Knowledge translation of burden of disease studies in the era of Covid-19
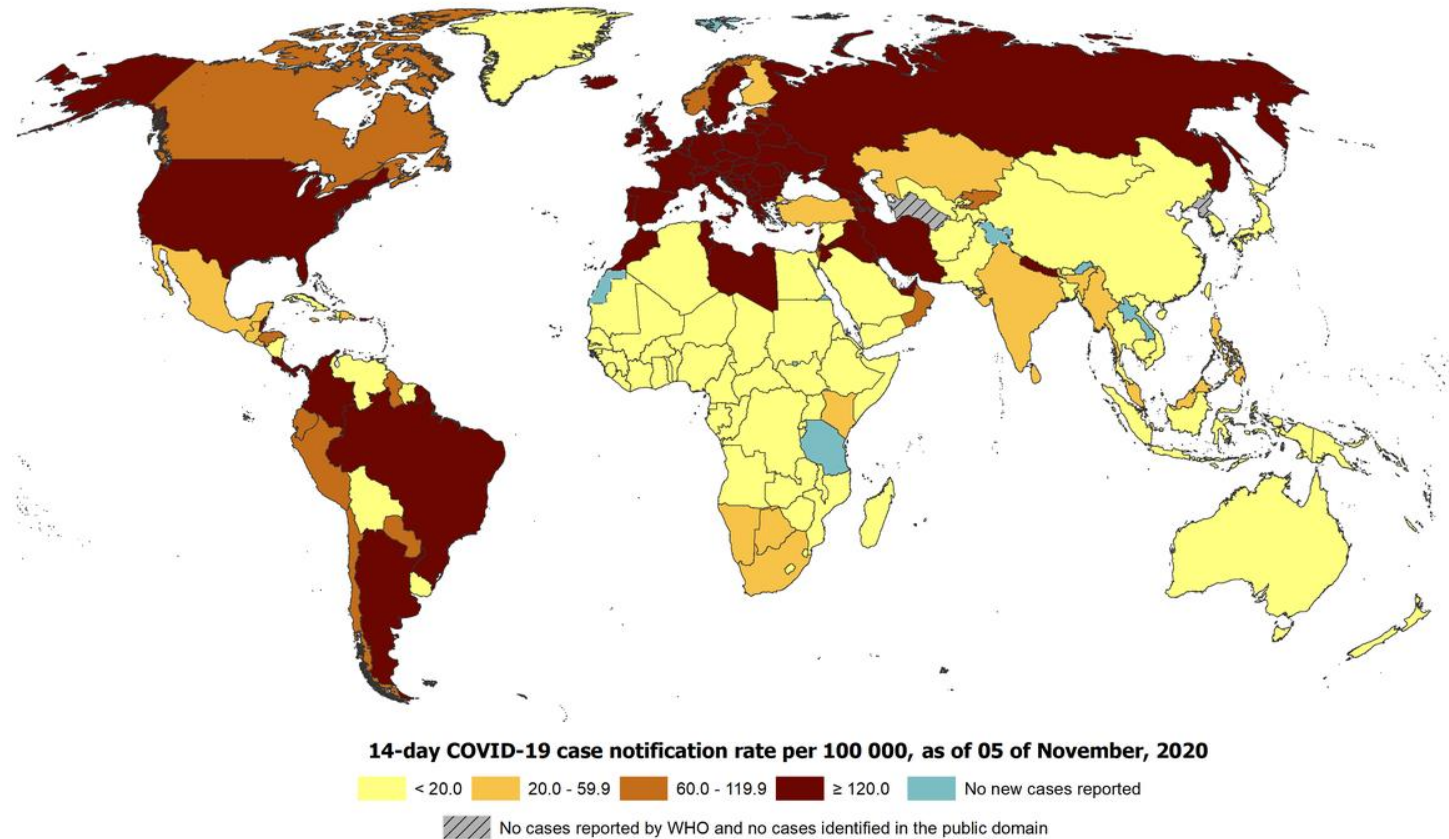
Dr Henk Hilderink and Dr Elena Pallari

8th and 9th of December 2020

14-day COVID-19 case notification rate per 100 000, as of 05 of November, 2020

< 20.0   20.0 - 59.9   60.0 - 119.9   ≥ 120.0   No new cases reported

No cases reported by WHO and no cases identified in the public domain

Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat.
The boundaries and names shown on this map do not imply official endorsement or acceptance by the European Union.
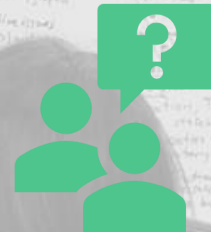
Date of production: 05/11/2020
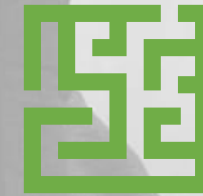
World Congress on Public Health 2020
Co-development in practice

Knowledge translation: guideline, evidence-based practice model, implementation program etc.

