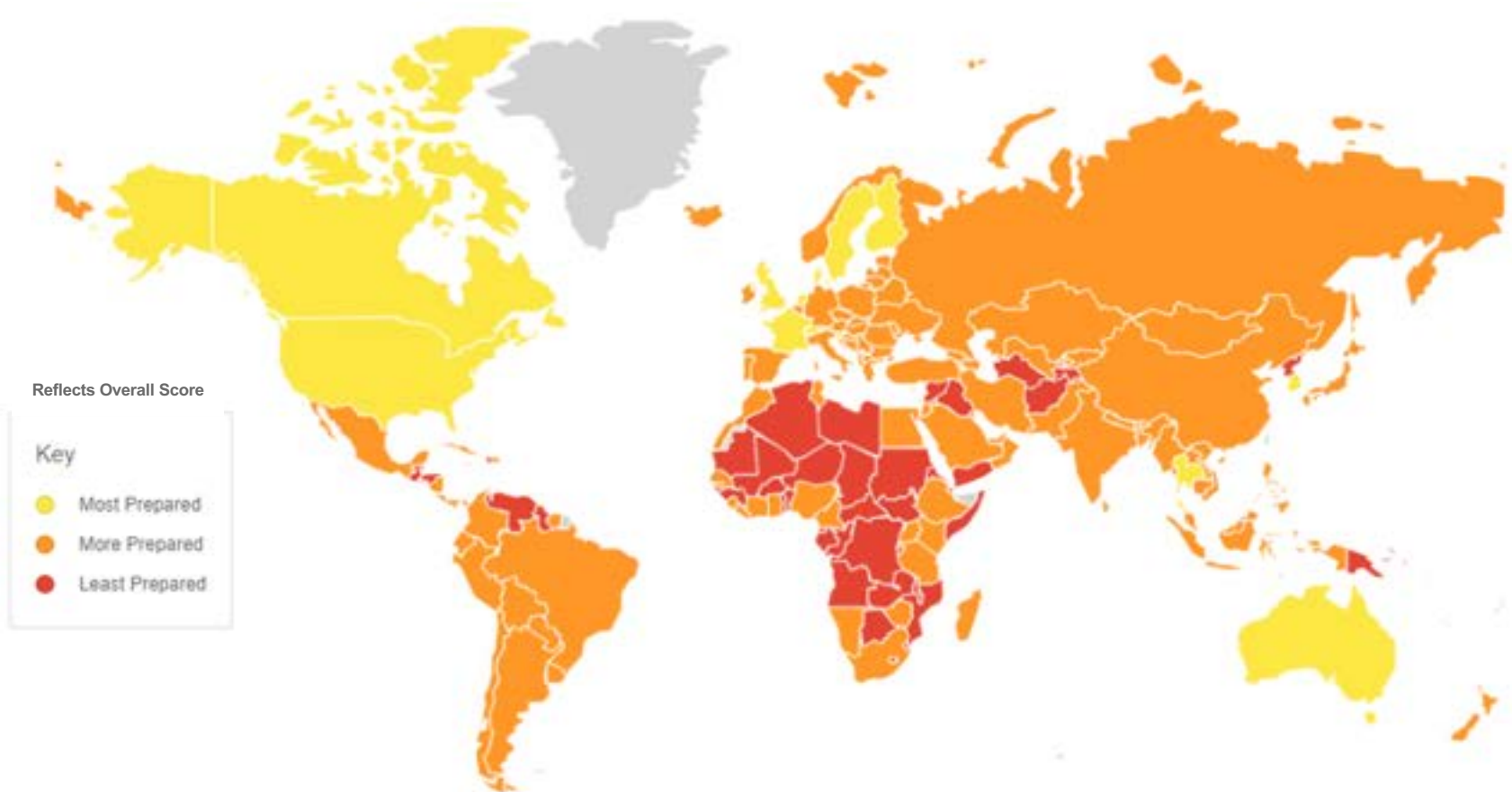
Overarching Finding: National health security is fundamentally weak around the world. **No country is fully prepared for epidemics or pandemics, and every country has important gaps to address.**



**Average Overall Score: 40.2 out of 100**  
**Highest: 83.5    Lowest: 16.2**



**GHS INDEX**  
GLOBAL HEALTH  
SECURITY INDEX



# GHSI: Latin America preparedness



More prepared Score 33.4 to → 56.6		Least prepared Score 0 to → 33.3	
Brazil	59.7	St. Vincent and the Grenadines	34.0
Argentina	58.6	Guatemala	32.7
Chile	58.3	Barbados	31.9
Mexico	57.6	Belize	31.8
Ecuador	50.1	Guyana	31.7
Peru	49.2	Haiti	31.5
Costa Rica	45.1	Bahamas	30.6
Colombia	44.2	Antigua and Barbuda	29.0
El Salvador	44.2	Jamaica	29.0
Panama	43.7	Honduras	27.9
Nicaragua	43.1	Grenada	27.5
Uruguay	41.3	St. Kitts and Nevis	25.2
Dominican Republic	38.3	Dominica	24.0
Trinidad and Tobago	38.6	Venezuela	23.0
Suriname	36.5		
Bolivia	35.8		
Paraguay	35.7		
St. Lucia	35.3		
Cuba	35.2		

Source: J. Bell

[https://www.ghsindex.org/wp-content/uploads/2020/12/NTI\\_SpanishGHSIndex.pdf](https://www.ghsindex.org/wp-content/uploads/2020/12/NTI_SpanishGHSIndex.pdf)

Tabla 1. Capacidades en seguridad sanitaria del Perú, según el Informe Anual de Autoevaluación del Reglamento Sanitario Internacional de 2018 y el Índice de Seguridad Global en Salud de 2019



