

La Prevenzione e il Controllo delle Infezioni in Tempo di COVID-19.

Gaetano Privitera

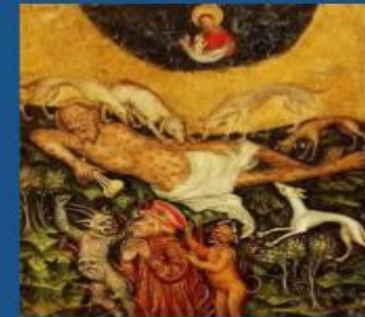
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COVID-19 ha (temporaneamente?) riportato la pratica del controllo delle infezioni al XV secolo

The Origin of the Quarantine

In response to the “Black Plague” pandemic of 1347- 1348, Venice founded the first quarantine island, Lazaretto Vecchio, Santa Maria di Nazareth Island. In 1485, in response to a successive wave of plague, Venice adopted the rule requiring that all vessels coming from infected ports be detained for 40 days, (*Quaranta giorno*).





COVID-19, COME HA CAMBIATO LA NOSTRA VITA, LA SOCIETA',
L'ECONOMIA:
QUARANTENA E DISTANZIAMENTO SOCIALE

I determinanti socio-economici dell'epidemia

Taux de décès liés au Covid-19

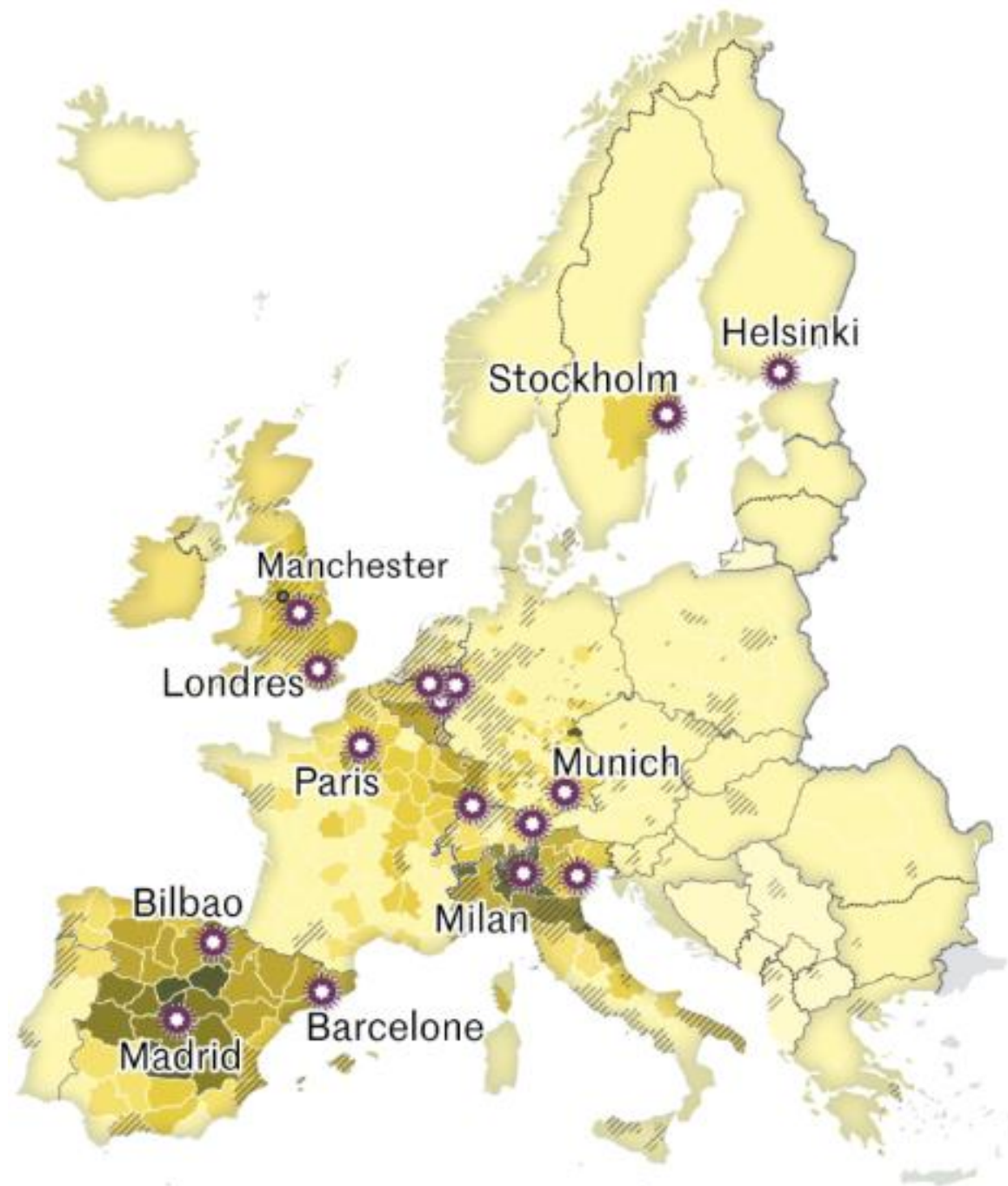
pour 100 000 habitants (au 9 avril)

○ 0-5 ● 5-10 ● 10-25 ● 25-50

● 50-75 ● 75-100

☼ Principaux foyers de propagation identifiés par pays

▨ Plus de 400 habitants au km²



215.665 casi di COVID-19* di cui:

24.358 operatori sanitari[§]

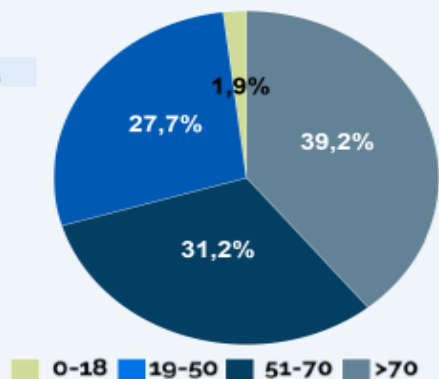
28.274 deceduti

Sorveglianza Integrata COVID-19 in Italia

(Ordinanza n. 640 del 27/02/2020)

