

“Lessons **learnt** during the pandemic”

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Prof.Dr. Oscar H. Franco, MD, DSc, PhD, FESC, FFPH
Institute of Social and Preventive Medicine (ISPM)
University of Bern

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Symposium 2022

Virus explosion

OUTBREAK

epidemic

1. An issue for everyone that can only be solved with everyone. Pandemics have no owners

Example: respiratory system (ears)

of time

PANDEMIC

- Disease usually affects a large number of people
- Has spread across several countries or continents
- Viruses that have caused past pandemics typically originated from animal flu viruses

Example: 2009 swine flu (H1N1)


PANDEMIC

ALL (Greek) PEOPLE OF

The word *pandemic* comes from the Greek parts *pan* ("all"), *dem* ("people"), & *-ic* ("of"; or "related to"). A *pandemic*, therefore, is something (used specifically for diseases) that is *related to all people*. To understand *pandemic* as a concept, see also *epidemic* & *endemic*.

#LOGOPHILIA

MY FAVOURITE WORDS



Wir lernen aus der Geschichte,
dass wir überhaupt nichts lernen.

Georg Wilhelm Friedrich Hegel

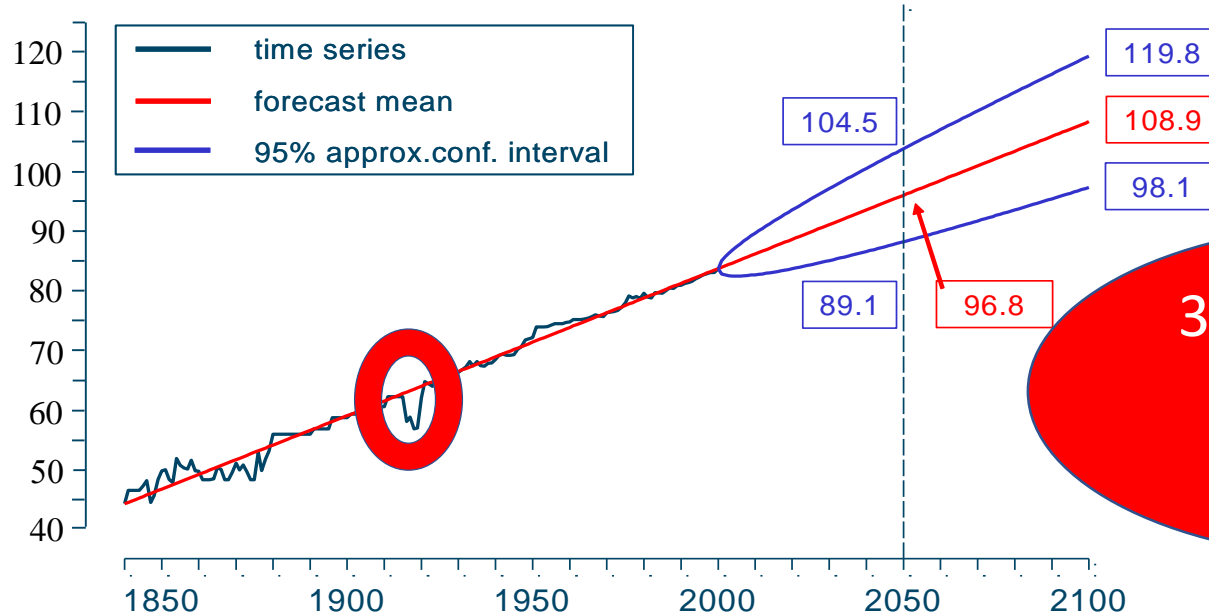
2. History can repeat
itself, if we learn nothing
from it, and most
certainly we don't



The Black Death

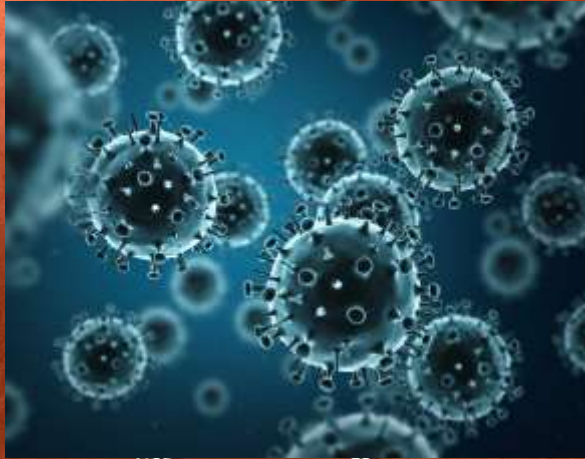
*Interactions and Consequences During the
Historical Plague Epidemic Called Black Death*