STATE PARTY SELF-ASSESSMENT ANNUAL IHR  
Categories and indicators

GLOBAL HEALTH SECURITY INDEX  
Categories and indicators

Prevenición	50	Prevenición	43,2
Eventos zoonóticos	40	Enfermedad zoonótica	47
Inseguridad de los alimentos	40	Resistencia a los antimicrobianos	58,3
		Bioterrorismo	50
		Biosseguridad	6
		Investigación de uso dual y ciencia responsable	0
		Inmunización	86
Detección	52,3	Detección y reporte	58,3
Laboratorio	47	Sistemas de laboratorio	81,2
Vigilancia	70	Vigilancia en tiempo real y reporte	86,7
		Integración de datos entre sectores	0
Recursos humanos	40	Fuerza laboral en epidemiología	33
Respuesta	50	Respuesta rápida	51,7
Marco nacional para emergencias sanitarias	40	Vinculación de autoridades de salud y seguridad	0
		Preparativos de emergencia y planificación	87,5
		Operaciones de respuesta a emergencias	31,1
		Transferencia de insumos y despliegue de personal	0
		Ejercicios de simulación de planes de respuesta	0
		Acceso a infraestructuras de comunicación	64,5
		Restricciones al comercio y los viajes	100
Comunicación de riesgos	40	Comunicación de riesgo	75
Legislación	51,5	Cumplimiento con normas internacionales	63
Legislación y financiamiento	55	Acuerdos transfronterizos a emergencias	50
		Compromisos internacionales	90,8
		Realización de JEE y PVS	33
		Financiamiento	50
		Compartir datos y especímenes	66,7
Coordinación del RSI y CNE para el RSI	50	Reporte del RSI y radiación de riesgo	100
Servicios de salud	33	Sistema de salud	45
Prestación de servicios de salud	33	Capacidad para evaluar y aprobar nuevos insumos médicos	75
		Acceso a servicios de salud	47,2
		Prácticas de control de infecciones y equipamiento	50
		Capacidad de salud en clínicas, hospitales y otros	60,8
		Comunicación con trabajadores en emergencia	100
Otros eventos y puntos de entrada	73,3	Ambiente de riesgo	57,7
Puntos de entrada	40	Riesgo político y de seguridad	75
Eventos químicos	40	Resiliencia socioeconómica	69,8
Emergencias de radiación	100	Coherencia de infraestructuras	58,3
		Riesgos ambientales	33,6
		Vulnerabilidad en salud pública	44,2

Peru's  
weaknesses to  
respond to  
pandemics.  
Feb 2020

<https://rpmesp.ins.gob.pe/index.php/rpmesp/article/view/5410/3533>

# Main weaknesses identified by the GHSI in Peru:



- **Linking health authorities with security**
- **Epidemiology workforce**
- **Public health Lab system**
- **Data sharing among disease surveillance systems**
- **Public and private healthcare facilities**
- **Lack of Joint External Evaluation**
- **Simulation exercises**
- **Emergency operations center**
- **Biosafety**