Health policy framework: context, content-factors (enablers, facilitators), processes and stakeholders (actors)

Implementation challenge: of converting a piece of evidence into a useable form

Next steps

- Making an inventory of good practices
- Use the DALYs and effectiveness data (QALYs)
- A diagram of 'policy-making' communication/ guidance on steps, challenges, opportunities, infographics
- Impact of infographics on policy-makers on what works and what doesn't
- Estimates are published, but impact is not evaluated

What does knowledge translation mean to you?

Knowledge Translation

- Knowledge Translation, Knowledge Exchange, Knowledge Transfer, Knowledge Transfer and Exchange, Research into action, knowledge-to-action, research into policy *etc.*

- According to the World Health Organization (WHO): Knowledge translation (KT) is *the synthesis, exchange, and application of knowledge by relevant stakeholders to accelerate the benefits of global and local innovation in strengthening health systems and improving people's health*

Models of Knowledge Translation
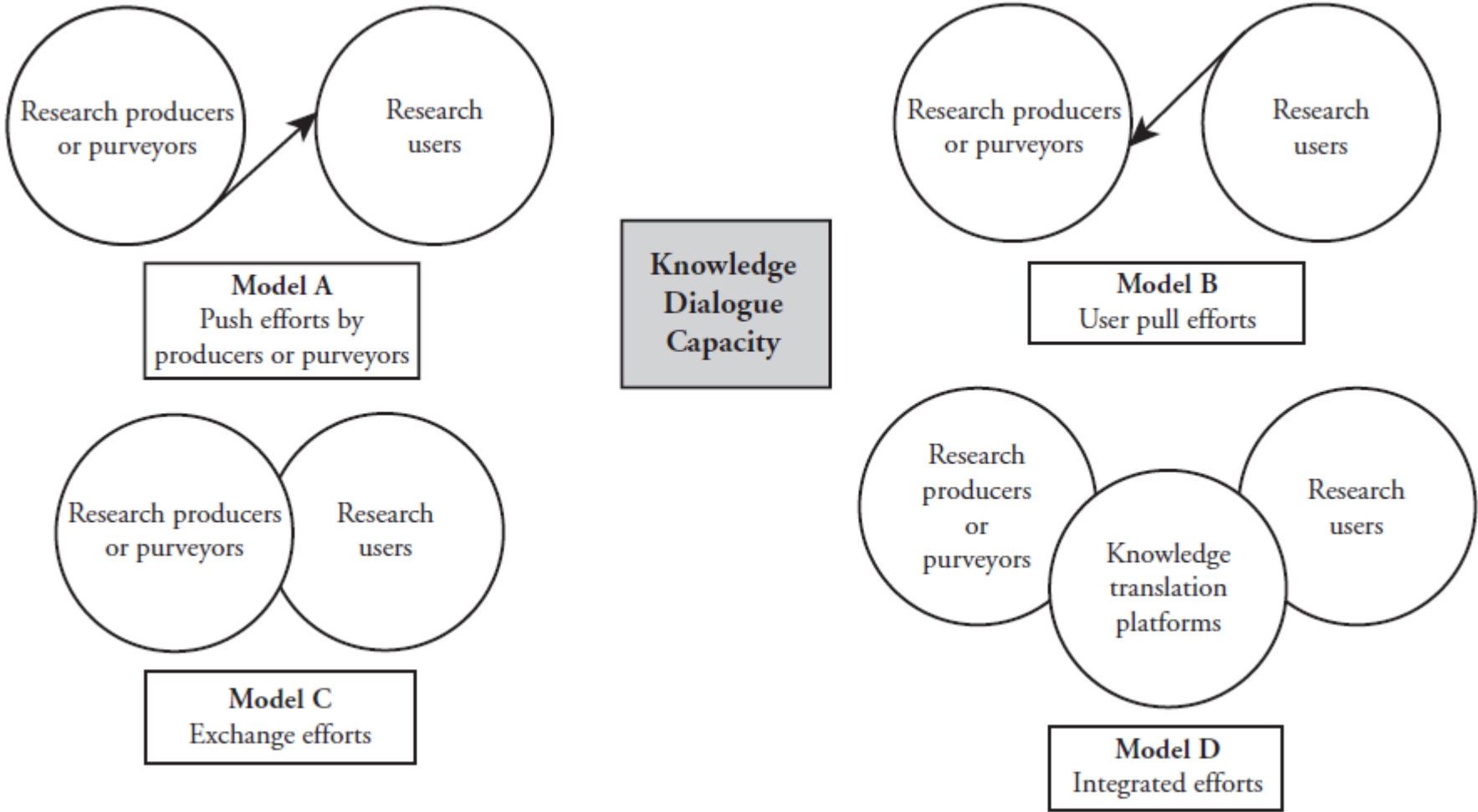
Source: Adapted from Lavis, J., J. Lomas, M. Hamid and N. Sewankambo. 2006. "Assessing Country-level Efforts to Link Research to Action." *Bulletin of the World Health Organisation*, 84: 620–628.