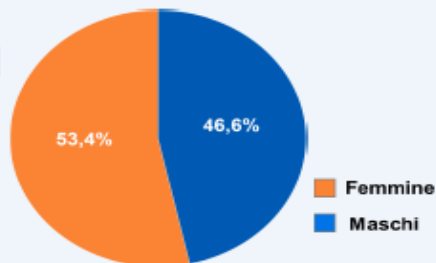
AGGIORNAMENTO 8 maggio 2020

Età

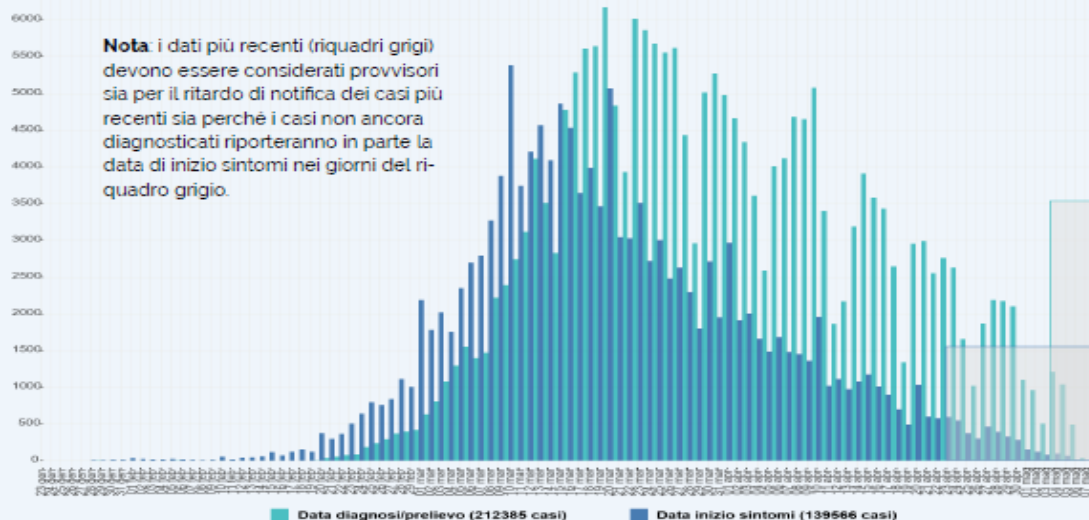


Età mediana dei casi: **62 anni**

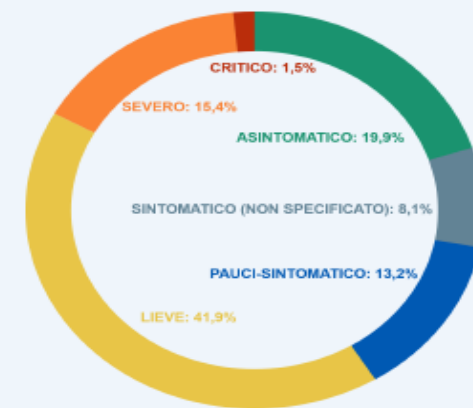
Sesso



Fascia d'età (anni)	Deceduti [n (%)]	Letalità (%)
0-9	3 (0%)	0,2%
10-19	0 (0%)	0%
20-29	9 (0%)	0,1%
30-39	55 (0,2%)	0,3%
40-49	248 (0,9%)	0,9%
50-59	1005 (3,6%)	2,6%
60-69	2989 (10,6%)	10,2%
70-79	7912 (28,0%)	24,9%
80-89	11543 (40,8%)	30,2%
>90	4510 (16,0%)	26,3%
Non noto	0 (0%)	0%
Totale	28274 (100%)	13,1%

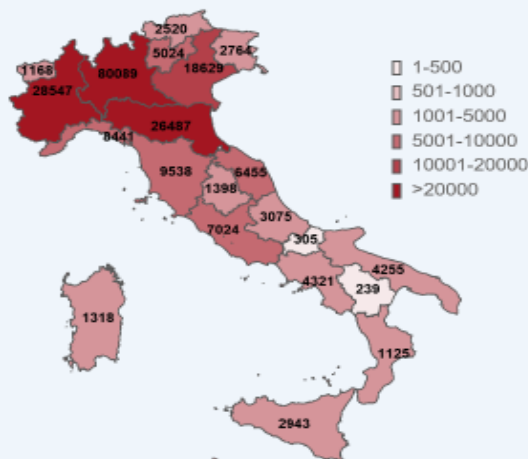


Sono risultati positivi il **99%** dei campioni processati dal Laboratorio nazionale di riferimento presso l'Istituto Superiore di Sanità

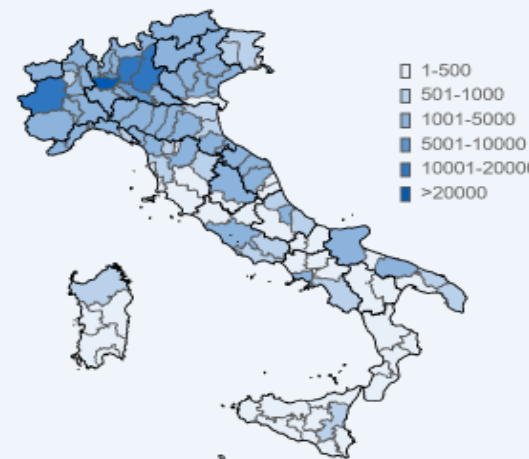


Dato disponibile per **65.319** casi

Numero totale di casi di COVID-19 diagnosticati dai laboratori regionali di riferimento



per Regione/PA di diagnosi
(dato disponibile per 215.665)



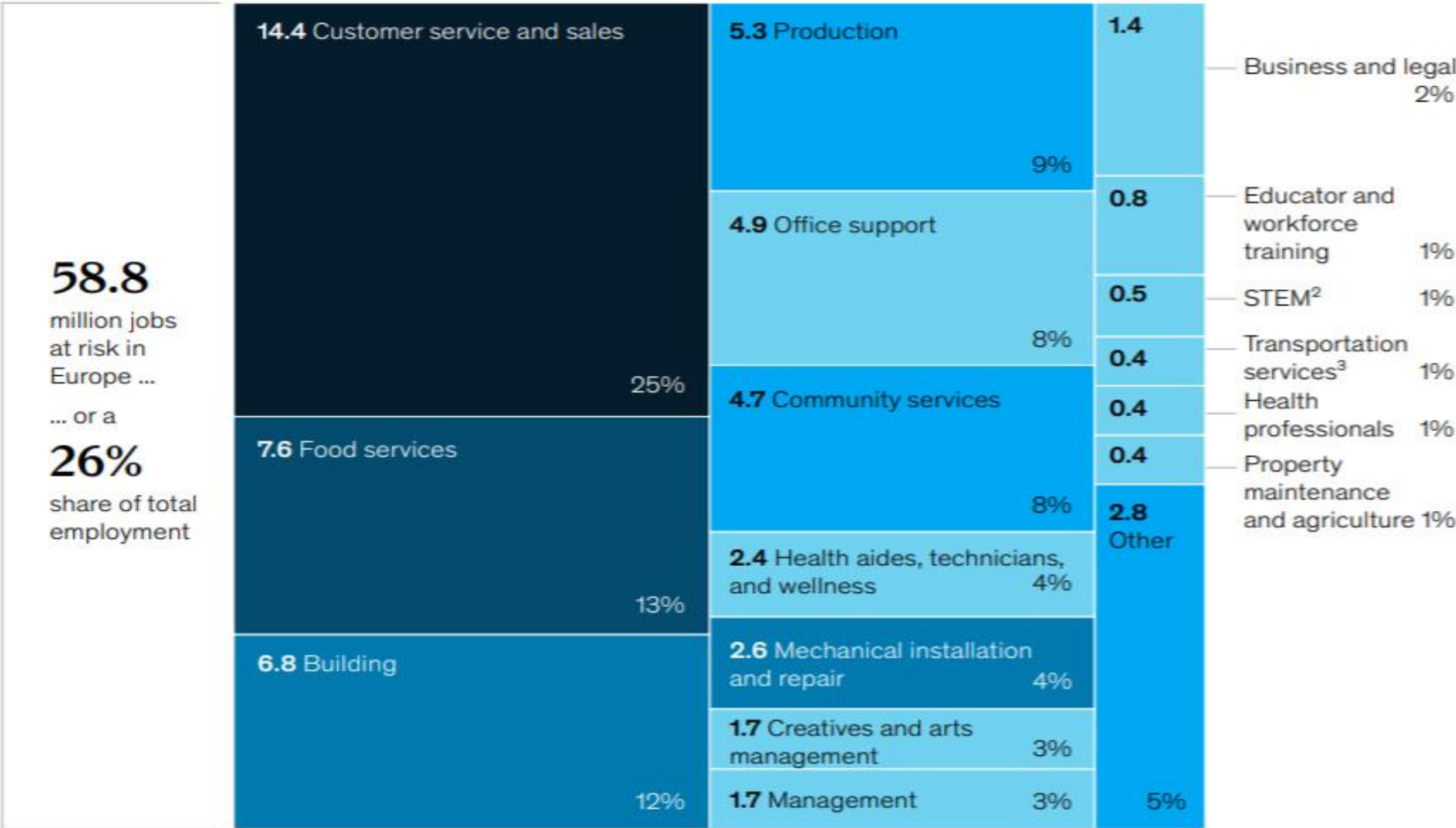
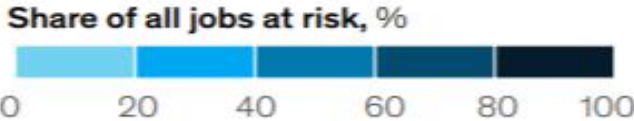
per Provincia di domicilio/residenza
(dato disponibile per 211.647)