The Americas account for the 48% of total deaths in the world

## Situation by WHO Region

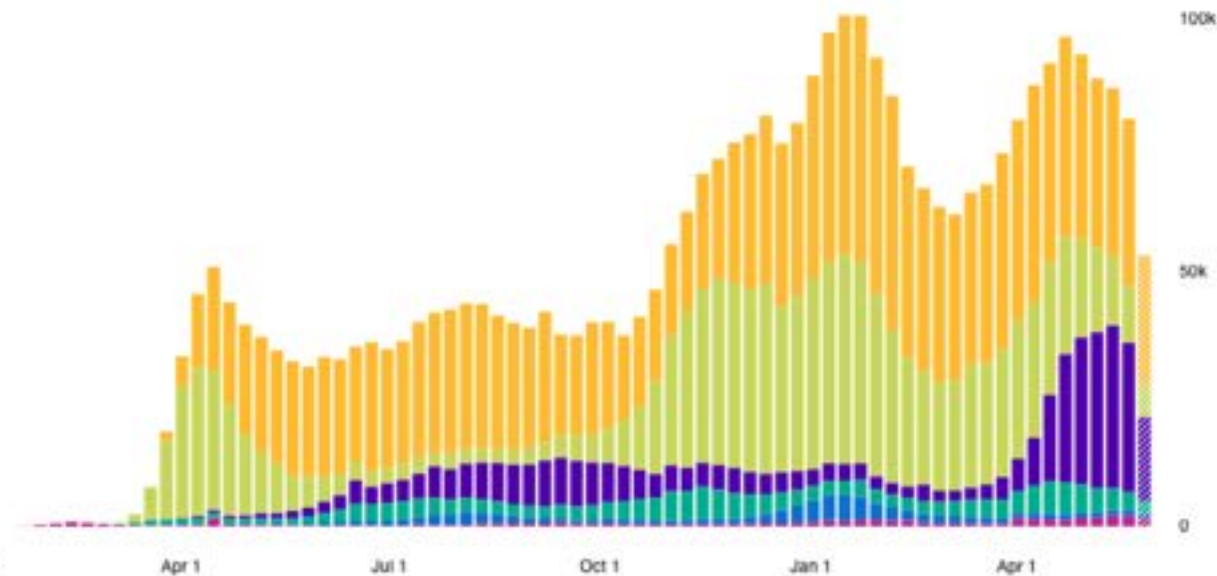


Daily Weekly

Cases Deaths

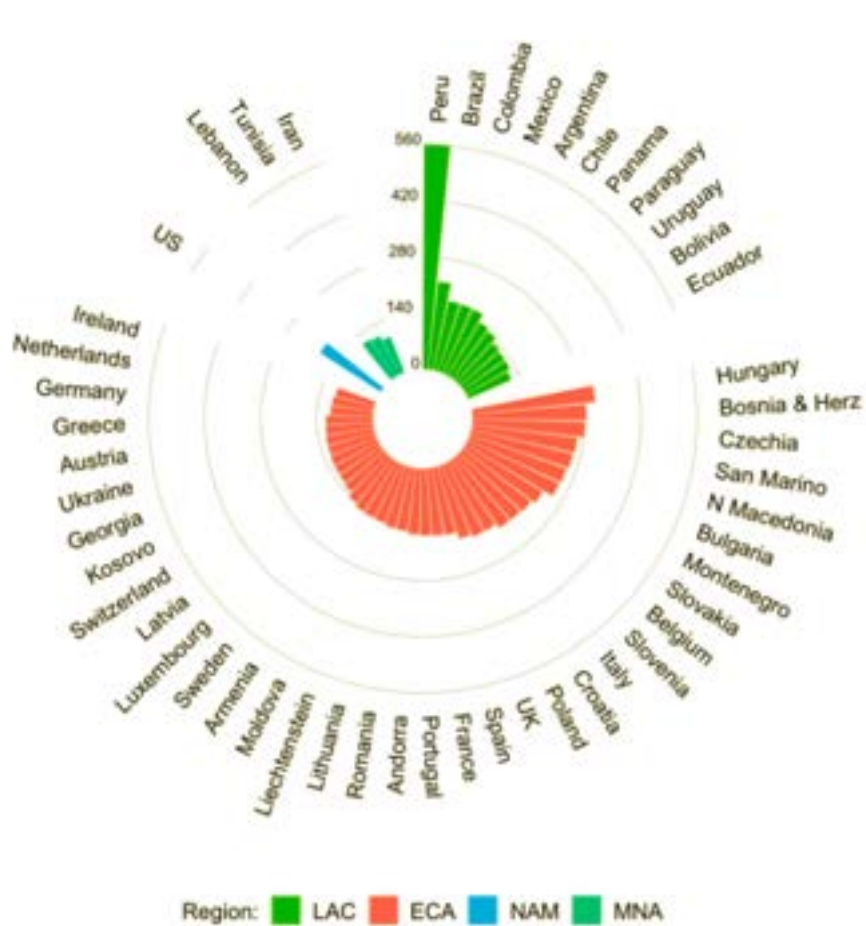
Count

Americas	1,785,897 deaths
Europe	1,155,470 deaths
South-East Asia	418,347 deaths
Eastern Mediterranean	204,164 deaths
Africa	87,928 deaths
Western Pacific	46,802 deaths

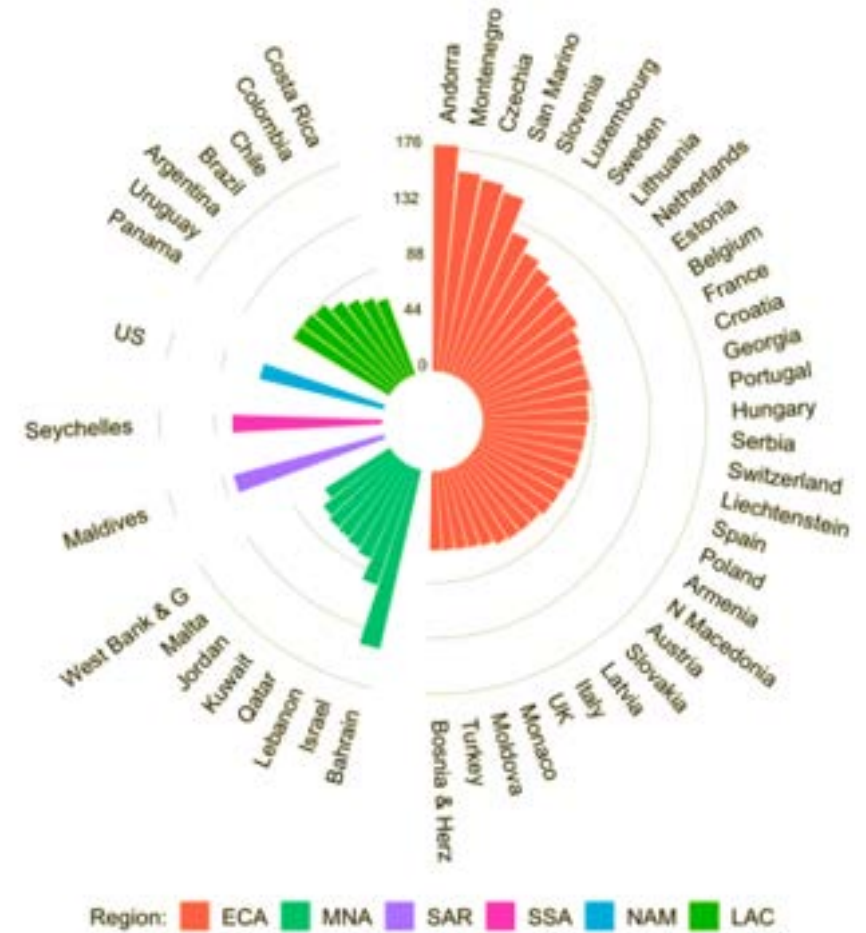




### Top 50 by region: Cumulative deaths per 100,000 people Since start of pandemic



### Top 50 by region: Cumulative cases per 1,000 people Since start of pandemic



Source: Schellekens (2021); JHU; WPP. Date: 2021-06-03. Latest: pandem-ic.com.  
Acronyms: EAP: East Asia & Pacific; ECA: Europe & Central Asia; LAC: Latin America & Caribbean; MNA: Middle East & North Africa; NAM: North America; SAR: South Asia; SSA: Sub-Saharan Africa.

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# Why?

