

Zero Waste Live!

7 April 2020 - 03.00 p.m. CET

COVID-19 AND ZERO WASTE



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ATTENTION:

Due to COVID- 19,
our store is closed
to the public.

HOWEVER

Phone orders with
curbside pickups
available

(709) 726-9663

Outline of presentation

- waste and Covid19-safety: **scientific background**
- **adaptation and safety** at recycling sites and composting sites
- a mid-term vision: **critical assessment** of measures being considered/adopted by EC and various MSs

Notable Articles of 2019
ACCESS NOW →IMAGES IN CLINICAL
MEDICINE

Advanced Mycosis Fungoides



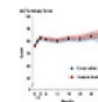
ORIGINAL ARTICLE

Trends in U.S. Burden of
Clostridioides difficile Infection
and Outcomes

EDITORIAL

Timing of Endoscopy in Patients
Hospitalized with Upper
Gastrointestinal Bleedin...

ORIGINAL ARTICLE

Health Status after Invasive or
Conservative Care in Coronary
and Advanced Kidne...CLINICAL
Anorexia

CORRESPONDENCE

Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1



TO THE EDITOR:



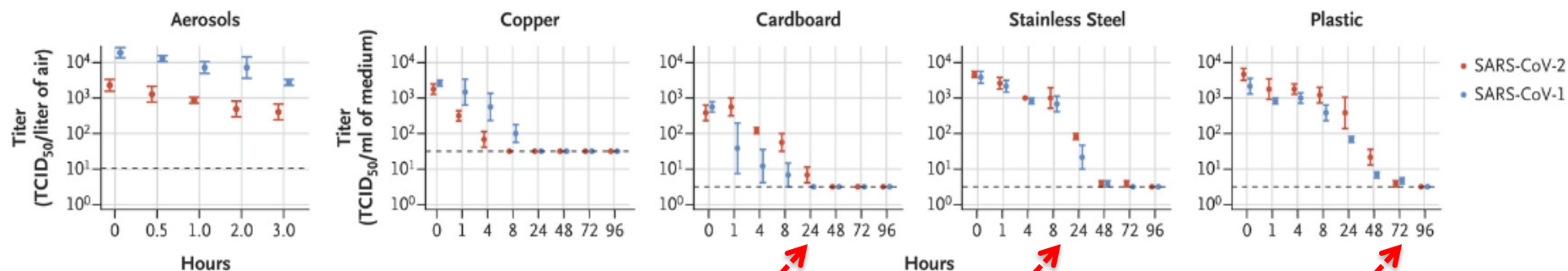
A novel human coronavirus that is now named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (formerly called HCoV-19) emerged in Wuhan, China, in late 2019 and is now causing a pandemic.¹ We analyzed the aerosol and surface stability of SARS-CoV-2 and compared it with SARS-CoV-1, the most closely related human coronavirus.²

March 17, 2020

DOI: 10.1056/NEJMc2004973

[Metrics](#)NEJM
CareerCenter

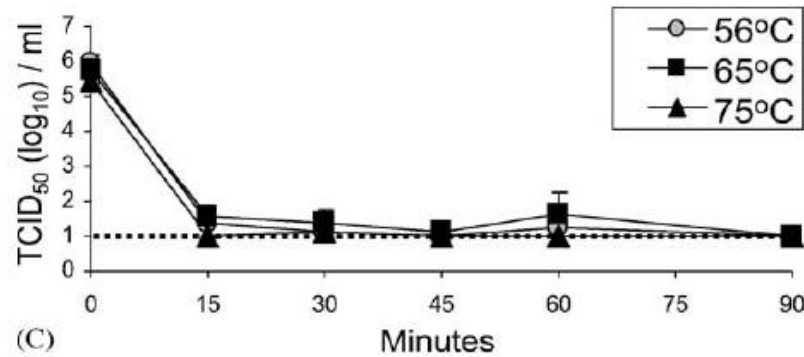
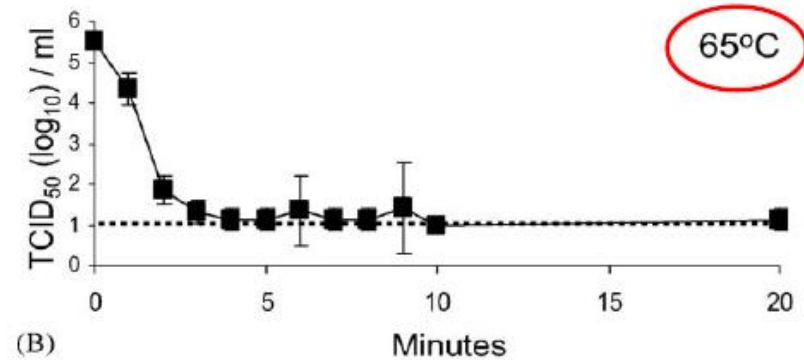
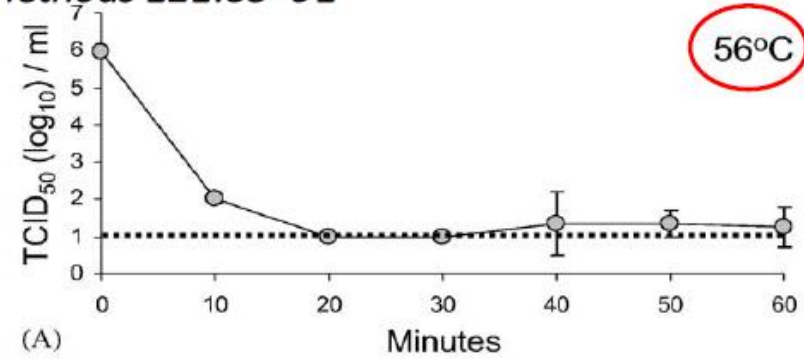
A Titers of Viable Virus