*La definizione internazionale di caso prevede che venga considerata caso confermato una persona con una conferma di laboratorio del virus che causa COVID-19 a prescindere dai segni e sintomi clinici
<https://www.ecdc.europa.eu/en/case-definition-and-european-surveillance-human-infection-novel-coronavirus-2019-ncov>

*Il flusso ISS raccoglie dati individuali di casi con test positivo per SARS-COV-2 diagnosticati dalle Regioni/PPAA. I dati possono differire dai dati forniti dal Ministero della Salute e dalla Protezione Civile che raccolgono dati aggregati. § Dato non riferito al luogo di esposizione ma alla professione.

Fifty percent of all jobs at risk in Europe fall into customer service and sales, food service, and building.

European jobs potentially at risk, by job cluster, millions, % share of total cluster employment¹



58.8
million jobs
at risk in
Europe ...
... or a
26%
share of total
employment

Eppure non sono mancati i preavvisi che alcune patologie infettive possono avere diffusione epidemica a livello globale o locale.....

- **Sars**
- **Mers**
- **Influenza aviaria**
- **Chikungunya e altre febbri emorragiche virali**
- **Ebola**
- **Zyca virus**
- **Meningite C**
- **Morbillo**
- **Scabbia**

• Infection and transmission

- Basic reproduction number (R_0) R_0 is proportional to the contact rate and will vary according to the local situation. A recent review of 12 modelling studies reports the mean basic reproductive number (R_0) for COVID-19 at 3.28, with a median of 2.79. This is in accordance with estimates of R_0 from Italy, ranging between 2.76 and 3.25. The introduction of mitigation measures has been reported to decrease R_0 .

• Incubation period

- Current estimates suggest a median incubation period from 5–6 days for COVID-19, with a range from 1–14 days. One study reported that in 97.5% of people with SARS-CoV-2 infection, COVID-19 compatible symptoms will appear within 11.5 days .
- A recent modelling study confirmed that it remains prudent to consider the incubation period to be up to 14 days.

• Viral shedding

- Over the course of infection, the virus has been identified in respiratory tract specimens 1–2 days before the onset of symptoms, and it can persist for up to eight days after the onset of symptoms in mild cases [27] and for longer periods in more severe cases, peaking in the second week after infection [27,28]. The high viral load close to symptom onset suggests that SARS-CoV-2 can be easily transmissible at an early stage of infection [29]. Viral RNA has been detected in faeces [30], whole blood [20], serum [31,32], saliva [26,29], nasopharyngeal specimens [21] and urine [33]. It should be noted that detection of viral RNA by PCR does not equate with infectivity, unless infectious virus particles have been confirmed through virus isolation and cultured from the particular samples. For more information on viral shedding, please refer to ECDC's seventh update of the risk assessment [34].

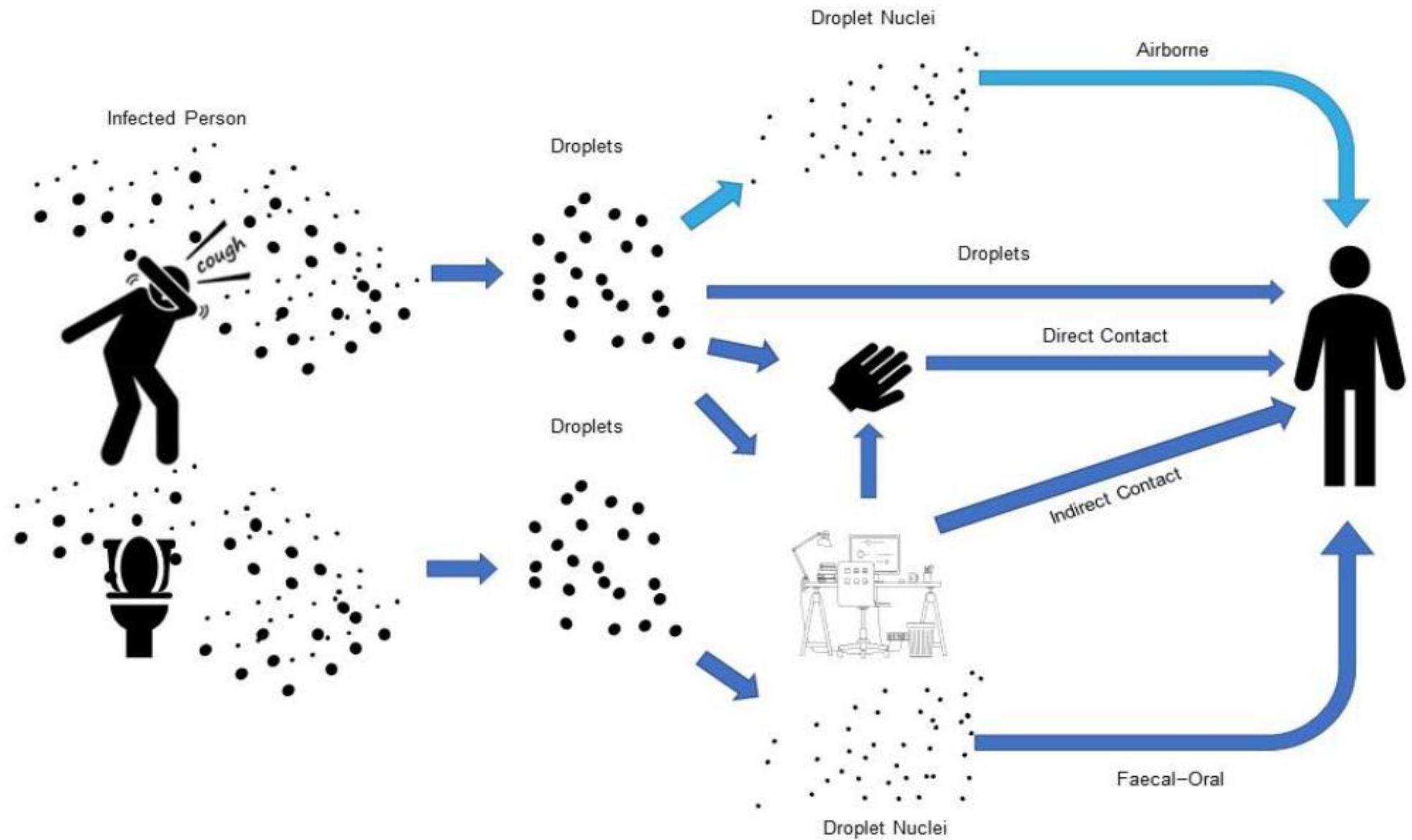


Figure 1. WHO reported exposure mechanisms of COVID-19 SARS-CoV-2 droplets (dark blue colour). Light blue colour: airborne mechanism that is known from SARS-CoV-1 and other flu, currently there is no reported evidence specifically for SARS-CoV-2 (figure: courtesy Francesco Franchimon).