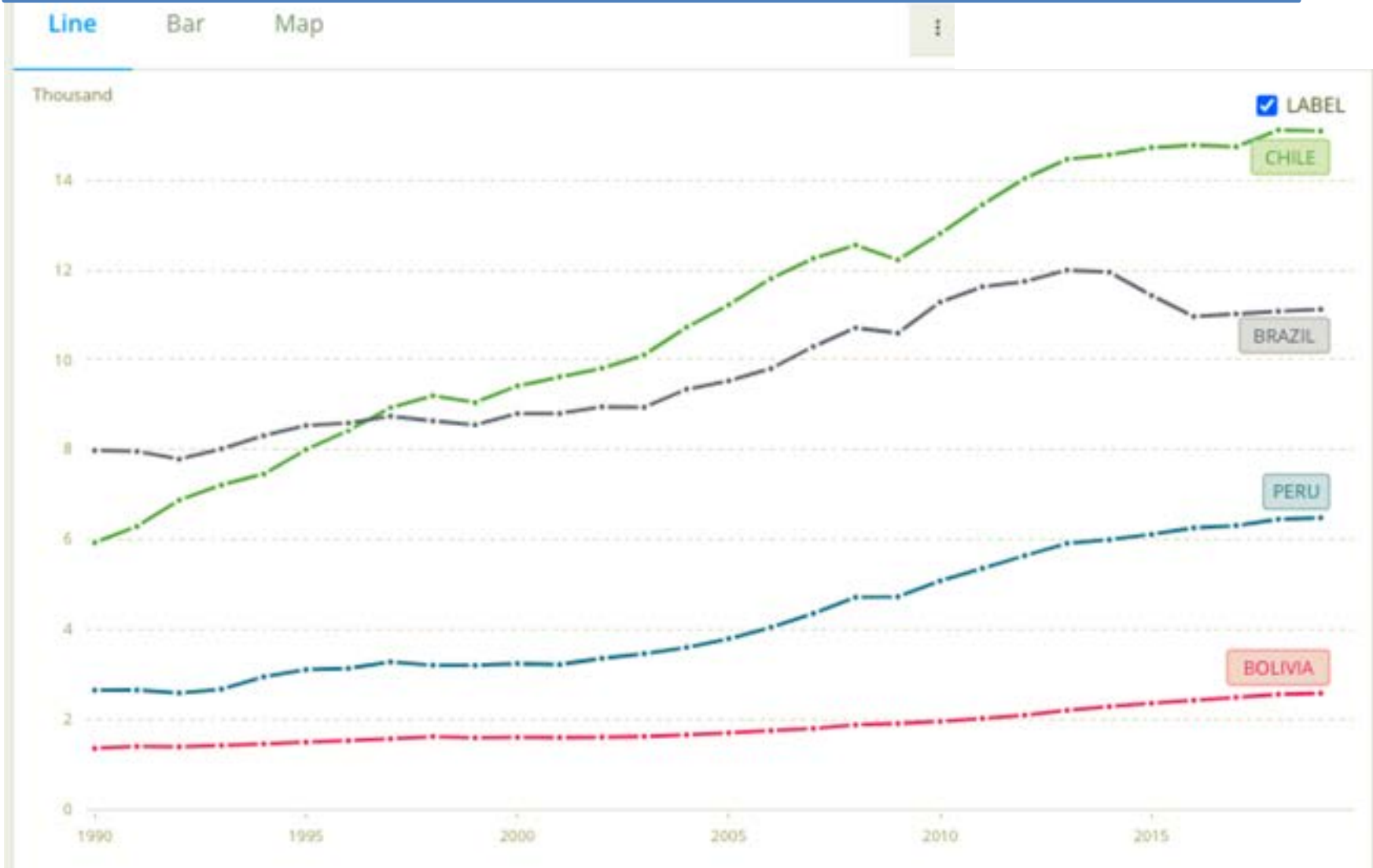
- Social determinants of health with economic growth and inequality
- Weak health care system
- Wrong approach and poorly implemented response



# Social determinants of health with economic growth and with inequality

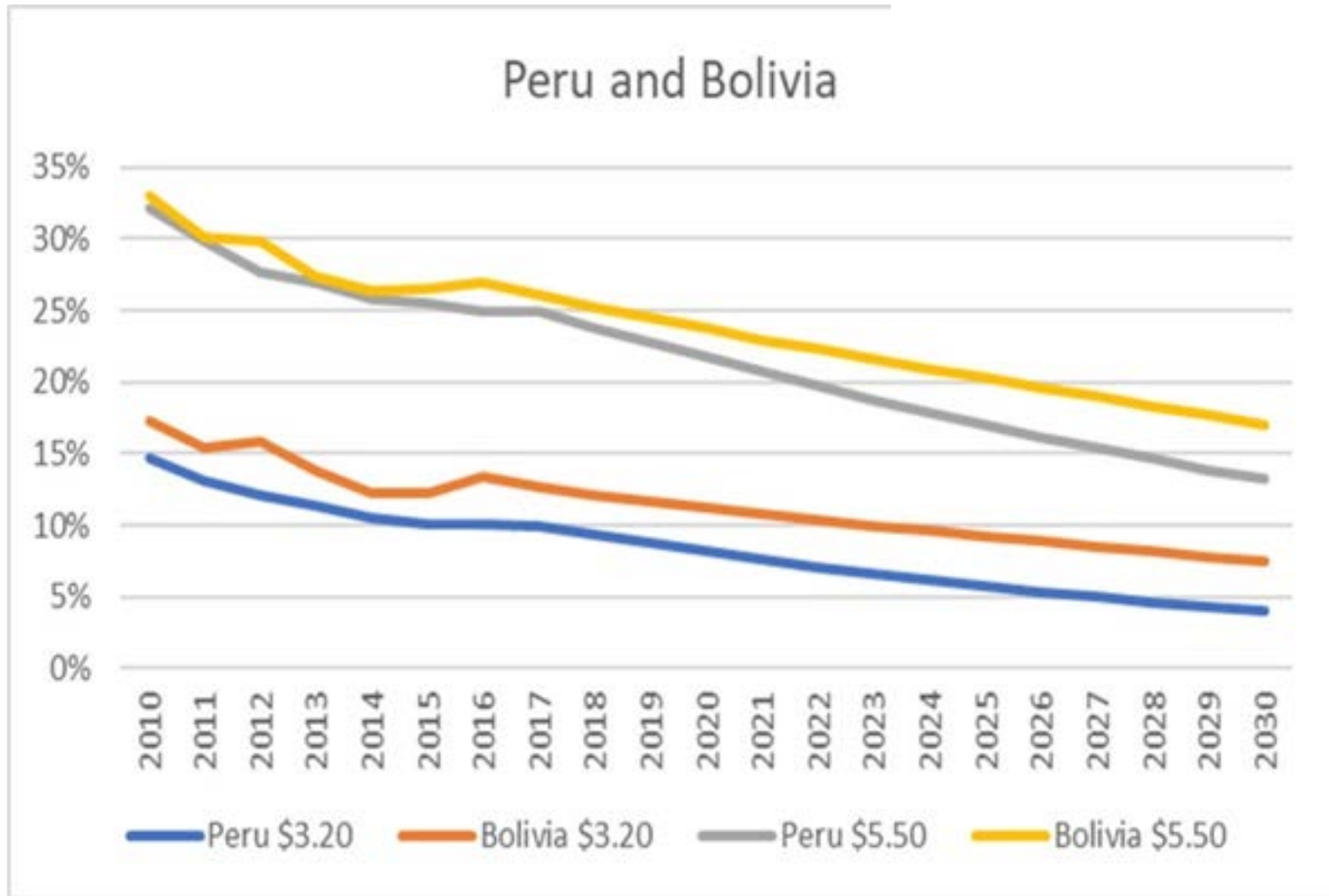


# GDP per capita (constant 2010 US): Peru, Bolivia, Brazil and Chile



<https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?end=2019&locations=PE-CL-BR-BO&start=1990>  
<https://worlddata.io/blog/a-broader-view-of-poverty-in-south-america>