Campbell, S., Schryer-Roy, A.M. and Jessani, N., 2008. Knowledge translation toolkit: a resource for researchers.

How are Covid-19 data being used by policy makers and/or researchers in your country?

COVID-19

- Rapid translation of COVID-19 evidence
  - Good examples in Europe (and beyond)
  - Bad examples and sharing of learning with other countries
- Yet, the second wave is much worse than the first
  - Need to identify potential solutions
    - Strengthening the public health policy and healthcare capacity
    - Close the 'know-do' gap→ how?
- Long-term effects on health
  - adversely affect their <u>quality of life</u>
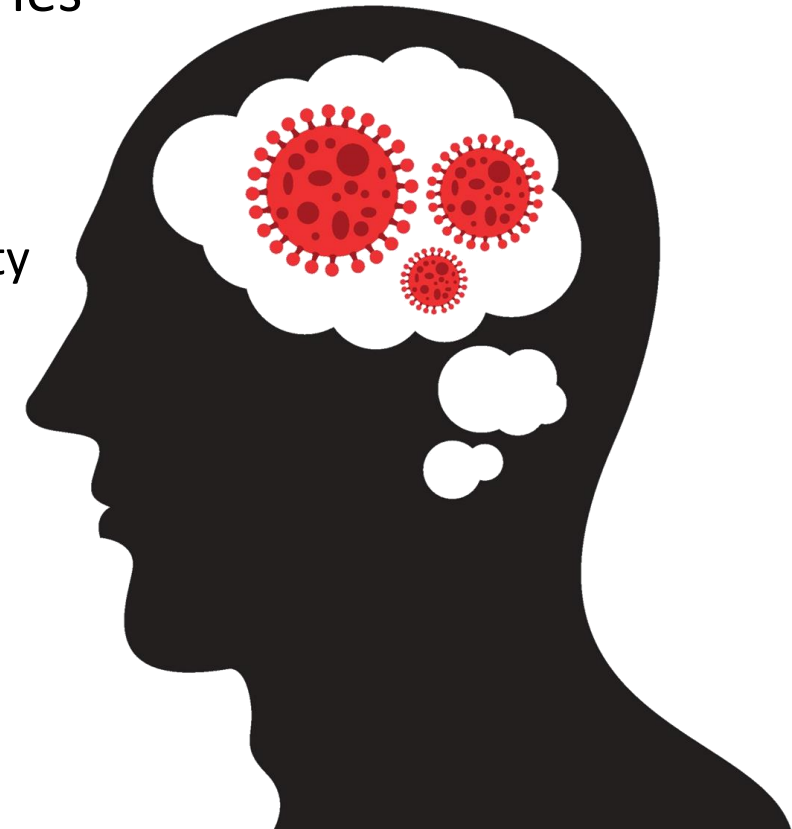
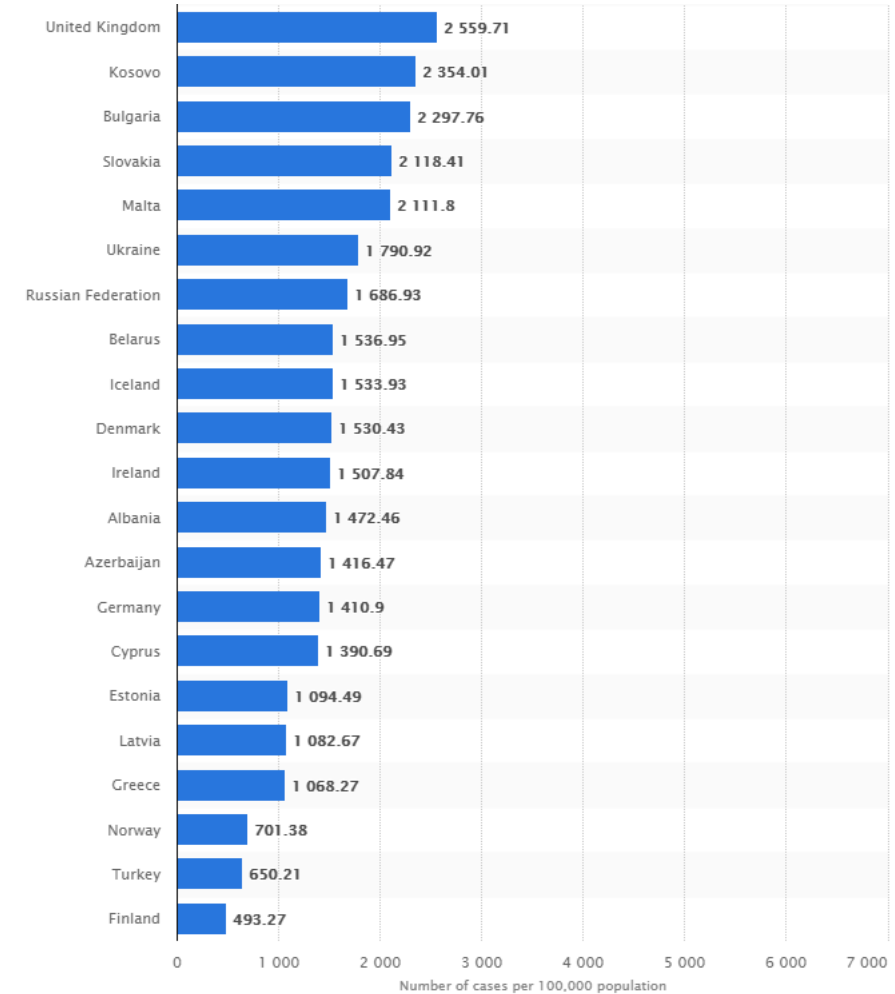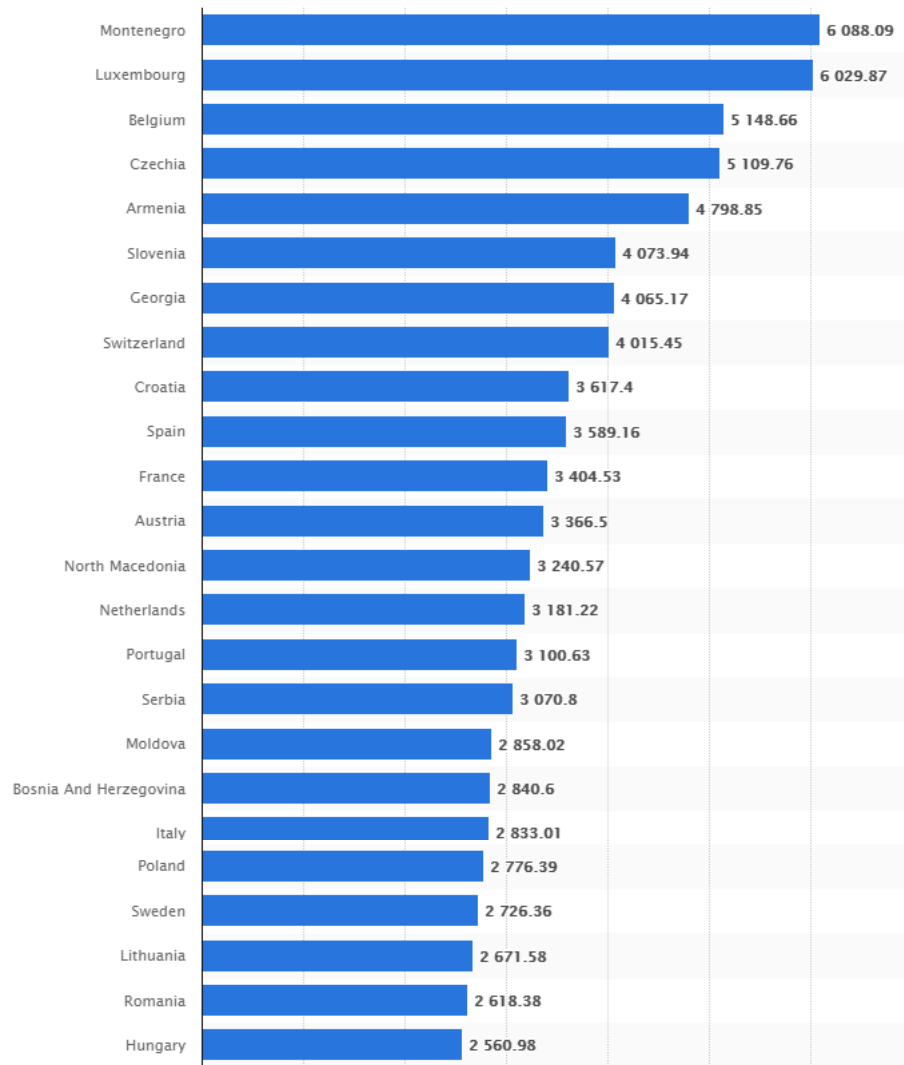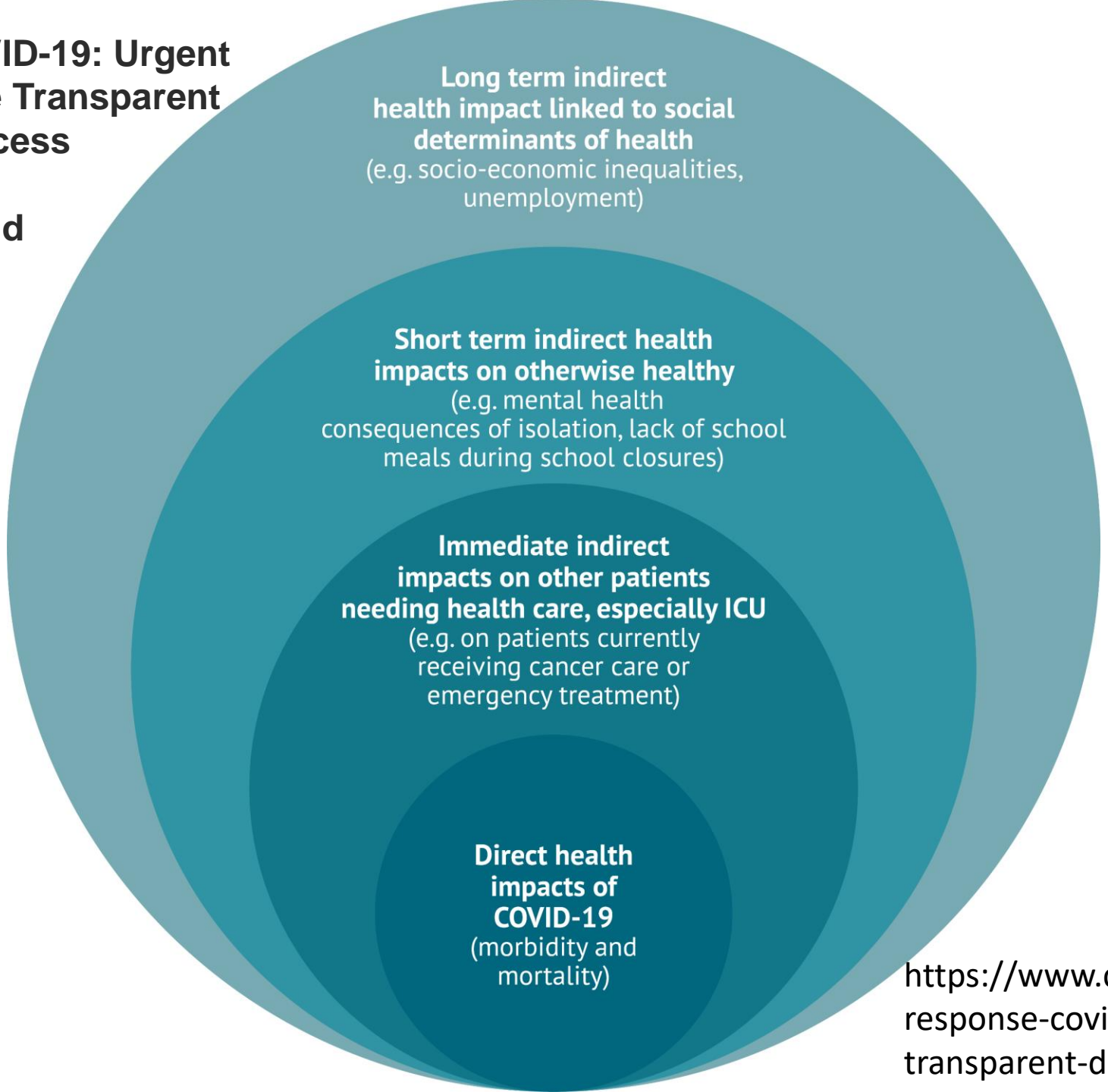# Coronavirus (COVID-19) cases per 100,000 in Europe 2020, by country

