

COVID-19 BURDEN TASK FORCE

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ASPHER burden-eu Meeting

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Horizon 2020

European Burden of Disease Network

working groups

WG1 – NCDs and Injuries



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WG3 – Risk Factors



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WG4 – Methods



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WG5 – Knowledge Translation



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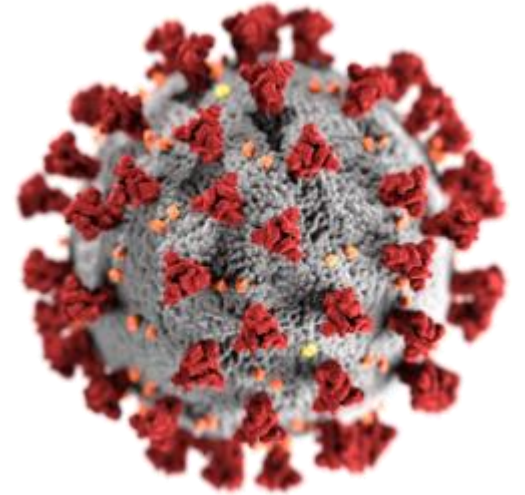


COST Action CA18218 European Burden of Disease Network

Technical platform to integrate and strengthen capacity in burden of disease assessment across Europe and beyond.

COVID-19

- Infectious disease by SARS-CoV-2
- Declared as a pandemic by WHO in March 2020
- High public health impact globally



COVID-19

- Perfect practical case to contribute to all aims of burden-eu
 - Research
 - Disease model, health outcomes
 - Data requirements
 - Computation
 - Building capacity
 - Burden of disease calculation
 - Knowledge translation



Burden of COVID-19 Task Force

COST Action CA18218



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Burden of COVID-19 Task Force

The European Burden of Disease Network established the Burden of COVID-19 Task Force, as a sub-group of [WG2 Infectious Diseases](#). The TF welcomes members who are conducting or interested in launching national studies to estimate the burden of disease of COVID-19.

Its aims are to:

- Share experiences in national burden of COVID-19 studies
- Support each other with calculations, model assumptions, data gaps
- Harmonize methodologies and align strategies for communicating results
- Discuss research projects and upcoming evidence on long-COVID

The TF meets approximately every six weeks. We select a different topic for each meeting, and focus mostly on technical discussions. We also have the opportunity to arrange ad-hoc meetings and discussions as needed/requested by members of the TF, and to use the [burden-eu discussion forum](#).

You can find the minutes of our meetings on the [Google Drive](#).

If you are interested in joining, contact [Sara Pires](#).

Other resources on COVID-19 disease burden are available on [this page](#).