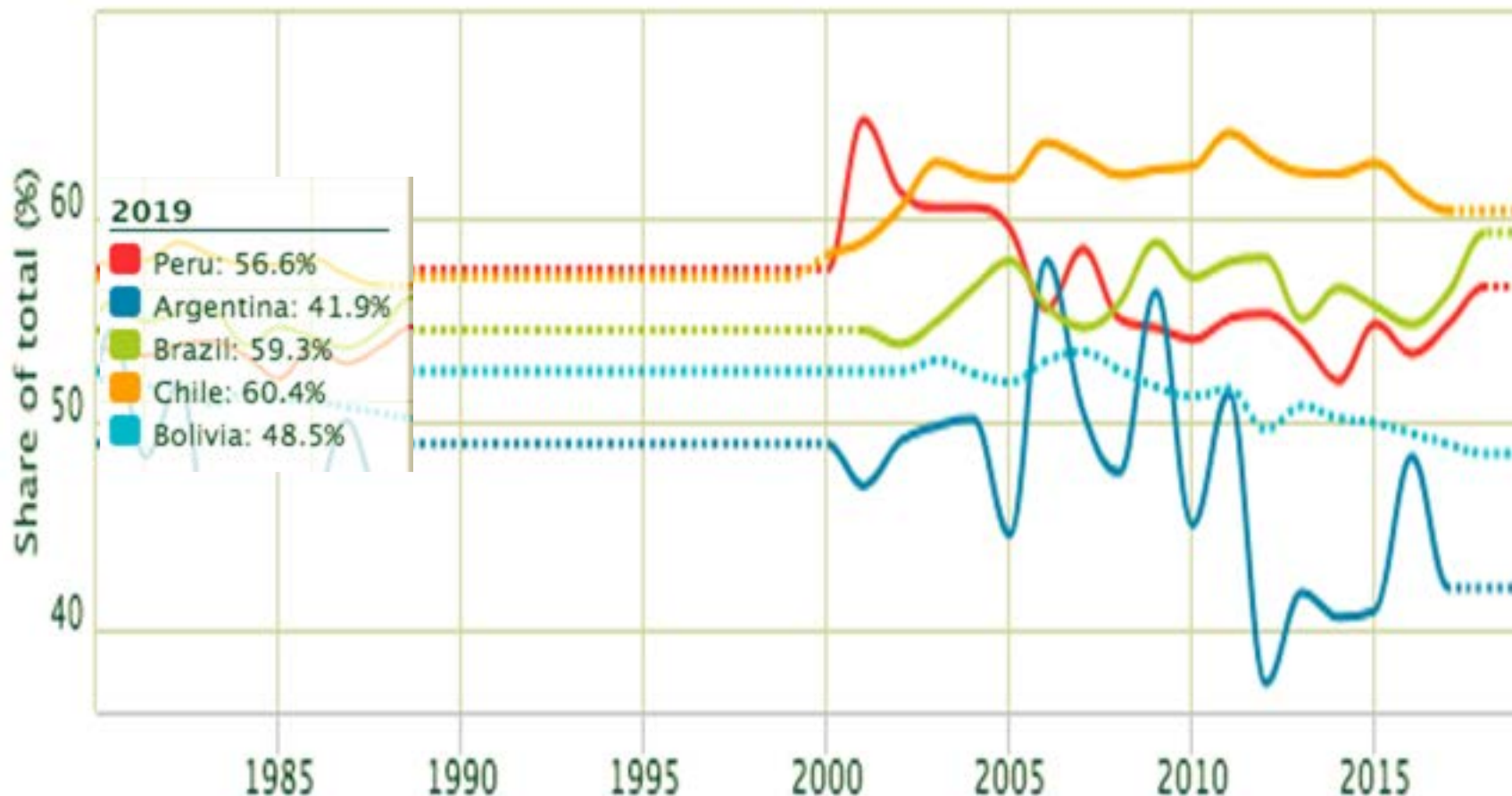
# Poverty reduction. People living below US\$ 3.20 and US\$ 5.50, Peru and Bolivia respectively



Sources:

<https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?end=2019&locations=PE-CL-BR-BO&start=1990>  
<https://worlddata.io/blog/a-broader-view-of-poverty-in-south-america>

# Top 10% national income share. 1990-2019. Peru, Bolivia, Brazil and Chile



Sources.

[https://wid.world/world/#sptinc\\_p90p100\\_z/PE;AR;BR;CL;BO/last/eu/k/p/yearly/s/false/35.9045/70/curve/false/country](https://wid.world/world/#sptinc_p90p100_z/PE;AR;BR;CL;BO/last/eu/k/p/yearly/s/false/35.9045/70/curve/false/country)

<https://ourworldindata.org/grapher/public-health-expenditure-share-gdp-owid?time=1990..latest&country=BOL~BRA~PER~CHL>