Record life expectancy

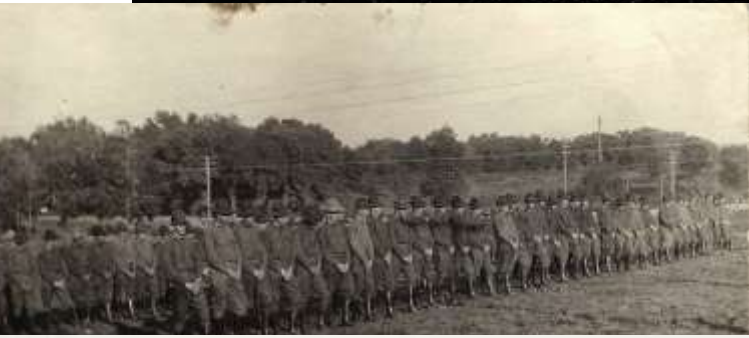


3. Hygiene and prevention, ignored

LA GRIPE ESPAÑOLA



LA GRIPE ESPAÑOLA SE EXPANDIÓ POR TODO EL MUNDO



4. We are all connected...
Globalisation is not new,
but accelerating

Spanish flu in numbers

50-60% of the world was ill



Población mundial estimada de 1918: 1.800.000.000

1-2% died

40 million dead

Las grandes epidemias y pandemias de la historia

Principales brotes

Antes de 1300

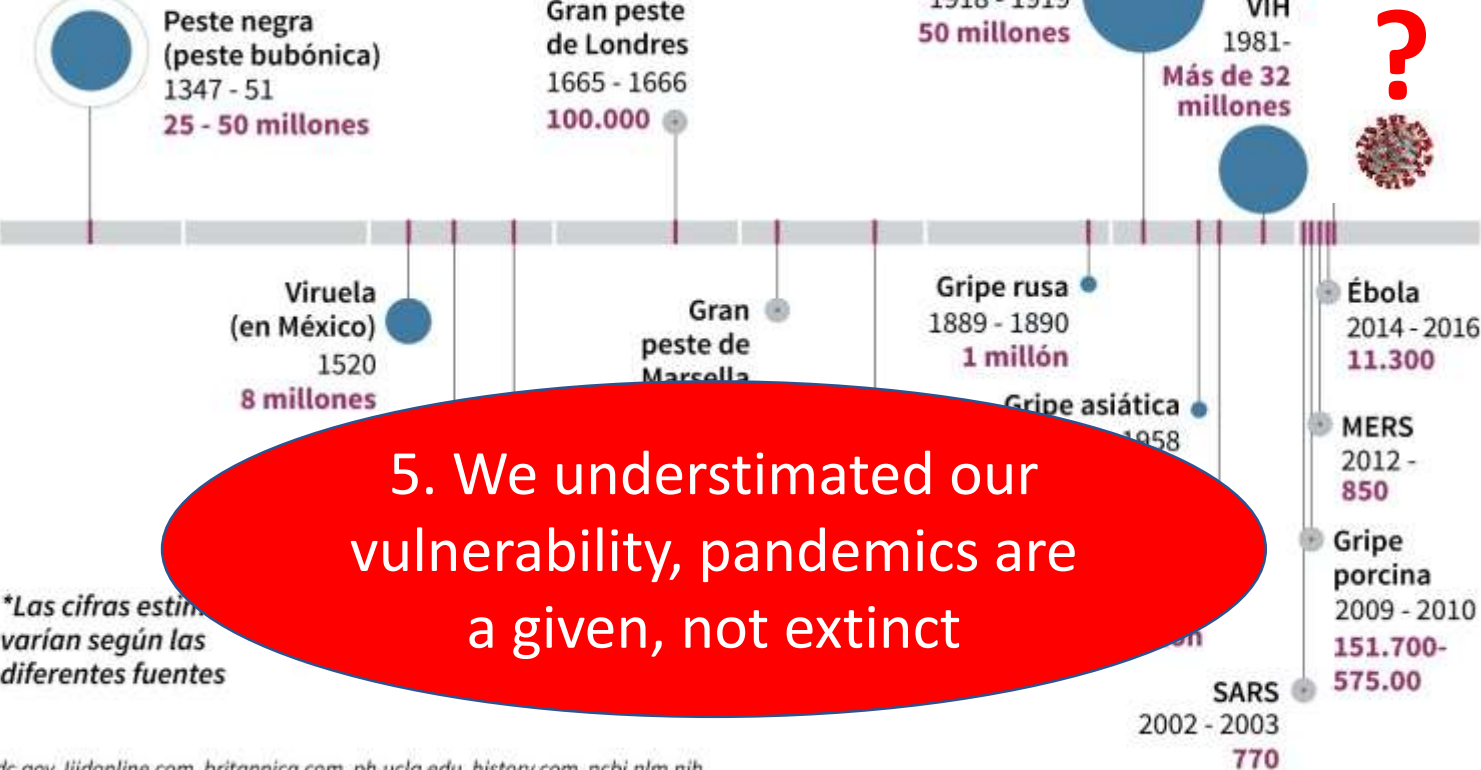
Plaga de Atenas
430 AC
Número de muertos (est.):
100.000