Burden of COVID-19 Task Force

- Provide guidance for data requirements, methodology and communicating results

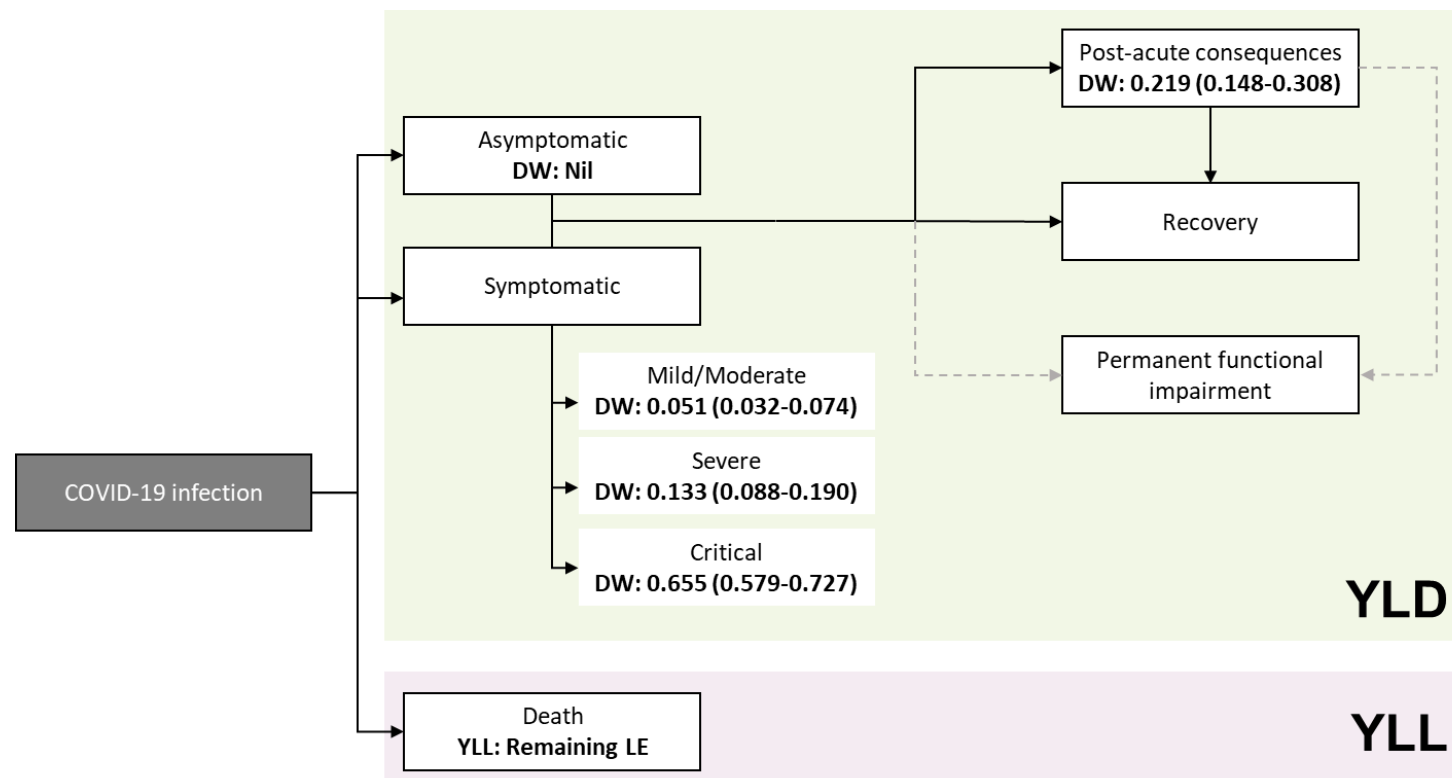


Burden of COVID-19 Task Force

Burden of disease of COVID-19 PROTOCOL FOR COUNTRY STUDIES

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Burden of COVID-19 Task Force

- **Open** to all network members conducting or interested in implementing national studies.
- Regular **group meetings**
- **Ad-hoc meetings** with countries
- Long-COVID meetings
- Online **discussion forum**
- **Several studies launched**
 - harmonized approaches
 - comparable estimates

Burden of COVID-19 Task Force

- Public webinars, attended by over 100 participants
- Website collects and continuously posts all published articles related to the burden of COVID



[Webinar] Burden of disease assessment for COVID-19: initial insights and future perspectives

Friday 21 May 2021, 14h-15h CET

Read more:



[Webinar] Quantifying COVID-19 disease burden

Friday 20 November 2020, 11h-12h CET

Read more:

BoD COVID-19 Studies

BoD-COVID Studies

Netherlands

Scotland

Germany

Malta

Ireland

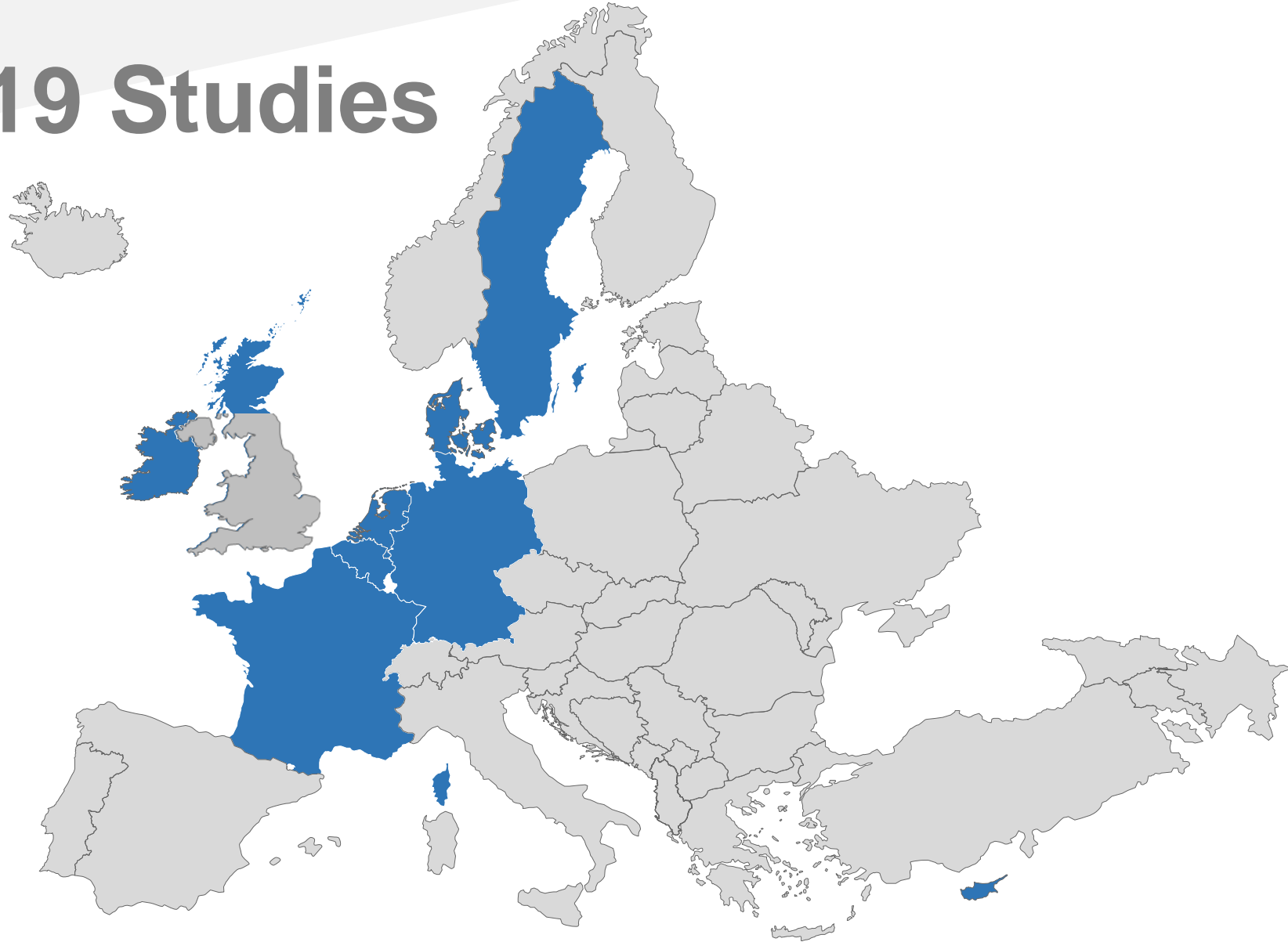
Denmark

France

Belgium

Ireland

Sweden



BoD COVID-19 Studies

Country adaptations

- Some countries included **post-acute consequences** of COVID-19 acute infections
- Germany defined **mild cases** in YLD calculations
- The Netherlands corrected for **underreporting** of hospital admissions and deaths
- Most countries used **durations** derived from their national data collections
- Scotland and Belgium used daily prevalence estimates from a **Susceptible-Exposed-Infectious-Removed (SEIR) transmission model**, and **daily hospital prevalence data**
- All studies except Germany used the **GBD aspirational life expectancy life table**

BoD COVID-19 Studies

Country	Period of analysis	Long-COVID included	DALY/100,000	% YLD
Australia	1 Jan-31 Dec 2020	Yes, estimated	32.7	3.5%
Belgium	Mar 2020- 31 Dec 2021	Yes	1,968	5%
Cyprus	9 March 2020 – 8 March 2021	N/A	1,881 YLL	NA
Denmark	28 Feb 2020-28 Feb 2021	No	520	1.6%
France	Jan- 31 Dec 2020	Yes, limited	1,472	1%
Germany	1 Jan-31 Dec 2020	No	368	0.7%
Ireland	1 Mar 2020 – 28 Feb 2021	Yes, estimated	1,033	1.3%
Malta	7 Mar 2020-31 Mar 2021	Yes, limited	1,086	5%
Netherlands	1 Jan-31 Dec 2020	No	1,570	1%
Scotland	1 Jan-31 Dec 2020	Yes, limited	1,770- 1,980	2%
Sweden	Mar 2020- Dec 2021	Yes	1,418	0.7%

BoD COVID-19 Studies

- National burden of COVID-19 ranged between **32 and app. 2,000 DALYs/ 100,000** inhabitants
- Consistent large contribution of **mortality** to the burden, between app. **1 and 5%**

BoD COVID-19 Studies

- Harmonized efforts and methodologies have allowed for **comparable estimates** and **communication** of results
- Future studies should evaluate the impact of interventions and unravel the indirect health impact of the COVID-19 crisis
- Burden of disease indicators, and standardization of approaches where applicable, can be useful for **monitoring within- and across-country public health in an ongoing pandemic**

Burden of COVID-19 Task Force

What have we been doing lately?