COVID-19 Routes of transmission

- Droplet transmission
 - COVID-19 virus is transmitted by droplets during close (within 1 m), unprotected contact
 - Preliminary viral shedding data suggests highest shedding in the early stages in symptoms (within first 3 days of symptom onset)
- Aerosol transmission
 - Aerosol generating procedures produce aerosols that can remain in the air for longer periods of time, compared to larger droplets and be transmitted to others over distances greater than 1m
 - Aerosol transmission is possible, but has not yet been documented for COVID-19 virus
- Transmission through fomites
 - The virus has been detected on surfaces in the patient environment
 - Possible for people to be infected after touching contaminated surfaces and touching eyes, nose or mouth
- Fecal-oral transmission
 - While RNA has been detected in the stool, only one study has cultured the virus from a single stool specimen
 - The roles of fecal-oral transmission remains uncertain, but likely not major driver of transmission

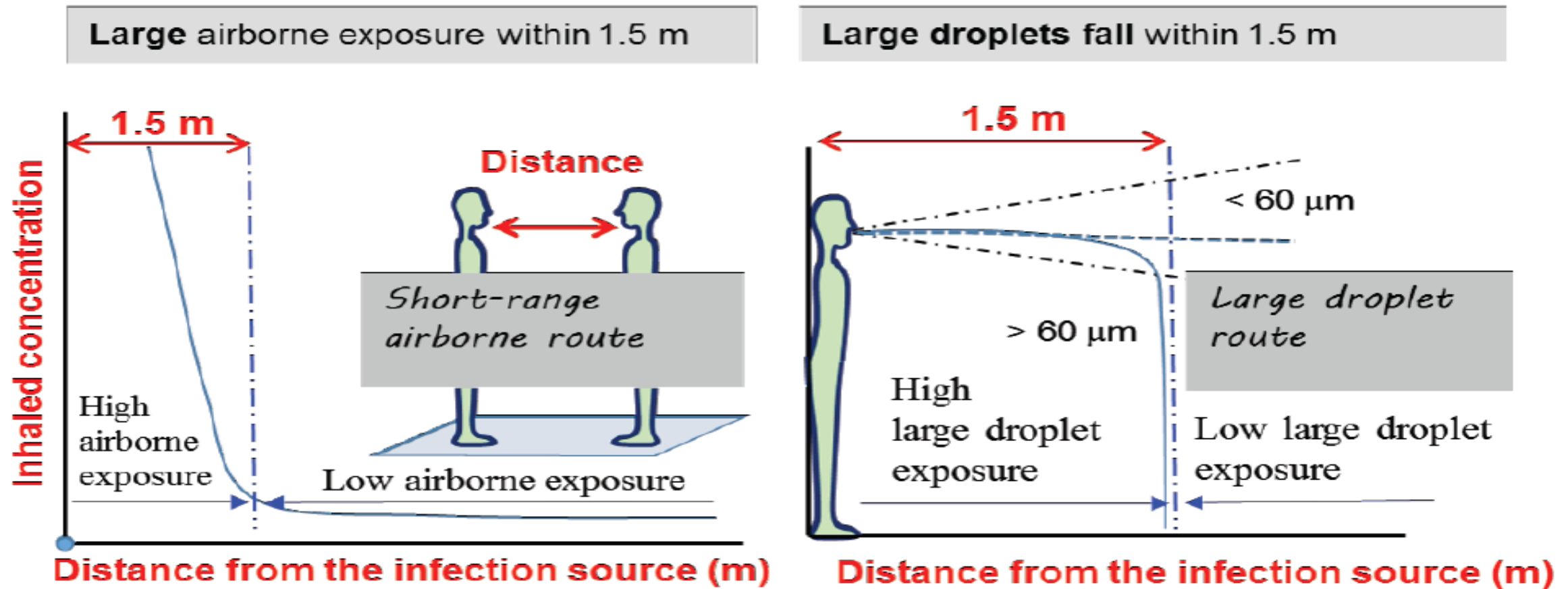


FIGURE 3-2 Comparison of exposure in short-range airborne route and large droplet route, showing highest concentrations of inhaled airborne and large droplet exposures within 1.5 meters.

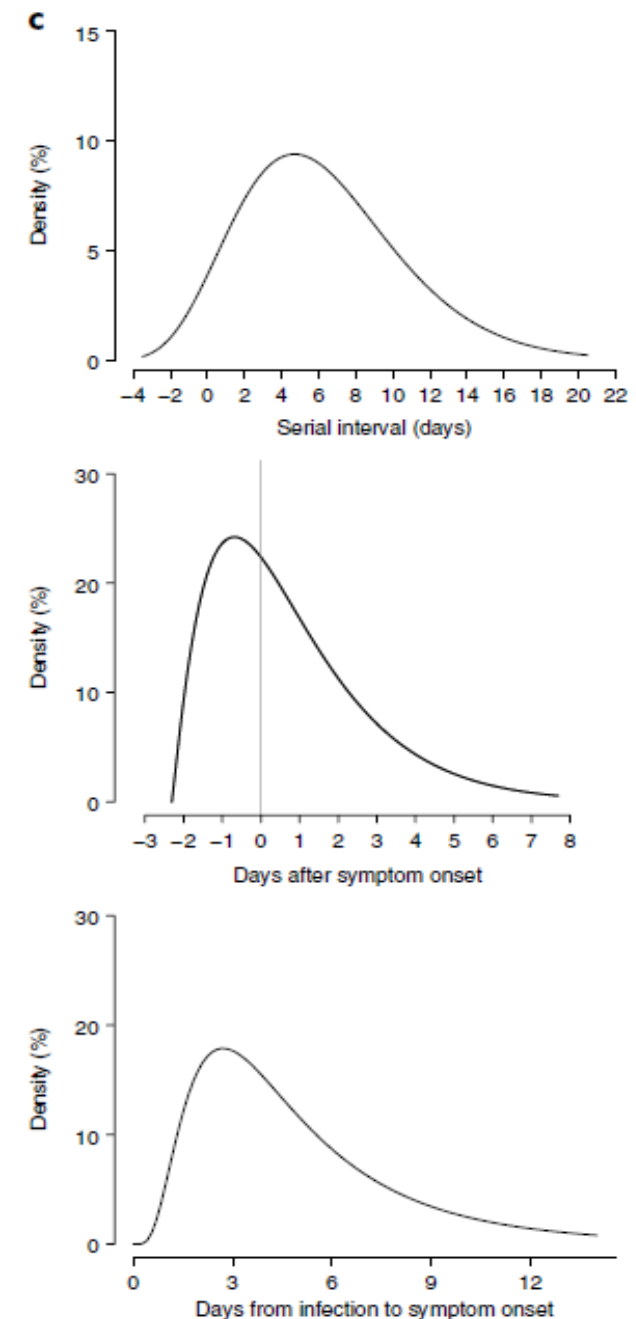
Symptomatic, pre-symptomatic and asymptomatic transmission

- **Symptomatic transmission**
 - Defined as: transmission of the virus from a person with symptoms compatible with COVID-19
 - evidence from COVID-19 affected countries indicates that symptomatic transmission is the major driver of transmission
 - supported by viral shedding data
- **Pre-symptomatic transmission**
 - Defined as: transmission of the virus from a person without symptoms at the time of transmission, but who goes on to develop symptoms compatible with COVID-19
 - evidence that those infected with COVID-19 virus may shed virus 1-2 days before onset of symptoms
 - has been documented in the context of contact tracing, but is unlikely to be major driver of transmission
- **Asymptomatic transmission**
 - Defined as: transmission of the virus from a person who has no symptoms at the time of testing and who does not go on to develop any signs/symptoms
 - Few reports of cases who are truly asymptomatic, and to date, there is no evidence of documented asymptomatic transmission.
 - This does not exclude the possibility that it may occur.
 - Will require data from population-based seroepidemiology investigations, which are underway