Peste antonina
165 - 180
3,5 - 7 millones

Viruela japonesa
735 - 737
1 millón

Plaga de Justiniano
541 - 542
25 - 100 millones

Después de 1300



5. We underestimated our vulnerability, pandemics are a given, not extinct

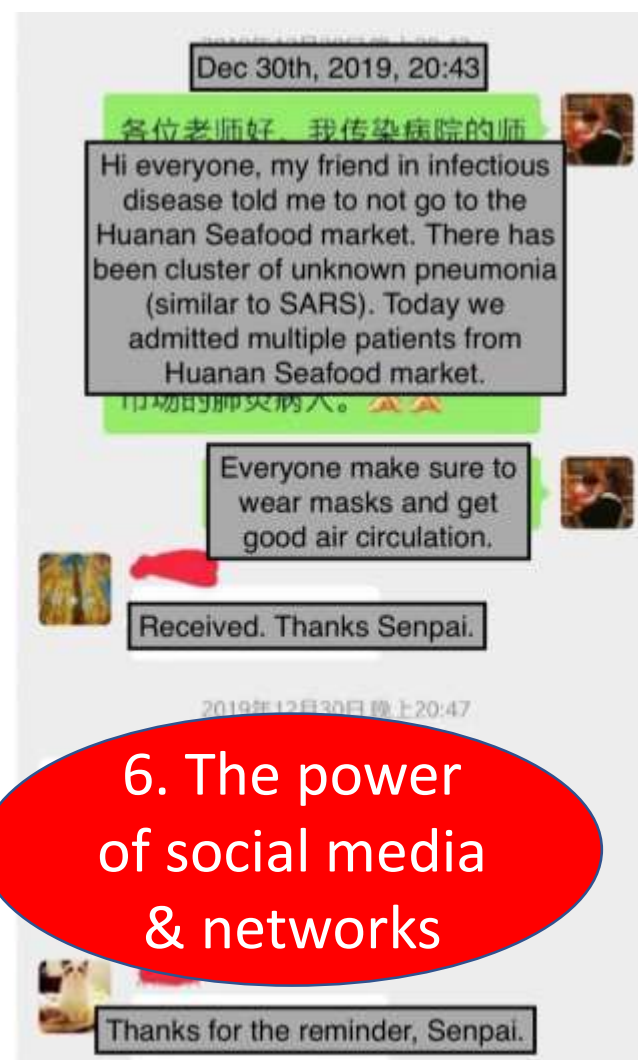


January
2020

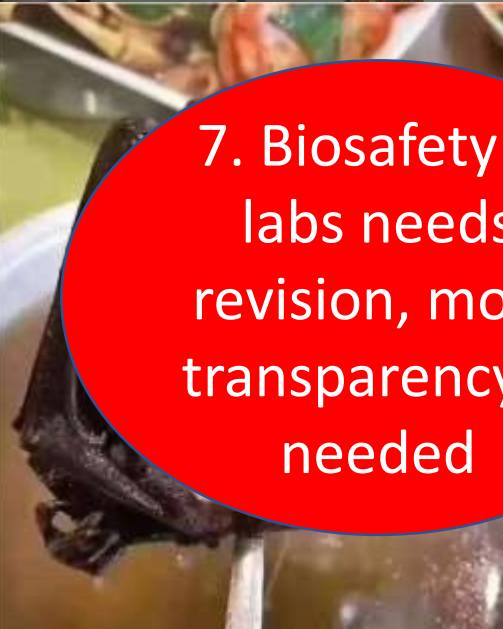
武汉

Wūhàn





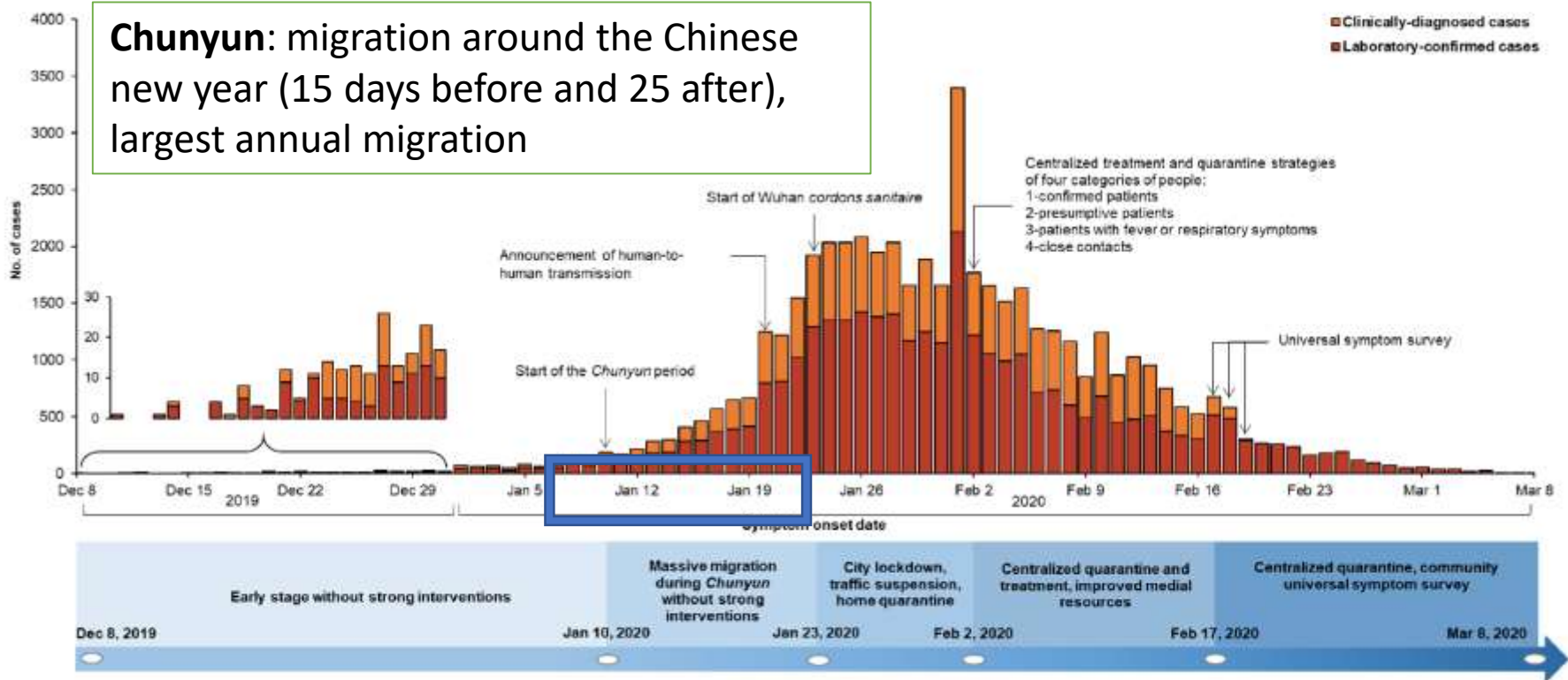
6. The power
of social media
& networks



7. Biosafety in labs needs revision, more transparency is needed



eFigure 1. Daily numbers of laboratory-confirmed and clinically-diagnosed COVID-19 cases by symptom onset date across the five periods



A total of 17 365 clinically-diagnosed cases and 32 583 laboratory-confirmed cases were included in the figure.



2020 Spring Festival Travel Rush

(January 10 – February 18)

A total of

1.476 billion trips

were made in China,

down 50.3%

from last year.



Railway Trips: **210 mln** ↓47.3%



Road Trips: **1.21 bln** ↓50.8%



Boat Trips: **16.89 mln** ↓58.6%



Air Trips: **38.39 mln** ↓47.5%

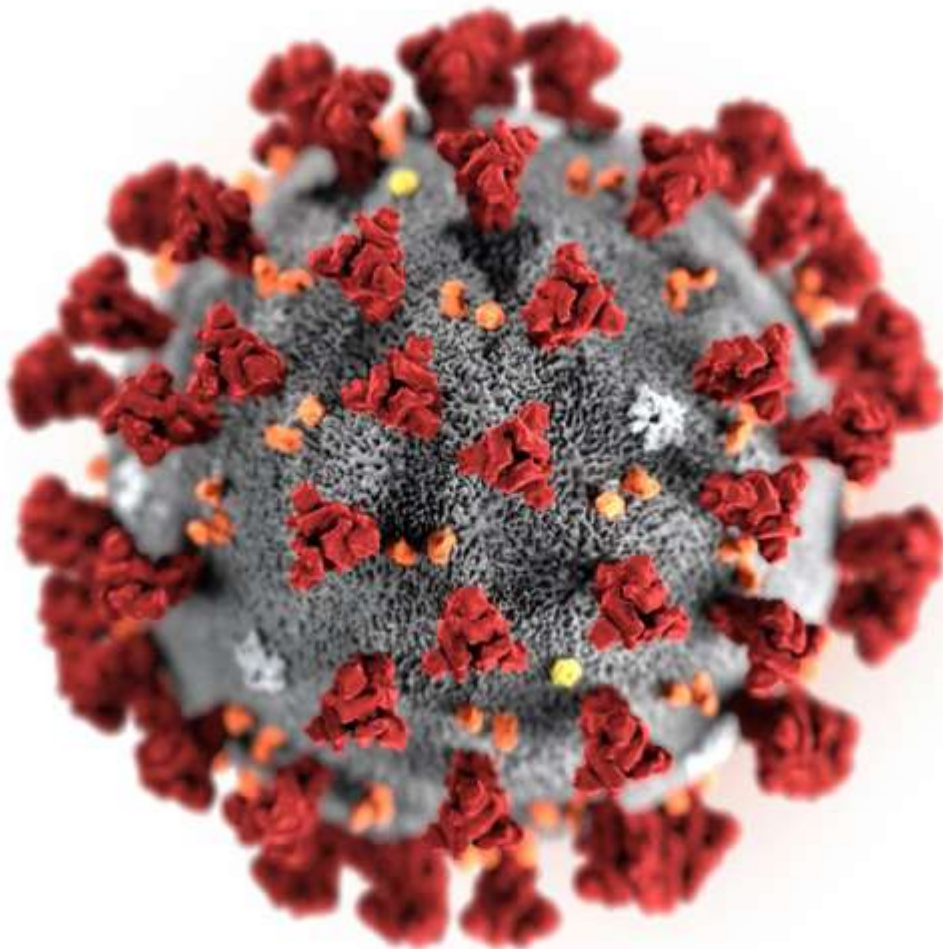
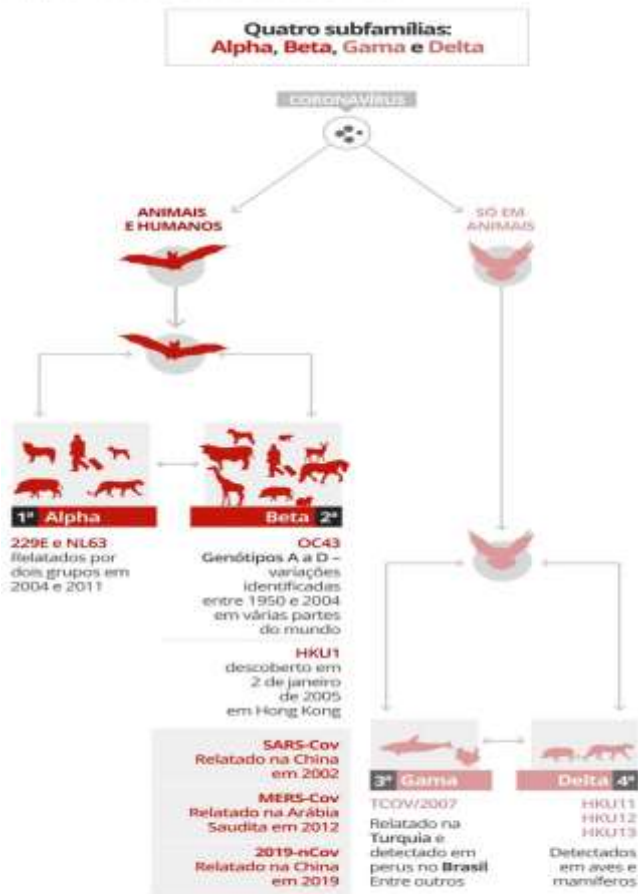


118 million railway tickets were **refunded** from January 21 to February 18 due to COVID-19.