# Public health expenditure (%GDP). 1995-2014 1990-2019. Peru, Bolivia, Brazil and Chile

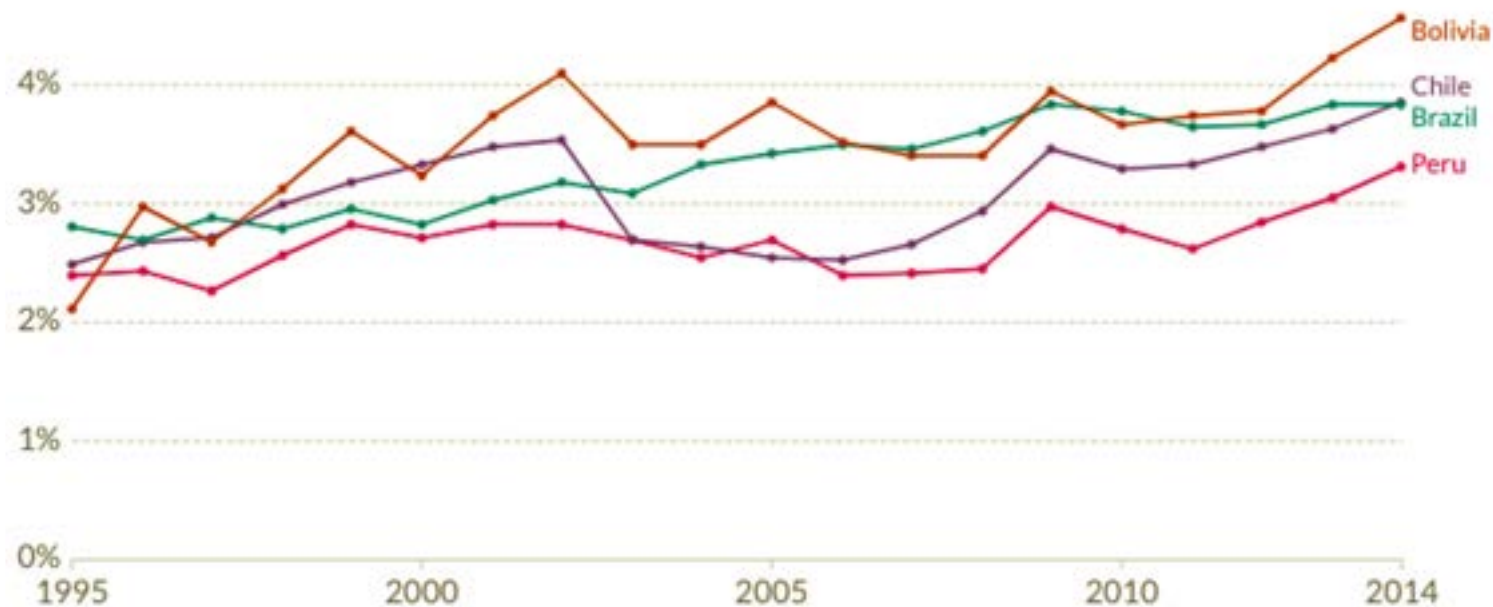


## Public health expenditure (% GDP), 1995 to 2014

Public health expenditure includes: recurrent and capital spending (central and local levels), external borrowing and grants (including donations from international agencies and NGOs), and social or compulsory insurance funds.



+ Add country



Source: Our World In Data based on Lindert (1994), OECD (1993), OECD.stat and WHO  
[OurWorldInData.org/the-expansion-of-healthcare-evidence-from-a-newly-assembled-dataset/](https://ourworldindata.org/the-expansion-of-healthcare-evidence-from-a-newly-assembled-dataset/) • CC BY

Sources.

[https://wid.world/world/#sptinc\\_p90p100\\_z/PE;AR;BR;CL;BO/last/eu/k/p/yearly/s/false/35.9045/70/curve/false/country](https://wid.world/world/#sptinc_p90p100_z/PE;AR;BR;CL;BO/last/eu/k/p/yearly/s/false/35.9045/70/curve/false/country)  
<https://ourworldindata.org/grapher/public-health-expenditure-share-gdp-owid?time=1990..latest&country=BOL~BRA~PER~CHL>



# “[Governments] forgot to adequately invest in health and now we are paying the price”

- **Social determinants**
  - Poverty (20.2%)
  - Informal economy (72,6%)
  - Inequality = Gini Coefficient (42.8%)
  - Education (Government expenditure as share of the GDP: 3.8%)
  - Household overcrowding
- **Healthcare system**
  - Gap both in human resources and health facilities
  - Around 150 ICU beds (0.5 ICU beds per 100K inhabitants)
  - Only one lab that processes molecular tests
  - Less than 1,000 hospital beds for COVID-19 patients

Sources: INEI, World Bank and <https://www.bbc.com/mundo/noticias-52843655>



# Why?

## Peru's COVID-19 Response



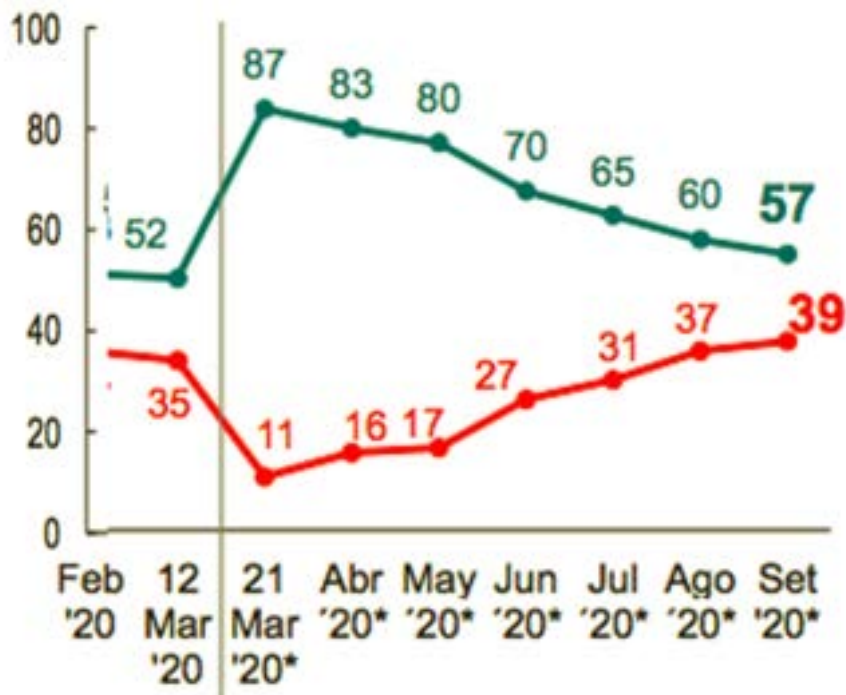
# Early Response

- National Response Plan: January 2020
- Active surveillance at point of entry: Jan-Mar
- First case confirmed: March 6
  - Schools and border closure
  - National lockdown
  - Economic stimulus and relief bonus
  - All but “COVID hospitals” were closed
  - Priority was on increasing the number of Intensive Care Units (ICU)

# Very high/ Massive public support at the beginning



President Vizcarra's approval ratings. Feb-Set 2020



Finance and Health ministers approval rating. April 2020

¿En general, diría que aprueba o desaprueba la gestión de...?