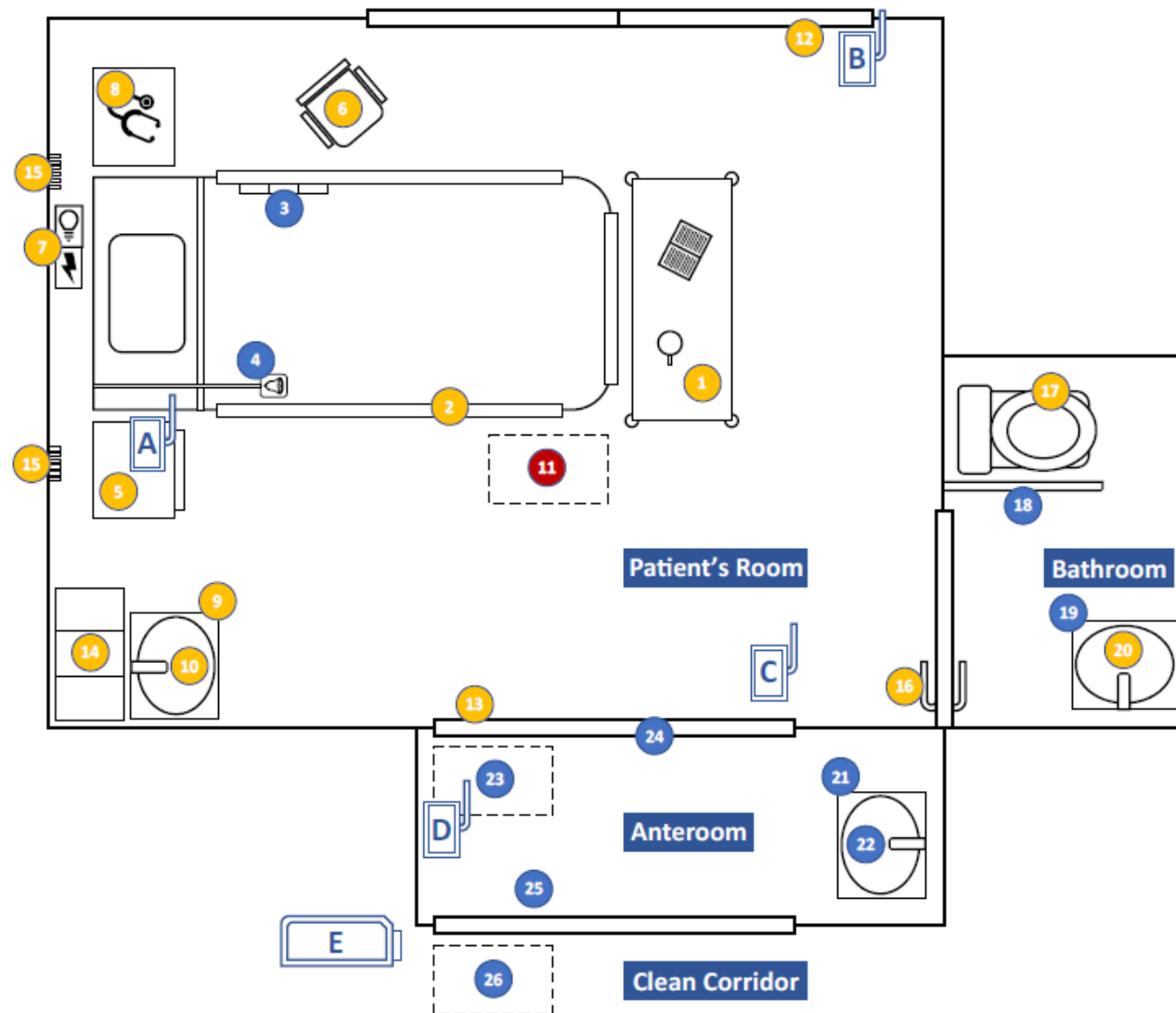
Temporal dynamics in viral shedding and transmissibility of COVID-19

Xi He^{1,3}, Eric H. Y. Lau^{2,3}✉, Peng Wu², Xilong Deng¹, Jian Wang¹, Xinxin Hao², Yiu Chung Lau², Jessica Y. Wong², Yujuan Guan¹, Xinghua Tan¹, Xiaoneng Mo¹, Yanqing Chen¹, Baolin Liao¹, Weilie Chen¹, Fengyu Hu¹, Qing Zhang¹, Mingqiu Zhong¹, Yanrong Wu¹, Lingzhai Zhao¹, Fuchun Zhang¹, Benjamin J. Cowling^{2,4}, Fang Li^{1,4} and Gabriel M. Leung^{2,4}

We report temporal patterns of viral shedding in 94 patients with laboratory-confirmed COVID-19 and modeled COVID-19 infectiousness profiles from a separate sample of 77 infector-infectee transmission pairs. We observed the highest viral load in throat swabs at the time of symptom onset, and inferred that infectiousness peaked on or before symptom onset. We estimated that 44% (95% confidence interval, 25-69%) of secondary cases were infected during the index cases' presymptomatic stage, in settings with substantial household clustering, active case finding and quarantine outside the home. Disease control measures should be adjusted to account for probable substantial presymptomatic transmission.



RESEARCH LETTER
Air, Surface Environmental,
and Personal Protective
Equipment Contamination
by Severe Acute Respiratory
Syndrome (SARS-CoV-2)
From a Symptomatic Patient
JAMA Published on line
March 4, 2020



Numbered labels correspond to environmental sampling sites listed in Table 2 in the article. Red circles indicate samples with strong positive results (low Ct value, ≤ 32). Yellow circles indicate samples with weak positive results (high Ct value, > 32). Blue circles indicate samples with no positive results. Blue icons labelled A to E indicate the position of the air samplers within the room (A to C), anteroom (D), and common corridor (E).

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BMJ Yale

THE PREPRINT SERVER FOR HEALTH SCIENCES

Transmission Potential of SARS-CoV-2 in Viral Shedding Observed at the University of Nebraska Medical Center

Joshua L. Santarpia, Danielle N. Rivera, Vicki Herrera, M. Jane Morwitzer, Hannah Creager, George W. Santarpia, Kevin K. Crown, David Brett-Major, Elizabeth Schnaubelt, M. Jana Broadhurst, James V. Lawler, St. Patrick Reid, John J. Lowe

doi: <https://doi.org/10.1101/2020.03.23.20039446>

This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.

<https://doi.org/10.1101/2020.03.23.20039446>

Percent positive by sample type

Sample	% Positive by PCR	N
Bedside Table	75%	24
Air Handling Grate	80%	5
Floor Under Bed	100%	5
Window Ledge	82%	24
Personal Items	81%	15
Phone	83%	18
Remote	65%	18
Toilet	81%	21
Air Samples	63%	19

Aerodynamic analysis of SARS-CoV-2 in two Wuhan hospitals

Received: 14 March 2020

Accepted: 20 April 2020

Accelerated Article Preview Published
online 27 April 2020Yuan Liu, Zhi Ning, Yu Chen, Ming Guo, Yingle Liu, Nirmal Kumar Gali, Li Sun, Yusen Duan,
Jing Cai, Dane Westerdahl, Xinjin Liu, Ke Xu, Kin-fai Ho, Haidong Kan, Qingyan Fu &
Ke Lan