8. The virus
doesn't travel
alone

Família coronavírus

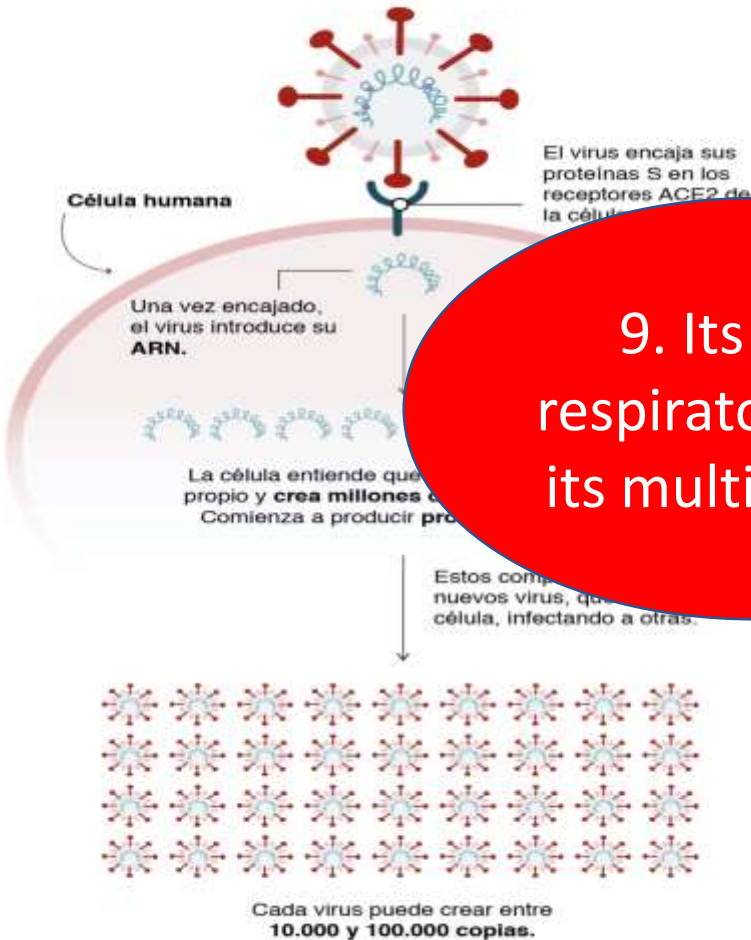
Tipos descobertos de 1960 a 2019



Fontes Primárias: Centro de Controle e Prevenção de Doenças (CDC); American Society for Microbiology

Infográfico elaborado em: 28/01/2020

Cómo se reproduce el coronavirus en el cuerpo

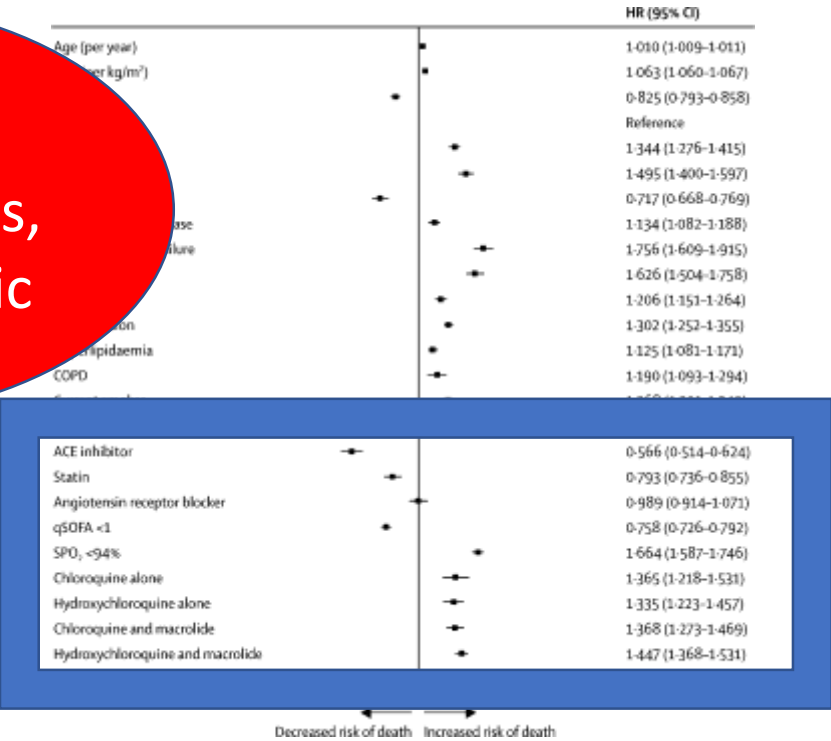


9. Its not a respiratory virus, its multisistemic

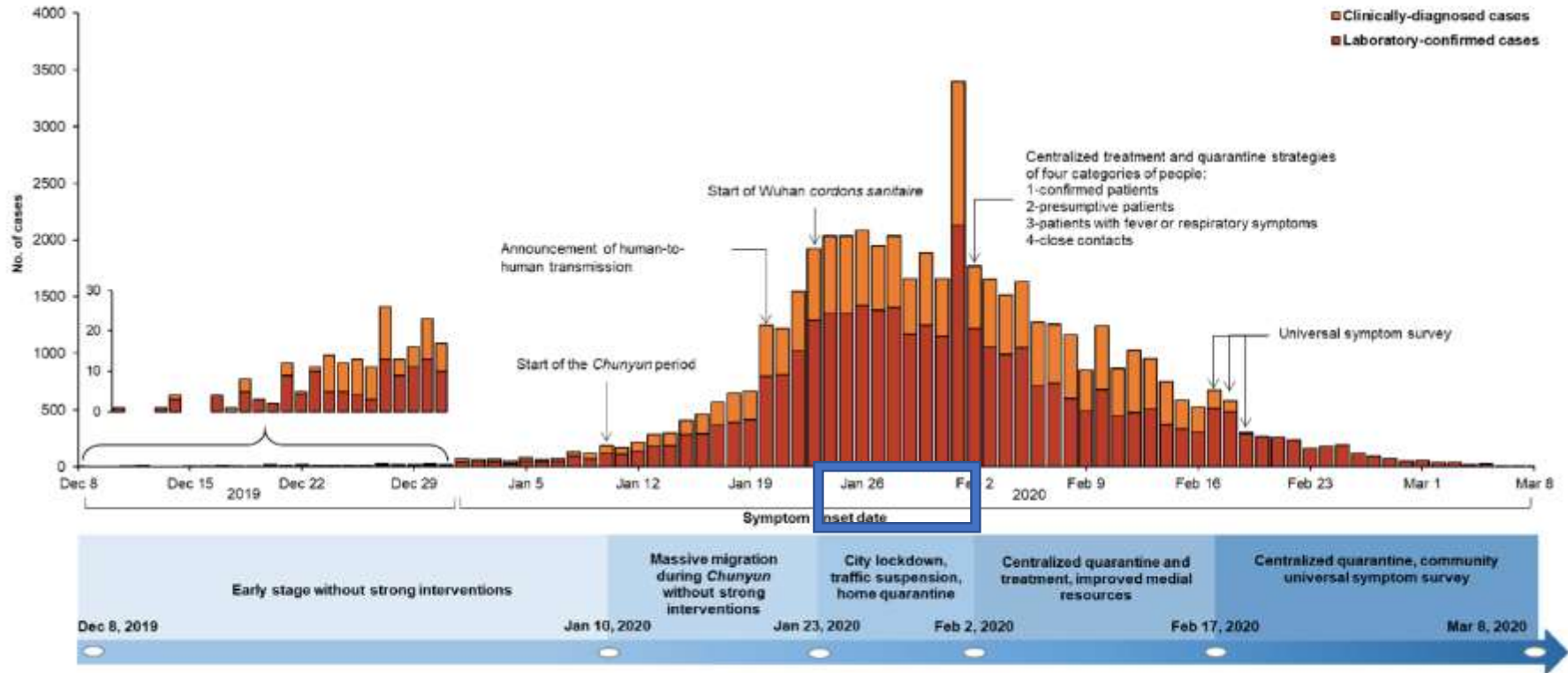
The double burden of disease of COVID-19 in cardiovascular patients: overlapping conditions could lead to overlapping treatments