Inactivation of the coronavirus that induces severe acute respiratory syndrome, SARS-CoV.

Darnell et al. 2004. *Journal of Virological Methods* 121:85–91

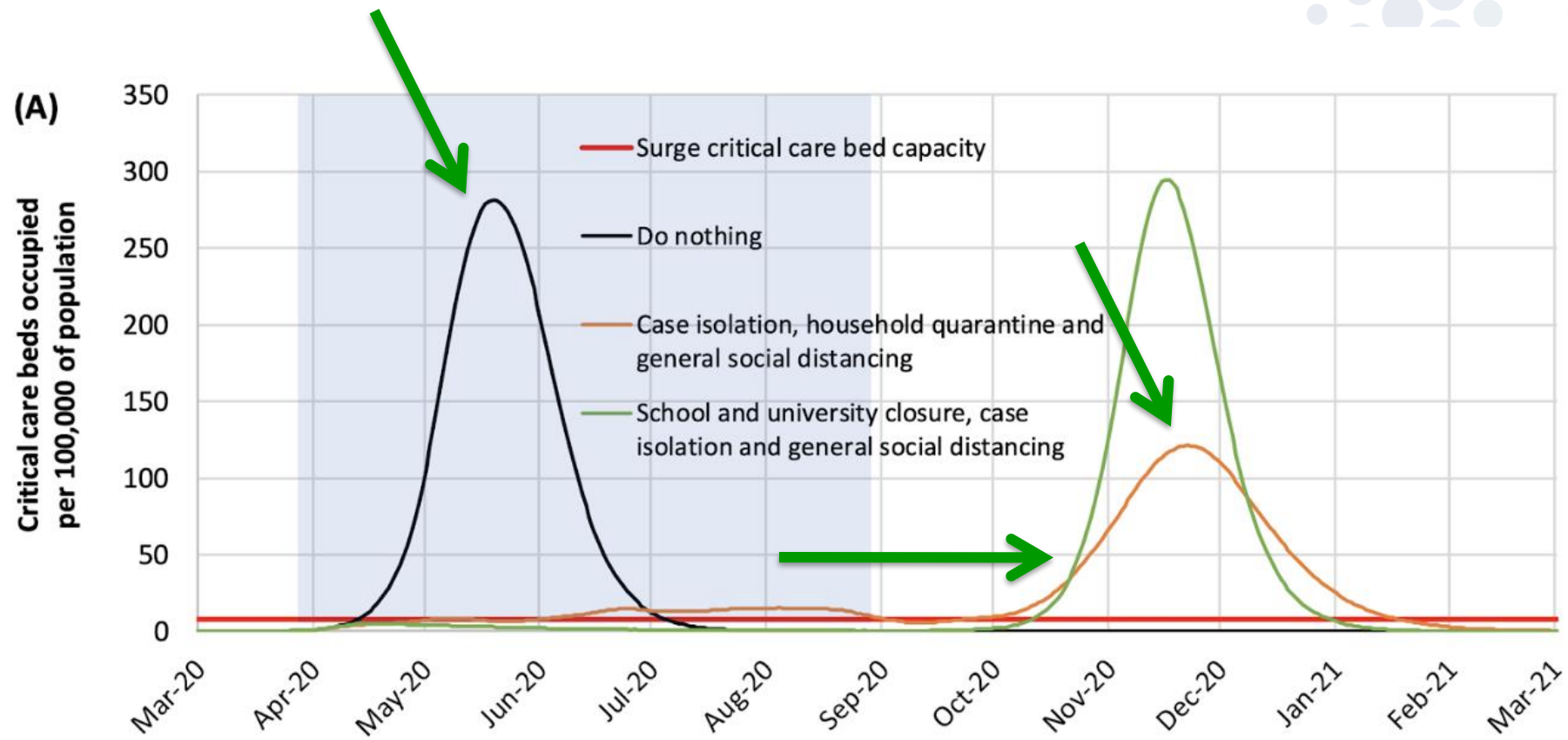
Temperature Effects



A first round of conclusions

- **Composting** a safe route
 - The process is ordinarily required to ensure **sanitisation** (pasteurisation + non thermal effects)
 - Compost sites traditionally accustomed to tackling **biohazards**
 - (Used to deal with virus-affected animal carcasses after viral outbreaks)
- **Packaging waste** safe to be handled after **temporary storage**
 - What may be a “safe” storage time?
- **Biological stabilisation** a suitable solution for residual waste, too