Article

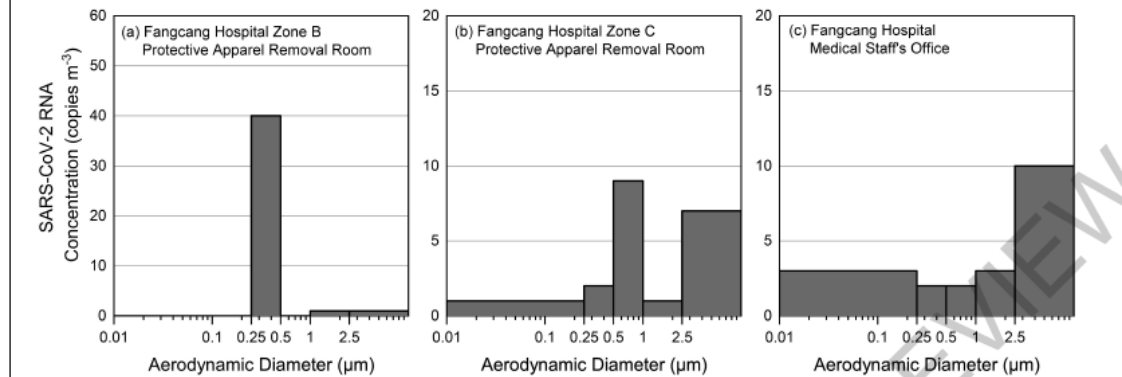


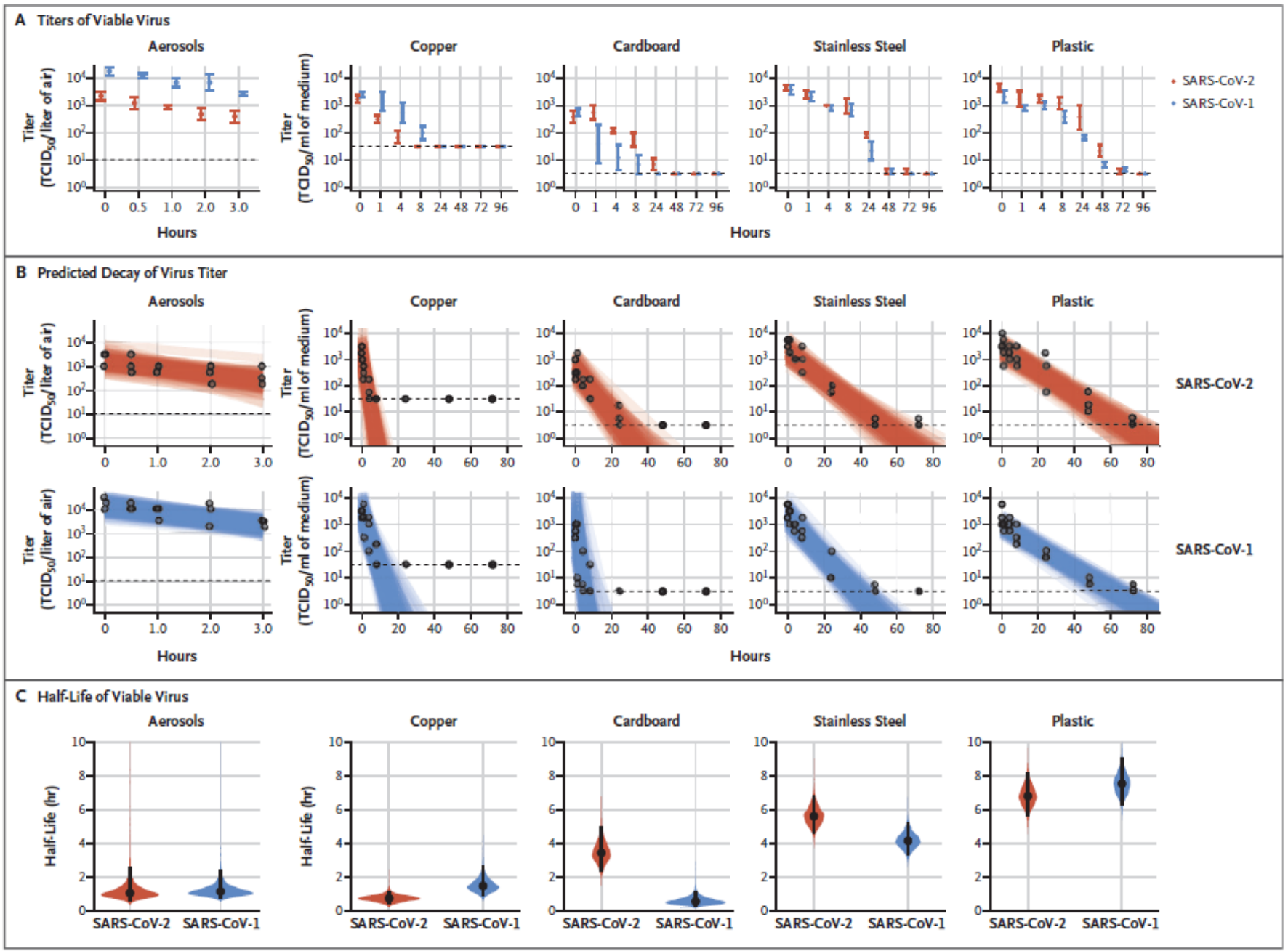
Fig. 1 | Concentration of airborne SARS-CoV-2 RNA in different aerosol size bins. The x-axis represents aerodynamic diameter in logarithmic scale to cover the multiple magnitude of measured aerosol diameter.

- Researchers in Wuhan measured SARS-CoV-2 RNA concentrations in aerosol samples taken from 30 sites inside two hospitals dedicated to treating COVID-19, as well as from several public areas. Among the findings:
- *Patient areas:* Viral RNA concentrations generally were very low or undetectable in patient areas (e.g., ICUs, coronary care unit), except in a patient mobile toilet room, which was not ventilated.
- *Medical staff areas:* Some sites — including rooms where personal protective equipment was removed — had high SARS-CoV-2 RNA levels; these levels became undetectable after better sanitization procedures were implemented.
- *Public areas:* Two areas that got a lot of foot traffic — the entrance to a department store and a site next to one of the hospitals — had high viral RNA concentrations.
- The researchers conclude: "Although we have not established the infectivity of the virus detected in these hospital areas, we propose that SARS-CoV-2 may have the potential to be transmitted via aerosols. Our results indicate that room ventilation, open space, sanitization of protective apparel, and proper use and disinfection of toilet areas can effectively limit the concentration of SARS-CoV-2 RNA in aerosols."

CORRESPONDENCE

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

Doremalen et al.
NEJM



Stability of SARS-CoV-2 in different environmental conditions

We previously reported the detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in different clinical samples.¹ This virus can be detected on different surfaces in a contaminated site.² Here, we report the stability of SARS-CoV-2 in different environmental conditions.

We first measured the stability of SARS-CoV-2 at different temperatures. SARS-CoV-2 in virus transport medium (final concentration ~6.8 log unit of

desired time-points were immediately soaked with 200 µL of virus transport medium for 30 mins to elute the virus. Therefore, this recovery of virus does not necessarily reflect the potential to pick up the virus from casual contact. No infectious virus could be recovered from printing and tissue papers after a 3-hour incubation, whereas no infectious virus could be detected from treated wood and cloth on day 2. By contrast, SARS-CoV-2 was more stable on smooth surfaces. No infectious virus could be detected from treated smooth surfaces on day 4 (glass and banknote) or day 7 (stainless steel and plastic). Strikingly, a detectable level of infectious virus could still be present

temperature (22°C). Additionally, we also found that SARS-CoV-2 is extremely stable in a wide range of pH values at room temperature (pH 3–10; appendix p 1). Overall, SARS-CoV-2 can be highly stable in a favourable environment,⁴ but it is also susceptible to standard disinfection methods.