Nathalia Gonzalez-Jaramillo^{1,2} · Nicola Low¹ · Oscar H. Franco¹

Received: 21 March 2020 / Accepted: 4 April 2020 / Published online: 15 April 2020



eFigure 1. Daily numbers of laboratory-confirmed and clinically-diagnosed COVID-19 cases by symptom onset date across the five periods



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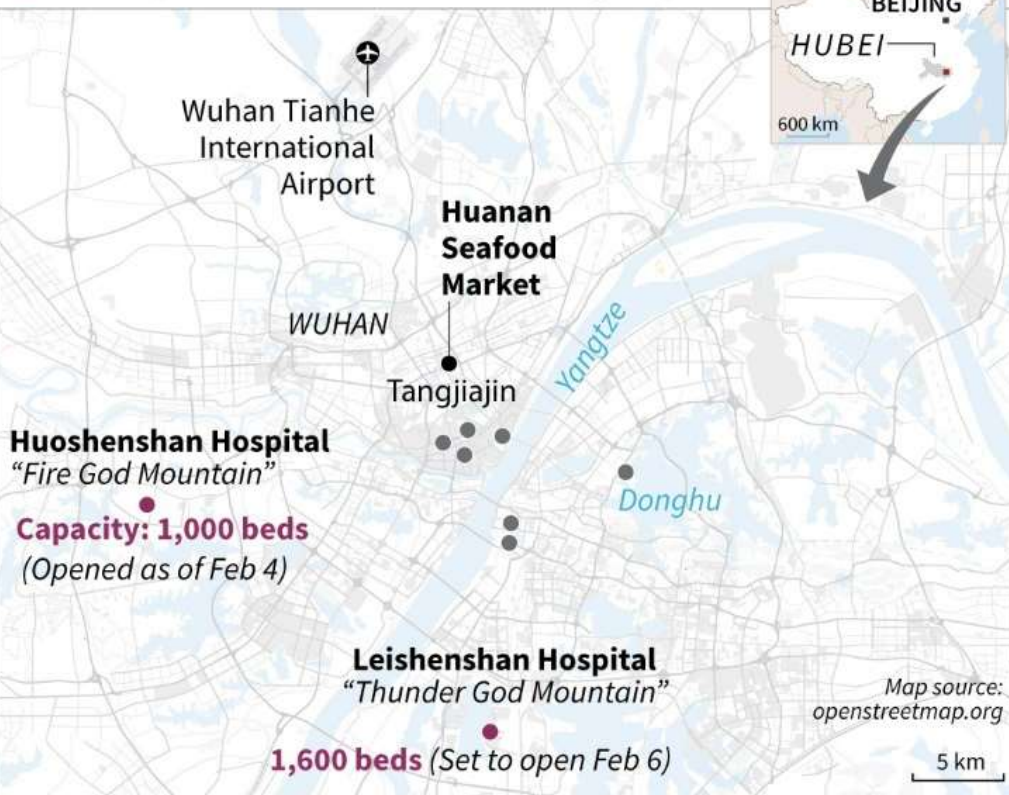
10. The virus lives
at home,
confinements not
a solution and
require careful
preparation and
flexible
adaptation

Wuhan virus hospitals

Two Chinese field hospitals built from scratch in under two weeks at the frontline of the coronavirus outbreak

● New hospitals

● Existing hospitals



Source: China state media

© AFP



Location & capacity of new hospitals



Designed capacity (number of beds)

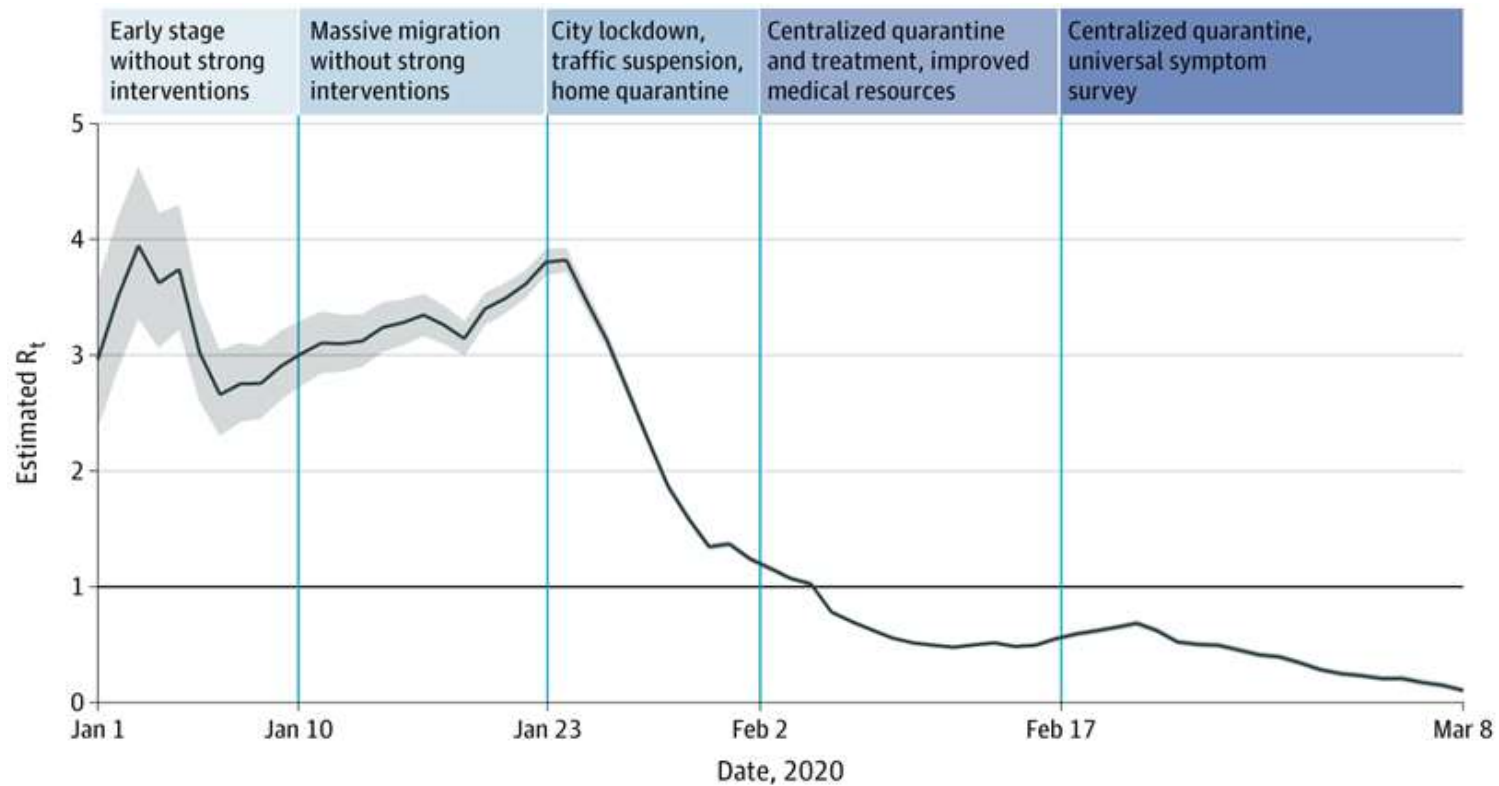
- Newly built Huoshenshan Hospital and Leishenshan Hospital
- Makeshift hospitals, mainly converted from public places

Sources: Xinhua, Chutian Dushibao
Data as of Feb. 17, 2020

CGTN

Fangcang, or Ark hospitals: large temporary hospitals converted from public places. Used to isolate patients with mild symptoms from their families and communities. Medical care, food, protection and social activities were provided.