Montenegro	6 088.09
Luxembourg	6 029.87
Belgium	5 148.66
Czechia	5 109.76
Armenia	4 798.85
Slovenia	4 073.94
Georgia	4 065.17
Switzerland	4 015.45
Croatia	3 617.4
Spain	3 589.16
France	3 404.53
Austria	3 366.5
North Macedonia	3 240.57
Netherlands	3 181.22
Portugal	3 100.63
Serbia	3 070.8
Moldova	2 858.02
Bosnia And Herzegovina	2 840.6
Italy	2 833.01
Poland	2 776.39
Sweden	2 726.36
Lithuania	2 671.58
Romania	2 618.38
Hungary	2 560.98

United Kingdom	2 559.71
Kosovo	2 354.01
Bulgaria	2 297.76
Slovakia	2 118.41
Malta	2 111.8
Ukraine	1 790.92
Russian Federation	1 686.93
Belarus	1 536.95
Iceland	1 533.93
Denmark	1 530.43
Ireland	1 507.84
Albania	1 472.46
Azerbaijan	1 416.47
Germany	1 410.9
Cyprus	1 390.69
Estonia	1 094.49
Latvia	1 082.67
Greece	1 068.27
Norway	701.38
Turkey	650.21
Finland	493.27

Number of cases per 100,000 population

https://www.statista.com/statistics/1110187/coronavirus-incidence-europe-by-country/

UK Response to COVID-19: Urgent Need for An Inclusive Transparent Decision Making Process

Kalipso Chalkidou and Francis Ruiz

Long term indirect
health impact linked to social
determinants of health
(e.g. socio-economic inequalities,
unemployment)

Short term indirect health
impacts on otherwise healthy
(e.g. mental health
consequences of isolation, lack of school
meals during school closures)

Immediate indirect
impacts on other patients
needing health care, especially ICU
(e.g. on patients currently
receiving cancer care or
emergency treatment)

Direct health
impacts of
COVID-19
(morbidity and
mortality)

https://www.cgdev.org/blog/uk-response-covid-19-urgent-need-inclusive-transparent-decision-making-process

Cyprus

The Netherlands

Coronavirus dashboard

The coronavirus dashboard provides information on the development of the coronavirus in the Netherlands. Read more

National | Safety regions | Municipalities | About this dashboard

General

Latest developments
Number of confirmed cases stagnates

Infections

Confirmed cases
Confirmed cases per day

5,641 ↑ Value of 3 December 2020

Infectious people
Number of infectious people

100,660 Value of 19 November 2020

R Reproduction number
Most recent reproduction number

1.04 Value of 13 November 2020

Infections

Number of confirmed cases

By keeping track of the number of confirmed cases, we are able to determine the rate at which the virus is spreading before it reaches the intensive care. This keeps us prepared. Read more in 'explanation of the data presented'.

Last values obtained on Thursday, 3 December. Is updated on a daily basis.