This work was supported by National Institute of Allergy and Infectious Diseases, National Institutes of Health (contract HHSN272201400006C). LLMP was supported by the Croucher Foundation. We declare no competing interests.

Alex W H Chin, Julie T S Chu, Mahen R A Perera, Kenrie P Y Hui, Hui-Ling Yen, Michael C W Chan, Malik Peiris, *Leo L M Poon
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Published Online
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[https://doi.org/10.1016/S2666-5247\(20\)30003-3](https://doi.org/10.1016/S2666-5247(20)30003-3)

B) Surfaces*

Time	Virus titre (Log TCID ₅₀ /ml)									
	Paper		Tissue paper		Wood		Cloth		Glass	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
0 min	4.76	0.10	5.48	0.10	5.66	0.39	4.84	0.17	5.83	0.04
30 mins	2.18	0.05	2.19	0.17	3.84	0.39	2.84	0.24	5.81	0.27
3 hrs	U	-	U	-	3.41	0.26	2.21 [#]	-	5.14	0.05
6 hrs	U	-	U	-	2.47	0.23	2.25	0.08	5.06	0.31
1 day	U	-	U	-	2.07 [#]	-	2.07 [#]	-	3.48	0.37
2 days	U	-	U	-	U	-	U	-	2.44	0.19
4 days	U	-	U	-	U	-	U	-	U	-
7 days	U	-	U	-	U	-	U	-	U	-

Time	Banknote		Stainless steel		Plastic		Mask, inner layer		Mask, outer layer	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
	0 min	6.05	0.34	5.80	0.02	5.81	0.03	5.88	0.69	5.78
30 mins	5.83	0.29	5.23	0.05	5.83	0.04	5.84	0.18	5.75	0.08
3 hrs	4.77	0.07	5.09	0.04	5.33	0.22	5.24	0.08	5.11	0.29
6 hrs	4.04	0.29	5.24	0.08	4.68	0.10	5.01	0.50	4.97	0.51
1 day	3.29	0.60	4.85	0.20	3.89	0.33	4.21	0.08	4.73	0.05
2 days	2.47	0.23	4.44	0.20	2.76	0.10	3.16	0.07	4.20	0.07
4 days	U	-	3.26	0.10	2.27	0.09	2.47	0.28	3.71	0.50
7 days	U	-	U	-	U	-	U	-	2.79	0.46

Persistence of coronaviruses on inanimate surfaces and its inactivation with biocidal agents

- 22 studies reveals that human coronaviruses such as SARS coronavirus, MERS coronavirus or endemic HCoV can persist on inanimate surfaces (metal, glass, plastic for up to 9 days,
but
- can be efficiently inactivated by surface disinfection procedures with 62-71% ethanol, 0.5% hydrogen peroxide or 0.1% sodium hypochlorite within 1 minute. Other biocidal agents such as 0.05-0.2% benzalkonium chloride or 0.02% chlorhexidine digluconate are less effective.

Transmission Potential of SARS-CoV-2 in Viral Shedding Observed at the University of Nebraska Medical Center

Joshua L. Santarpia, Danielle N. Rivera, Vicki Herrera, M. Jane Morwitzer, Hannah Creager, George W. Santarpia, Kevin K. Crown, David Brett-Major, Elizabeth Schnaubelt, M. Jana Broadhurst, James V. Lawler, St. Patrick Reid, John J. Lowe

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Conclusions



Ubiquitous environmental contamination not linked to symptoms



PCR positive air samples outside of 6ft provides additional evidence of aerosol transmission

Does not establish particle size or distribution potential



Value of strategies for environmental disinfection

Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations

Scientific brief
29 March 2020



This version updates the 27 March publication by providing definitions of droplets by particle size and adding three relevant publications.

Modes of transmission of the COVID-19 virus

Respiratory infections can be transmitted through droplets of different sizes: when the droplet particles are $>5\text{-}10\ \mu\text{m}$ in diameter they are referred to as respiratory droplets, and when they are $\leq 5\ \mu\text{m}$ in diameter, they are referred to as droplet nuclei.¹ According to current evidence, COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes.²⁻⁷ In an analysis of 75,465 COVID-19 cases in China, airborne transmission was not reported.⁸

Droplet transmission occurs when a person is in close contact (within 1 m) with someone who has respiratory symptoms (e.g., coughing or sneezing) and is therefore at risk of having his/her mucosae (mouth and nose) or conjunctiva (eyes) exposed to potentially infective respiratory droplets. Transmission may also occur through fomites in the immediate environment around the infected person.⁸ Therefore, transmission of the COVID-19 virus can occur by direct contact with infected people and indirect contact with surfaces in the immediate environment or with objects used on the infected person (e.g., stethoscope or thermometer).

Airborne transmission is different from droplet transmission as it refers to the presence of microbes within droplet nuclei, which are generally considered to be particles $\leq 5\ \mu\text{m}$ in diameter, can remain in the air for long periods of time and be transmitted to others over distances greater than 1 m.

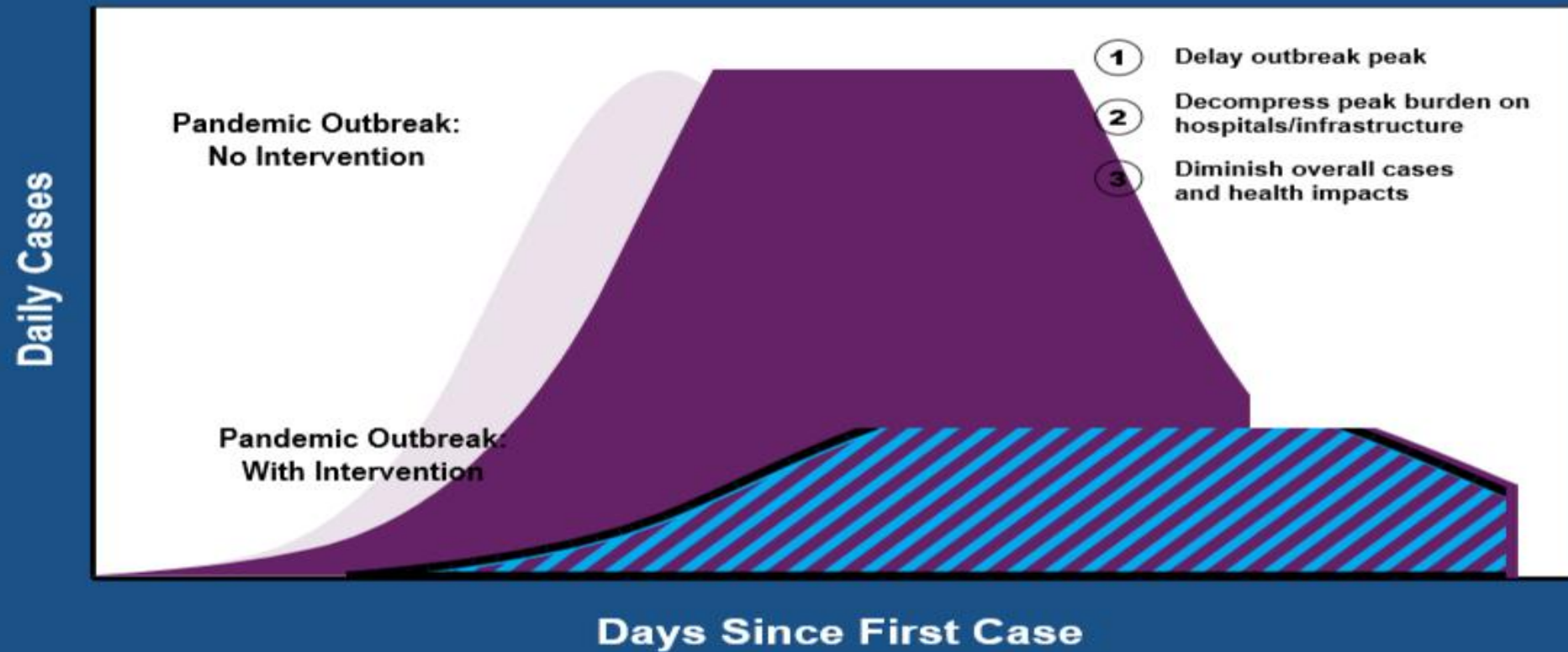
In the context of COVID-19, airborne transmission may be possible in specific circumstances and settings in which procedures or support treatments that generate aerosols are performed; i.e., endotracheal intubation, bronchoscopy, open suctioning, administration of nebulized treatment, manual ventilation before intubation, turning the patient to the prone position, disconnecting the patient from the ventilator, non-invasive positive-pressure ventilation, tracheostomy, and cardiopulmonary resuscitation.