A mid-term vision



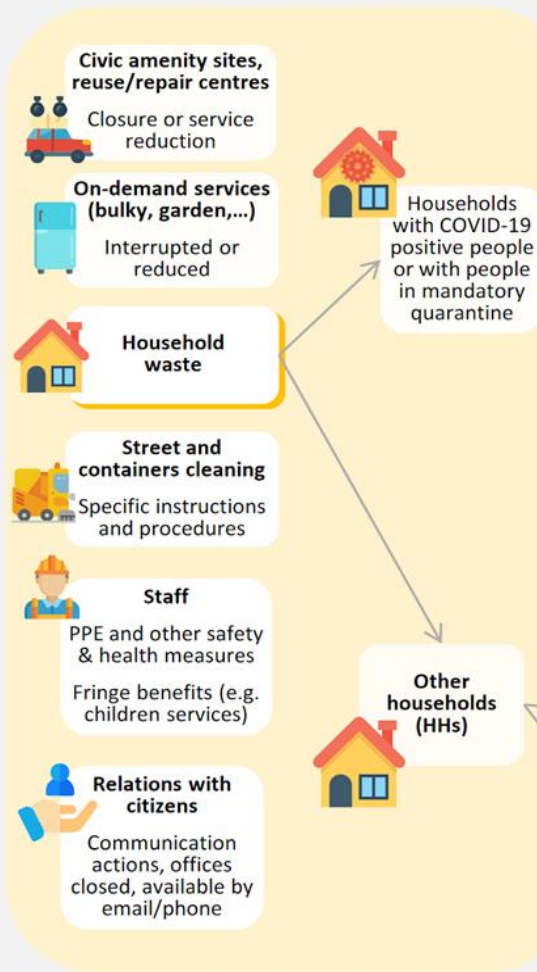
Source: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID19 mortality and healthcare demand, Neil Ferguson et. al, Imperial College

Timelines, transitions



Municipal waste management and COVID-19 Summary of observed trends (March 2020)

GENERAL ADAPTATIONS TO MUNICIPAL WASTE SYSTEM



SORTING RULES AT HOME

Masks, gloves, tissues and disposable cloths collected with mixed waste (in some cases tissues and handkerchiefs were before collected with bio-waste)

Mixed waste
Bin with pedal, 2 or more sealed bags, recyclables and biowaste with mixed waste

Recyclables, bio-waste
No source separation, households might be asked to keep at home for a certain amount of time WEEE, batteries, and other hazardous waste

Residual waste
Business as usual or 2 or more sealed bags

Recyclables, bio-waste
Business as usual, in case of temporary interruption of the service, households are invited to store at home dry recyclables

In some cases, 72 hours to wait before waste disposal

WASTE COLLECTION

Frequency collection modulated according to specific needs (staff shortages, health & safety measures reducing efficiency, mixed waste and biowaste prioritization)

Mixed waste
Possibility of ad hoc services, keeping their waste separated from the municipal stream (specific containers)
Frequency of collection may need to be increased

Residual waste
Frequency of collection may need to be increased

During this period, the reporting for recycling targets might be modified according to the increase of mixed waste

Recyclables, bio-waste
Business as usual, even if the frequency of collection may need to be reduced

WASTE TREATMENT

Derogation to the mandatory preliminary mixed waste treatment before its disposal may be needed (either by way of incineration or controlled landfill)
Treatment plant must rely as much as possible on automated systems
Review of storage permits may be needed (to safely treat waste without infectious load)

Mixed waste
Incineration prioritised; MBTs continue with business as usual when they are highly automated (minimum involvement of operators), or controlled landfill

Residual waste
Business as usual, prioritising automated systems or preliminary storage

Recyclables, bio-waste
Business as usual, prioritizing automated systems or preliminary storage

This graphic does not include recommendations or an exhaustive list but a reflection in terms of trends of what has been observed in the practices shared with ACR+



The EC initiative ("*non paper*")

- Aimed at providing guidance to Member States for adaptation in the **transitional situation**
- Keeps **separate collection** as a fundamental service for both ordinary households and – in general - Covid19-positive people
 - Derogations may be adopted by Member States
- No particular requirement for **composting**
- Treatment of **residuals**: "*(...) incinerated in incineration or co-incineration facilities or safely disposed of in controlled landfills*"
 - Does not highlight the potential role of biological stabilisation
 - "*safely pretreated and disposed of in controlled landfills*"
- Requires **temporary storage** for reprocessing sites (9 days)

Last round of conclusions

- **EC guidelines** sufficiently solid and backed by science
 - Temporary storages may be revised
 - Management of residual waste may be fine-tuned
- **Alignment** of guidelines with EU roadmap on Circular Economy
 - Also transitional adaptation may be aligned
- The **long term vision** is beyond discussion

Be Safe, Stay Home, and #AndràTuttoBene