Source: RIVM

: RIVM
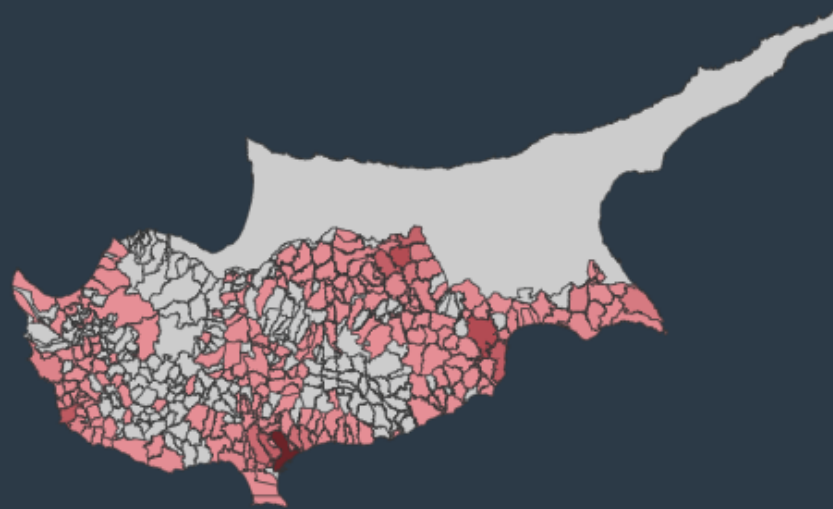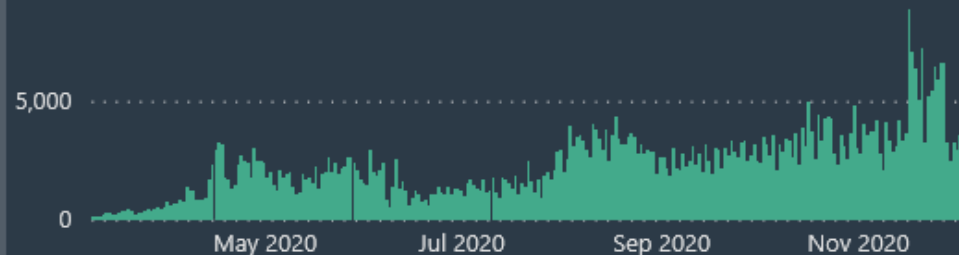
Average number of confirmed cases per 100,000 inhabitants per day.

32.4

0   40
Alert value: 7

This figure shows how many people per 100,000 inhabitants were reported yesterday as testing positive for COVID-19 (number of confirmed cases).

Number of confirmed cases

5,641

↑ 706 more than 2 days ago

This number shows how many confirmed cases were reported yesterday. Part of this number are positive tests of previous days, that have been reported later.

11.1% of GGD tests had a positive result

Read more

High burden of disease first wave COVID-19

The COVID-19 disease burden during the first wave has been estimated at 58,500 Disability-Adjusted Life Years (DALYs). In an average influenza season, the estimated burden of disease is an average of 12,000 DALYs. The disease burden of COVID-19 is therefore almost five times higher than an average influenza season. Most DALYs due to COVID-19 (99%) are related to years of life lost due to premature death. In the first wave, 6,142 people died who were diagnosed with COVID-19.