THE POWER OF SOCIAL DISTANCING

#AxteleraRay @AxteleraRay

11. Cutting transmission: physical distancing is essential

50% LESS EXPOSURE

75%
LESS EXPOSURE

NOW

INFECTS

5 DAYS



2.5 PEOPLE
INFECTED

30 DAYS



406 PEOPLE
INFECTED

EXPOSURE

INFECTS

5 DAYS



1.25 PEOPLE
INFECTED

30 DAYS



15 PEOPLE
INFECTED

75% LESS EXPOSURE



1 PERSON

INFECTS

5 DAYS



0.625 PEOPLE
INFECTED

30 DAYS



2.5 PEOPLE
INFECTED

#AxteleraRay @AxteleraRay

NUMBER OF
INFECTIONS

NOW

THE IMPACT OF PROTECTIVE MEASURES

WITHOUT
SOCIAL DISTANCING

WITH
SOCIAL DISTANCING

50%
LESS EXPOSURE

75%
LESS EXPOSURE

HEALTHCARE SYSTEM
CAPACITY

12.

Technology
has not
made basic
measures
redundant.

Soap,
hygiene,
ventilation,
remain
essential

4 STEPS TO AVOID COVID-19

Wash your hands regularly with soap and water, or rub your hands with alcohol gel with $\geq 70\%$ concentration.



Cover your mouth and nose while sneezing or coughing.



Avoid close contact with anyone who has a cold or flu-like symptoms.



If you have fever, cough and difficulty breathing, seek medical care early.