Base: total de entrevistados

■ APRUEBA    ■ DESAPRUEBA    ■ NO PRECISA  
■ APROBACIÓN ANTERIOR

LA MINISTRA DE ECONOMÍA  
**MARÍA ANTONIETA ALVA**



EL MINISTRO DE SALUD  
**VÍCTOR ZAMORA**



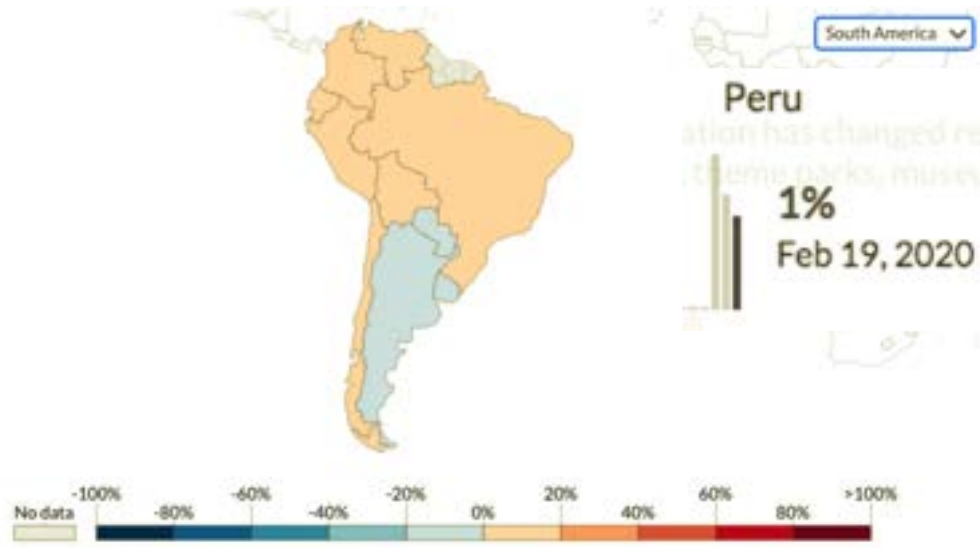
Sources: [https://www.ipsos.com/sites/default/files/ct/news/documents/2020-09/encuesta\\_nacional\\_urbana\\_setiembre\\_2020\\_-\\_crisis\\_politica.pdf](https://www.ipsos.com/sites/default/files/ct/news/documents/2020-09/encuesta_nacional_urbana_setiembre_2020_-_crisis_politica.pdf)  
<https://elcomercio.pe/politica/actualidad/encuesta-el-comercio-ipsos-mas-de-70-aprueba-labor-de-ministros-de-salud-y-economia-coronavirus-peru-covid-19-maria-antonieta-alva-victor-zamora-vicente-zeballos-noticia/>





Mobility

Retail and leisure: How did the number of visitors changed from February 17 through June 20, 2020



Source: Google COVID-19 Community Mobility Trends - Last updated 4 June, 16:02 (London time) OurWorldInData.org/coronavirus • CC BY  
Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.



Source: Google COVID-19 Community Mobility Trends - Last updated 4 June, 16:02 (London time) OurWorldInData.org/coronavirus • CC BY  
Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.

<https://ourworldindata.org/covid-mobility-trends>

# “COVID Walkers”: from Lima to the rest of the country looking for haven



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# Cashing “COVID stimulus checks” (US\$ 171), long lines and crowding at the banks



Go to cashier on this date:

SE PUEDE COBRAR EN VENTANILLA A PARTIR DE ESTA FECHA	ÚLTIMO DÍGITO DEL DNI DE PERSONA RESPONSABLE DEL COBRO
Lunes 29 de marzo	0
Miércoles 31 de marzo	1
Martes 6 de abril	2
Jueves 8 de abril	3
Lunes 12 de abril	4
Miércoles 14 de abril	5
Viernes 16 de abril	6
Lunes 19 de abril	7
Miércoles 21 de abril	8
Jueves 22 de abril	9

According to the last digit on your ID

Change of COVID-19 death definition:  
From 69K to 184K in one day!



### SALA SITUACIONAL COVID-19

Información oficial del día 29 de mayo de 2021



### SALA SITUACIONAL COVID-19

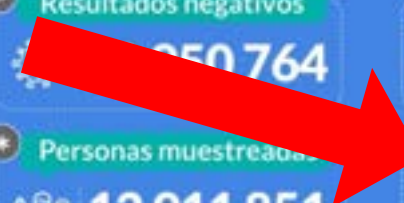
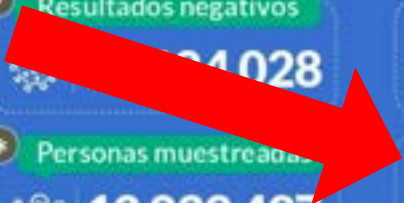
Información oficial del día 31 de mayo de 2021