Small fluctuations R-number, big consequences

It is uncertain how the corona pandemic will continue. We therefore sketch the future on the basis of three scenarios. This shows that small differences in the distribution of SARS-CoV-2 can have major consequences for the number of intensive care (IC) recordings. Three scenarios have been developed that show the possible future developments of the possible future course of the corona pandemic.
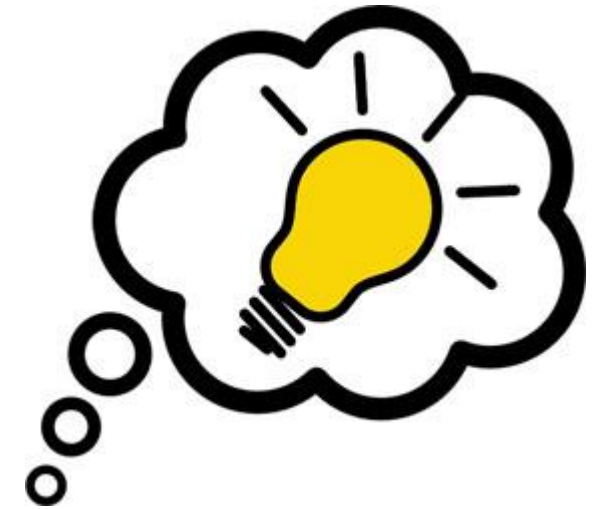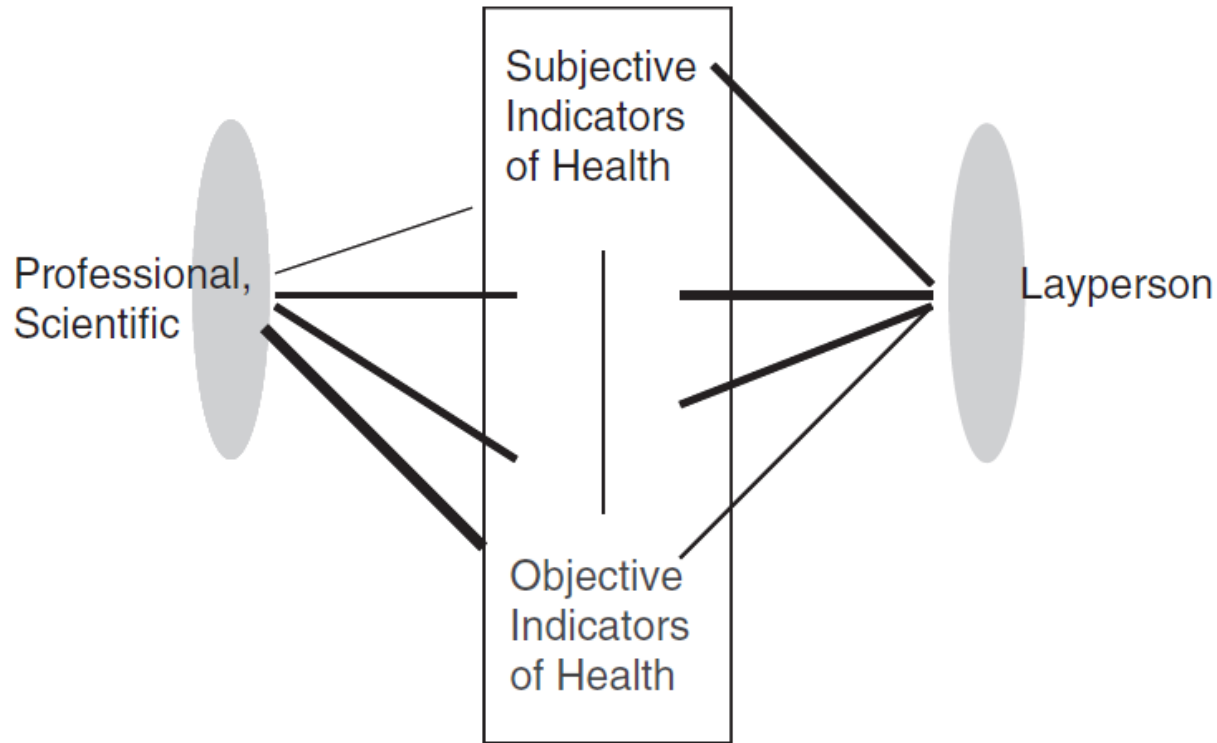
Vulnerability of the population is increasing

There is a possibility that SARS-CoV-2 or another coronavirus will continue to cause outbreaks in the future, even if there is a vaccine against it. The Dutch population is aging, and the

Belangrijkste risicofactoren ernstig beloop COVID-19

Chronische ziekten
- Diabetes
- Hart-en vaatziekten
- COPD

Ernstig overgewicht

Hogere leeftijd

Vergrijzing >70-plussers
2020 — 14% +6%
2040 — 20%

Het toekomstig verloop van de uitbraak zal afhangen van:

- **Gedrag** van de bevolking en de **maatregelen** die getroffen worden
- **Opbouw van immuniteit** door een doorgemaakte infectie of eventuele vaccinatie

Omstandigheden bij verspreiding van het virus

- Verspreiding gebeurt **bij samenkomsten** thuis, op het werk of in openbare ruimtes
- Ons reisgedrag is

The Lenses of Scientists, Health Professionals and Lay People

How can the KT process be improved for COVID-19 and more broadly BoD studies?

Thank you for listening :)

Acknowledgements

COST Action CA18218 Workshop participants and collaborators

Please get in touch:

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