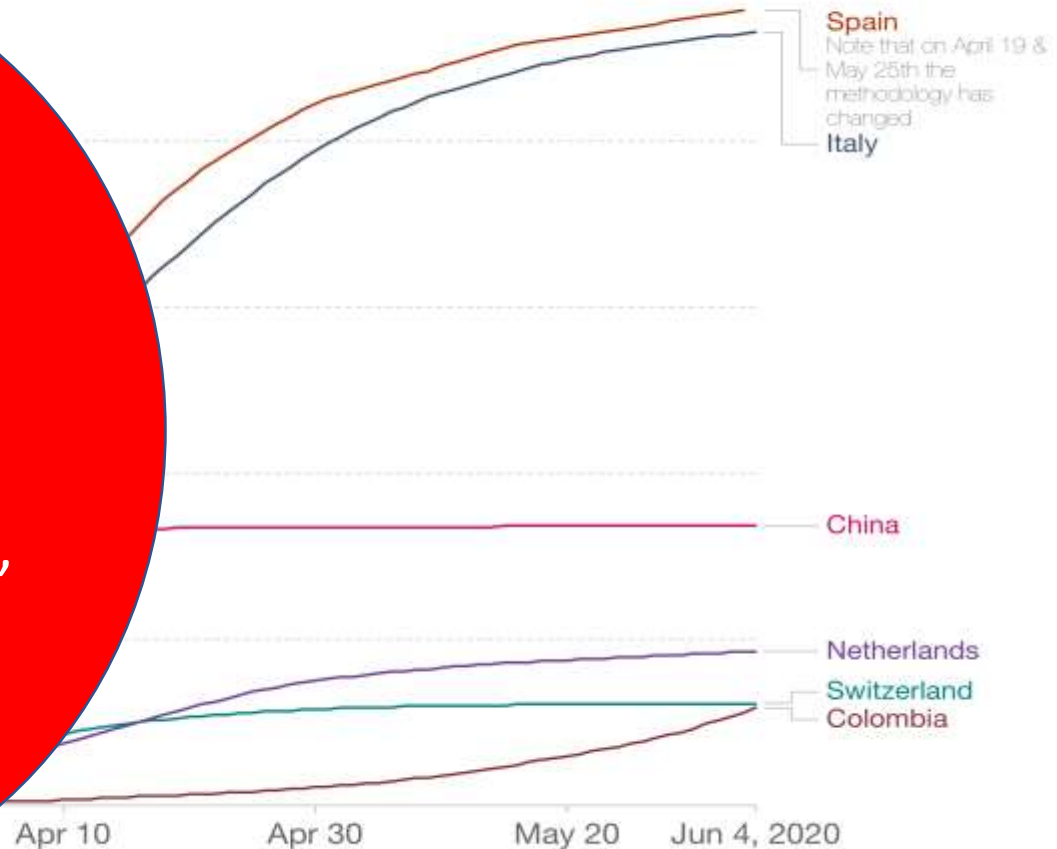


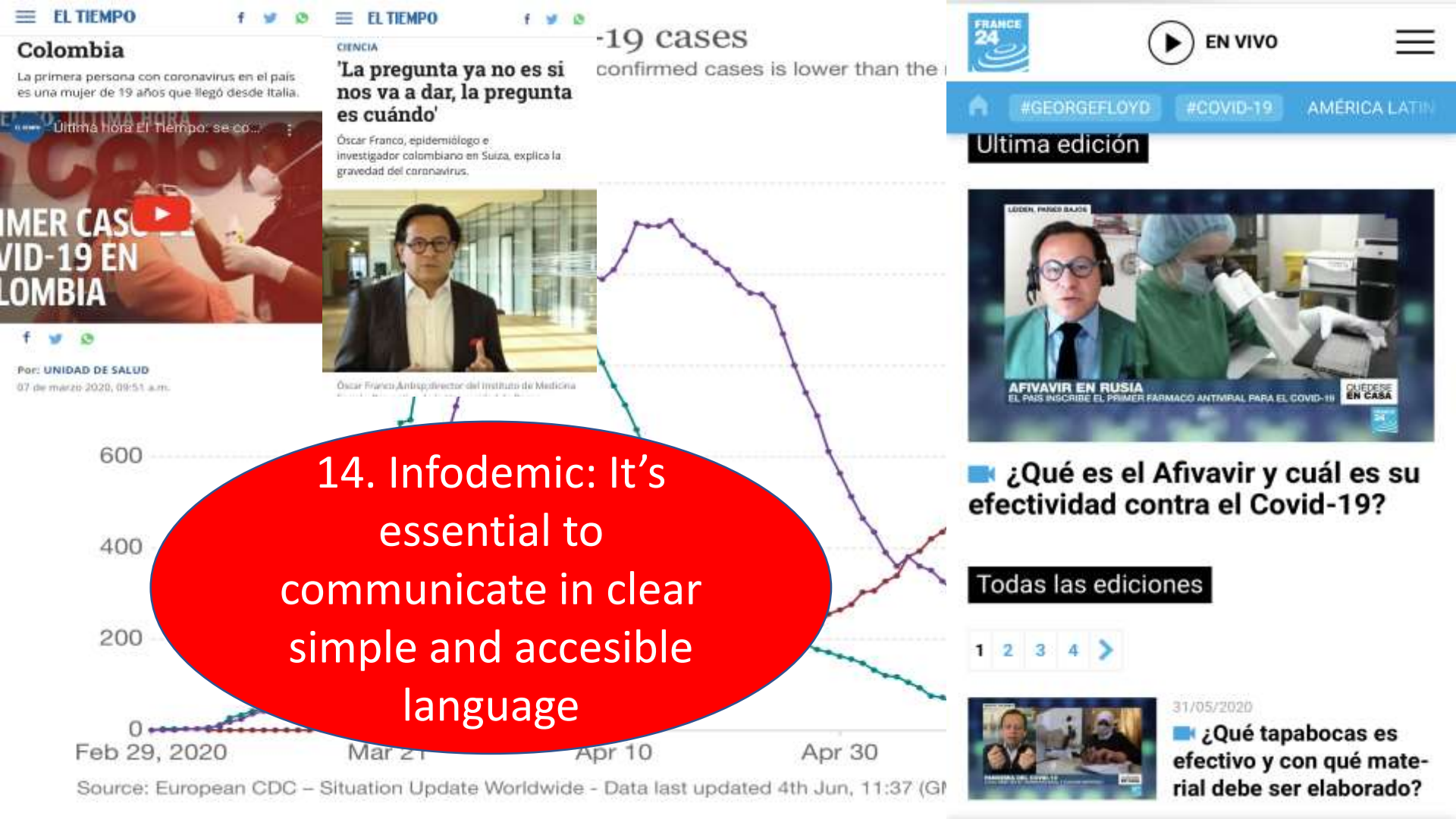
Total confirmed COVID-19 cases

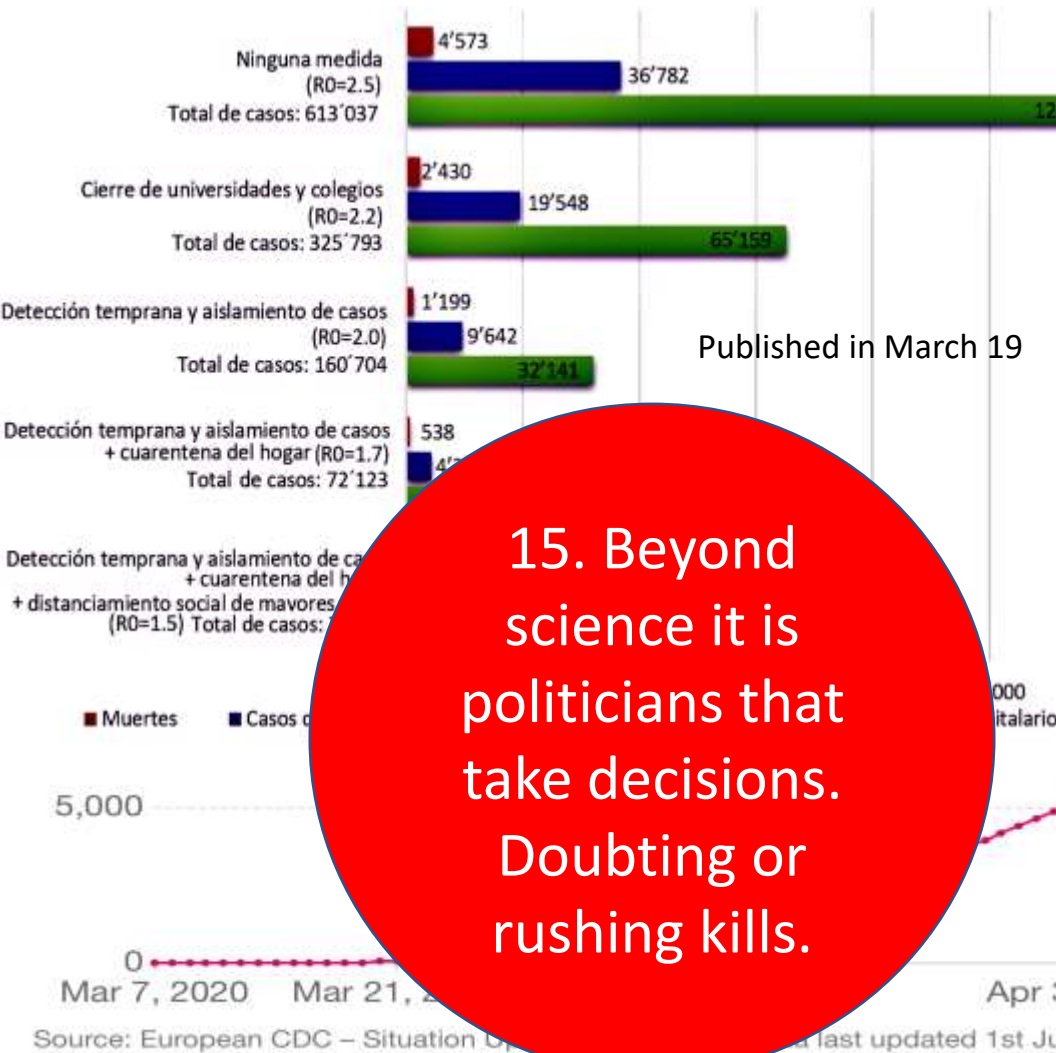
Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for this is under-reporting.

Our World
in Data

13. Nobody was prepared, lots of lessons learnt by March: covid19, mechanisms, flights, distribution, Test, trace and isolate, fast measures distancing, hygiene... What happened???







Published in March 19

15. Beyond science it is politicians that take decisions. Doubting or rushing kills.

Proyecciones de impacto COVID-19 en la población con medidas de mitigación de modelos epidemiológicos del 18 de marzo al

Impact of the COVID-19 pandemic according to mitigation measures epidemiological models for the

Valentina González-Jaramilla
Carlos Gómez-Restrepo,
Arley Gómez-López

Recibido: 10 marzo 2020 | Enviado para revisión

RESUMEN

Objetivo Este estudio tiene como primer objetivo la infección en el horizonte temporal desde la implementación de medidas de aislamiento aplicadas. Las proyecciones de mortalidad y la necesidad de recursos hospitalarios de contagio del 70% de la población.

Métodos Para el primer objetivo, nos basamos en el país hasta marzo 18, 2020 (n=93). Con un índice de contagio $R_0=2.5$ y el índice de contagio $R_0=1.5$.

Para la proporción de pacientes que necesitarían cuidados intensivos u otros cuidados intrahospitalarios, nos basamos en datos aportados por el Imperial College of London. Para el segundo objetivo usamos como tasa de mortalidad por edad, datos aportados por el Instituto Superiore di Sanità en Italia.

Resultados Basándonos en los 93 casos reportados al 18 de marzo, si no se aplicase ninguna medida de mitigación, para el 18 de abril el país tendría un total de 613 037 casos. Medidas de mitigación que reduzcan el R_0 en un 10%, generan una reducción del 50% del número de casos. Sin embargo, a pesar de reducirse los casos a la mitad, todavía habría un déficit en el número de camas requeridas y sólo uno de cada dos pacientes tendría acceso a dicho recurso.

Conclusión En nuestro modelo encontramos que las medidas de mitigación que han sido implementadas hasta la fecha por el gobierno colombiano, se fundamentan en evidencia suficiente para pensar que es posible reducir significativamente el número de casos contagiados y con esto, el número de pacientes que requerirían manejo hospitalario.

March 21, 2020 09:36 AM



El presidente Iván Duque señaló que, en los próximos días, estará informando las medidas y acciones para la población.

El presidente de Colombia, Iván Duque, anunció el viernes cuarentena obligatoria para su país, que regirá desde el próximo martes 24 de marzo.