Información acumulada de la pandemia COVID-19



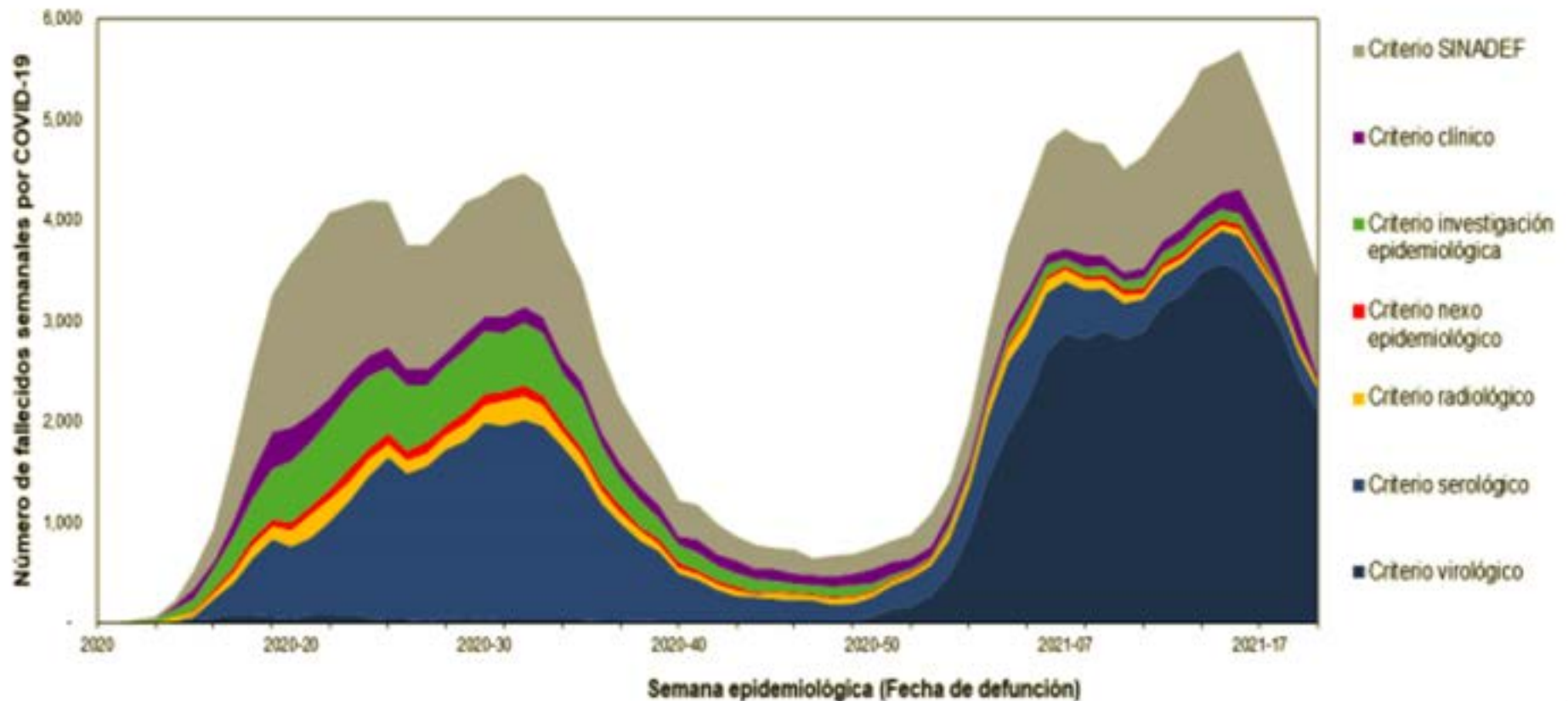
Información acumulada de la pandemia COVID-19





On May 31, 2021, the number of deaths was updated: it was 2.7 times higher than previous daily official reports

Figura 3: Fallecidos semanales por COVID-19 en Perú, según criterios técnicos (01/03/2020 - 22/05/2021)





# Post mortem of Peru's COVID-19 pandemic response



# What went wrong?

- Lack of country preparedness against public health threats
- Biomedical hospital based over public health approach
- Strategy not based on scientific evidence
  - “Serology has better sensitivity/specificity than molecular tests”
  - Treatment guidelines that included unapproved drugs (Ivermectin, etc.)

# Lack of use of scientific evidence for Public Health decisions



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type Noticias

En vivo Programas ▾ Horario



Lo último Política Locales Nacionales Deportes Economía Internacionales Cultural Tecnología

Nacionales

Ministro Zamora: Proponemos que la prueba rápida sea considerada equivalente a la

Minister of Health: "We propose that the serologic rapid test be considered equivalent to a molecular test"

## Minsa sobre uso de Hidroxicloroquina e Ivermectina: No tenemos tiempo para "esperar evidencia científica"

El ministro de Salud, Víctor Zamora, dijo en entrevista a RPP que ambos fármacos son recomendados por los expertos de su Sector. Además, recordó que esta pandemia "está marcando un momento de conocimiento de la enfermedad".

04 de junio del 2020 - 7:38 PM

Redacción

Síguenos en Google News



On hydroxychloroquine and ivermectin Minister of Health: "We do not have time to wait for scientific evidence"

Sources.  
<https://rpp.pe/peru/actualidad/coronavirus-victor-zamora-ministro-de-salud-sobre-uso-de-hidroxicloroquina-e-ivermectina-no-tenemos-tiempo-para-esperar-evidencia-cientifica-noticia-1270896>





# What went wrong?

- Very weak risk communication
- Absence of social participation
- Weak pandemic monitoring indicators
- Lack of strategies to expand laboratory capacity
- Weak contact tracing response
- Long and inefficient lockdown measures
- Closing first health care level
- Senior MD's were sent home and haven't come back

# Weak risk communication strategy



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Long and sometimes confusing press conferences led by the highest authorities

Weak campaign during the whole pandemic  
Fear and guilt provoking communication campaign



# What went wrong?

- Weak management skills
- Inequity
- Social determinants of health
- Weak healthcare system
- Political instability (January 2020 – June 2021)
  - 3 presidents
  - 5 ministers of health



# What went wrong?

Biomedical hospital based pandemic response approach + lack of science based decisions + weakened leadership over time + high turnover of high rank health officials and political authorities + weak healthcare system + high prevalence of communicable diseases + inequity + social determinants of health + etc...

A perfect storm = Syndemic



# What to do? The road ahead



# The road ahead

## Strength Public Health Approach

- Systematic application of science based public health decisions
- Accelerate vaccination rate
- Improve risk communication
- Increase testing
- Implement contact tracing

Preparedness, preparedness, preparedness



# The road ahead

## Strength Public Health Approach

- **Capacity assessment** (JEE, GHSI) and national health security **action plan** to reduce gaps
- Increase **investment** in **public health** and **medical healthcare**
- Strength institutional strategies to deal with public health threats: **Peruvian CDC with comprehensive approach**
- Public health emergencies **Fund**
- Strength **national** laboratories system



## Nine monsters

So, unfortunately  
pain grows in the world at all times,  
it grows at thirty minutes per second, step by step,  
and the nature of pain is twice the pain,  
and the condition of martyrdom, carnivorous, ravenous,  
is twice the pain  
and the task of the purest herb, twice  
the pain  
and the goodness of being, our double pain  
...  
Sir minister of health, what's to be done?  
Oh, unfortunately, human men,  
there is much, brothers and sisters, so much to be done!

Cesar Vallejo Peruvian poet (1892 –1938)

Translations by Michael Smith and Valentino Gianuzzi

# ¡Gracias!