- Focus on long-COVID-19
 - Available data – incidence, severity
 - Disability weights
 - Updating disease model



A woman who has had COVID-19 attends a physiotherapy session in Madrid. Credit: Pierre-Phillipe Marcou/AFP/Getty

[The pandemic's true health cost: how much of our lives has COVID stolen? \(nature.com\)](https://www.nature.com/news/the-pandemic-s-true-health-cost-how-much-of-our-lives-has-covid-stolen-1.4548444)

BOD Long-Covid - GBD approach

- Published mid 2022 (not peer-reviewed yet?)
- <https://doi.org/10.1101/2022.05.26.22275532>
- Three main clusters of symptoms
 - Respiratory
 - Cognitive
 - Fatigue syndrome
- Minimum duration of three months

BOD Long-Covid - GBD approach

Outcome	Health state	Lay description	Disability weight
Respiratory symptoms	Chronic respiratory problems, mild	has cough and shortness of breath after heavy physical activity but is able to walk long distances and climb stairs.	0.019
	Chronic respiratory problems, moderate	has cough, wheezing and shortness of breath, even after light physical activity. The person feels tired and can walk only short distances or climb only a few stairs.	0.225
	Chronic respiratory problems, severe	has cough, wheezing and shortness of breath all the time. The person has great difficulty walking even short distances or climbing any stairs, feels tired when at rest, and is anxious.	0.408
Cognitive symptoms	Cognitive problems, mild	has some trouble remembering recent events and finds it hard to concentrate and make decisions and plans.	0.069
	Cognitive problems, moderate	has some trouble remembering recent events and finds it hard to concentrate and make decisions and plans.	0.377
Fatigue syndrome	Infectious disease, post-acute consequences	is always tired and easily upset. The person feels pain all over the body and is depressed.	0.219

BOD Long-covid - early burden-eu approach

Outcome	Health state	Lay description	Disability weight
Long COVID	Infectious disease, post-acute consequences	has some trouble remembering recent events and finds it hard to concentrate and make decisions and plans.	0.219

BOD Long-covid - early burden-eu approach

- Published at the start of 2021
- <https://doi.org/10.3389/ijph.2021.619011>
- Approach is too generic, reflective of the fact we didn't know much at the time
- Require wider disability weight set, and new disability weight (loss of sense of smell/taste)

BOD Long-covid - current burden-eu approach

- Developing fatigue syndrome
- Potential to use health states for anemia to capture different severities of fatigue syndrome

Outcome	Health state	Lay description	Disability weight
Fatigue syndrome	Anemia, mild	feels slightly tired and weak at times, but this does not interfere with normal daily activities.	0.004
	Anemia, moderate	feels moderate fatigue, weakness, and shortness of breath after exercise, making daily activities more difficult.	0.052
	Anemia, severe	feels very weak, tired and short of breath, and has problems with activities that require physical effort or deep concentration.	0.149
	Infectious disease, post-acute consequences	is always tired and easily upset. The person feels pain all over the body and is depressed.	0.219

Burden of COVID-19 Task Force

What have we learned along the way?

nature

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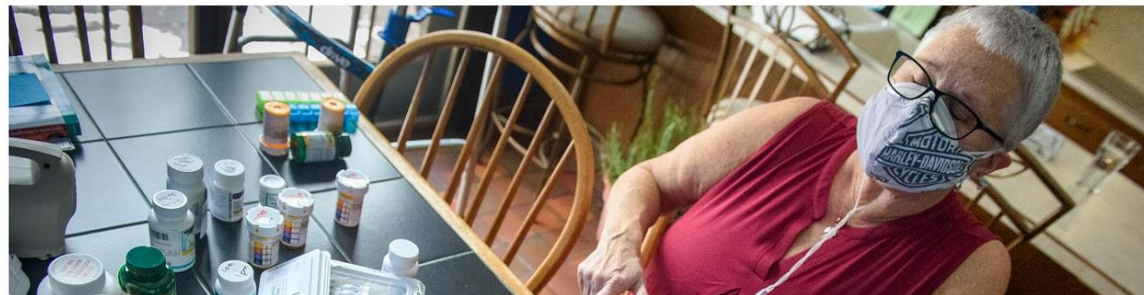
nature > news feature > article

NEWS FEATURE | 18 May 2022

The pandemic's true health cost: how much of our lives has COVID stolen?

Researchers are trying to calculate how many years have been lost to disability and death.

Holly Elise



Burden of COVID-19 Task Force

- Join us: ismpi@food.dtu.dk; info@burden-eu.net
- What to expect:
 - Share experiences in national burden of COVID-19 studies
 - Support with calculations, model assumptions, data gaps
 - Harmonize methodologies and align strategies for communicating results
 - Discuss research projects and upcoming evidence on long-COVID

Join our network



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■ Contact us at info@burden-eu.net