La decisión se tomó después de que entablara una reunión analizaron las conclusiones de funcionarios y expertos para tomar medidas frente a la pandemia del COVID-19.

CC BY

Cristina Mesa Vieira^{a,b}, Oscar H. Franco^c, Carlos Gómez Restrepo^b, Thomas Abel^a

[†] Faculty of Medicine, Hospital Universitario San Ignacio, Pontificia Universidad Americana, Colombia

ABSTRACT

Keywords:
COVID-19
Wellbeing
Social Distancing
Vulnerable populations
LARC

The zoonotic virus now named SARS-CoV-2 first infected humans in late 2019. To mitigate its impact on societies, health and pharmaceutical preventive practices such as 'optimal' handwashing, these have been widely implemented. The healthcare systems have side-effects that might have reached low- and middle-income countries, weak economic status of their populations make halting the impact of COVID-19 and its prevention measures must be given to homeless, indigenous, migrant disabilities and the elderly. More than just rest pandemic. Links between science and political an environment and community action, on a global scale.

16. A pandemic is not simply an infectious disease but a sociocultural phenomenon with ample consequences specially among those most vulnerable



Figura 1. Prioridades olvidadas de la pandemia

Waves of the virus or from us?



Mutation and new variants



Covid-19: Pandemic is not over

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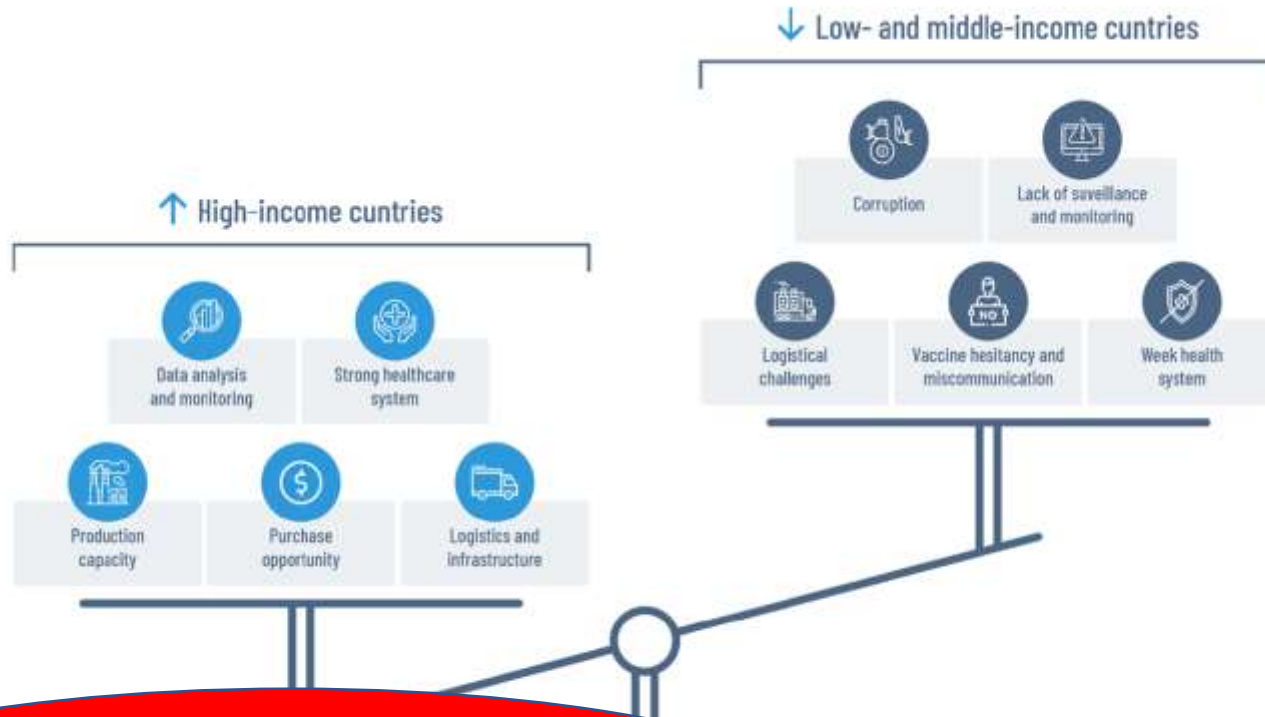
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Long term solutions?

1. Herd immunity
2. Vaccines
3. Treatments
4. Non-pharmacological





19. Global and local inequalities the ignored elephant

on of vaccination plans against COVID-19.

Covid19 in Europe: immediate challenges

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1. **Reduce inequalities: vaccines, genomic vigilance**
2. **Communication against vaccine skepticism**
3. **Economic recovery**
4. **Future of vaccine programs**
5. **Coordinated response to all of the above (travel policies, schools, economy etc.)**





Are you ready for
Life after Covid-19?



Data pointing toward decreased overall health in U.S.

Life expectancy has been declining over the last few years

Increased obesity, blood pressure and glucose intolerance in younger people

Highly educated and urban populations have superior health statistics compared with poor, poorly educated and rural populations

Public health and evidence generation infrastructure

Make information available close to real time to enable formulation of targeted policies and interventions at multiple levels

Reform of our global and national clinical trials infrastructure

Improved sharing of health data

Suggested interventions

Lifestyle (diet, exercise, tobacco, mental health)

Medication optimization and adherence

Align incentives for new therapy development

Better access and sharing of information

Avoid suboptimization

Staying healthy during the COVID-19 Pandemic

Prevent adverse COVID-19 outcomes



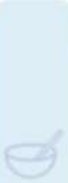
Discontinuation of smoking

- Cessation of smoking habits



Reducing high alcohol intake

- Alcohol should only be consumed in moderation
- Those who do not drink alcohol should not start



Eat healthily and keep well hydrated

- Eat balanced diets that are rich in whole foods, fresh vegetables, fruits, legumes, nuts, whole grains, and are
- Limit sugar and salt intake
- Eat moderate fats and oil
- Drink enough water every day
- In case of inadequate intakes of essential minerals and vitamins, consider using supplements to fill the gaps (e.g. vitamin D).



Regulate blood pressure & glucose

- Patients with diabetes or hypertension should continue their prescribed treatment
- Take medications on a regular basis
 - Perform self-checks to ensure optimal control



Use digital technology to improve mental health

- Embrace relaxation techniques such as meditation
- Keep occupied with activities that you enjoy



Have adequate sleep

- Set consistent sleep schedule by fixing bed- & wake-up times
- Maintain a good duration of sleep (7-8 hours/day)
- Avoid day-time naps which may affect night-time sleep
- Open windows/ blinds to ensure natural light exposure, which helps in the circadian rhythm
- Reserve your bed for sleeping (do not "work-from-bed")

20. The key aspects of this and planet's health crisis is lifestyle and behaviour

Prevent spread



Keep physical distance



Wash Hands



Avoid touch face



Cover when cough

g Adverse

ways Research Laboratory,

es and limiting person-
19 pandemic, they will
tance to explore what
l health behaviours and
sequences of COVID-19
aviours and correspond-
outcomes.

Pandemic Covid-19:

Everything, even the
worst, can leave
positive things

My top 5:

1. TIME  at h

2. SOLIDARITY 

3. REFLECTION 

4. ESSENTIAL 

5. FAMILY AND P

Wir lernen aus der Geschichte,
dass wir überhaupt nichts lernen.

Georg Wilhelm Friedrich Hegel

he ?

Whatever you learnt, lets please not forget.



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Symposium 2022

Oscar.franco@ispm.unibe.ch