There is some evidence that COVID-19 infection may lead to intestinal infection and be present in faeces. However, to date only one study has cultured the COVID-19 virus from a single stool specimen.⁹ There have been no reports of faecal–oral transmission of the COVID-19 virus to date.

Gli interventi di prevenzione e controllo a livello di popolazione

- **Distanziamento sociale**
- **Ventilazione**
- **Protezione respiratoria**
- **Igiene respiratoria**
- **Igiene delle mani**
- **Sanificazione e disinfezione degli ambienti e delle superfici, delle superfici high-touch inclusi i dispositivi elettronici.**
- **Contact tracing**
- **SOLO UNA STRATEGIA COMBINATA PUO' ESSERE EFFICACE!**

Goals of Community Mitigation



Gerarchia delle strategie di controllo

- **Interventi tecnici:**

- ventilazione, percorsi, riorganizzazioni strutturali, sanificazione

- **Interventi organizzativi e gestionali:**

- riconoscimento precoce dei casi sospetti (personale e utenti), analisi del rischio, organizzazione del lavoro, procedure, check list, formazione

- **Dispositivi di protezione individuale:**

- mascherine, guanti, tenuta di lavoro

Nonpharmaceutical Interventions (NPIs): “Personal Action”

COVID 19
CORONAVIRUS DISEASE
2019 (COVID-19)

Your hands carry germs you can't see

You can help prevent the spread of respiratory illnesses with these actions:

- Avoid close contact with people who are sick.
- Avoid touching your eyes, nose & mouth.
- Wash hands often with soap & water for at least 20 seconds.

www.cdc.gov/COVID19

Wash your hands
www.cdc.gov/handwashing



www.cdc.gov/handwashing

COVID: OGNI PROFESSIONISTA, OGNI GESTO CONTA



5 maggio giornata mondiale igiene delle mani



**azienda
ospedaliero
universitaria
pisana**



Che carenze ha evidenziato la comparsa di COVID?

- **La mancanza dei piani pandemici e di una pratica di preparedness per eventi di rischio biologico**
- **La carenza di una legislazione forte a livello nazionale sulle attività di prevenzione delle infezioni, coerente e omogenea a livello regionale**
- **La carenza di personale nell'area della Sanità Pubblica: sia nelle direzioni mediche di presidio che nei dipartimenti di prevenzione**
- **La mancanza di uno stock adeguato di DPI: mascherine, camici, guanti, gel idroalcolico....**
- **La mancanza di un training adeguato del personale alle procedure di isolamento, alle pratiche di vestizione e svestizione**
- **La perdita di competenze tecniche in ambito di disinfezione, pulizia, ventilazione**

Che problemi ha evidenziato la comparsa di COVID?

- **La pletera normativa, talvolta contraddittoria e posizioni dogmatiche**
- **La carenza delle risorse diagnostiche**
- **Il ritardo (la rinuncia?) nell'attivazione del contact tracing**
- **L'assenza di una tempestiva politica di gestione dell'epidemia sul territorio**
- **L'abbandono delle strutture residenziali assistenziali**
- **Un ruolo non sempre positivo della comunicazione multimediale: fake news, la passerella degli "esperti"....**

Ma abbiamo assistito anche a risposte positive!

- **La rapida istituzione della rete di sorveglianza**
- **La tempestiva riorganizzazione dei percorsi, degli spazi ospedalieri e dell'assistenza**
- **Una larga offerta formativa a distanza orientata alle diverse figure professionali sui canali multimediali**
- **La rapidissima comunicazione dei documenti di indirizzo prodotti ad hoc e dei risultati degli studi scientifici**
- **Il riorientamento immediato della ricerca traslazionale verso diagnostica, terapia, vaccino.....**



Istituto Superiore di Sanità

Rapporto ISS COVID-19 • n. 2/2020 Rev 2

**INDICAZIONI AD INTERIM
PER UN UTILIZZO RAZIONALE DELLE PROTEZIONI
PER INFEZIONE DA SARS-COV-2 NELLE ATTIVITÀ
SANITARIE E SOCIO SANITARIE (ASSISTENZA A
SOGGETTI AFFETTI DA COVID-19) NELL'ATTUALE
SCENARIO EMERGENZIALE SARS-COV-2**

Gruppo di Lavoro ISS Prevenzione e Controllo delle Infezioni

aggiornato al 5 maggio 2020

DPI/PPE	WHO	ECDC	US CDC	PHE	INMI
Mascherina "chirurgica"	X				
Filtrante facciale (FFP)	aerosol- generating procedures	X FFP2 or 3 FFP3 aerosol- generating procedures	X (N95)	X FFP3	X FFP2/3 PAPR aerosol- generating procedures ICU
Goggles	X	X	X	X	X
Schermo	X	X	X	X	
Camice lungo impermeabile		X		X	X
Camice lungo	X		X		
Grembiule impermeabile	X aerosol- generating procedures	Se camice non impermeabile			X aerosol- generating procedures ICU
Guanti	X	X	X		Doppio paio



Istituto Superiore di Sanità

Rapporto ISS COVID-19 • n. 4/2020 Rev.

**Indicazioni *ad interim*
per la prevenzione e il controllo
dell'infezione da SARS-COV-2
in strutture residenziali sociosanitarie**

Gruppo di Lavoro ISS Prevenzione e Controllo delle Infezioni

Versione del 17 aprile 2020



Istituto Superiore di Sanità

Rapporto ISS COVID-19 • n. 1/2020

**INDICAZIONI AD INTERIM
PER L'EFFETTUAZIONE DELL'ISOLAMENTO
E DELLA ASSISTENZA SANITARIA DOMICILIARE
NELL'ATTUALE CONTESTO COVID-19**

Gruppo di Lavoro ISS Prevenzione e Controllo delle Infezioni

aggiornato al 7 marzo 2020

QUALCHE ASPETTO CRITICO DEL PROCESSO DI PULIZIA E DISINFEZIONE

- **Che modalità di gestione? Interna, Appalto**
- **La gestione del personale *******
- **La sanificazione ambientale (superfici, ventilazione, ambiente idrico)**
 - **Dove: aree comuni, camere, dispositivi, aree diagnostiche, sale operatorie**
 - **Come: pulizia ad umido, dall'alto in basso, da più pulito a più sporco.....**
 - **Quando: gestione quotidiana, cambio del paziente, evento critico...**
 - **Con che prodotti? Detergenti E Disinfettanti**

Sparkling Surfaces: Know How, Know When

- Create a process for cleaning equipment and room surfaces
 - Following the same pattern every time makes it easier to ensure consistent cleaning
 - Clean high-touch surfaces at least once during each shift
- Build in time to wipe down/clean all equipment shared between residents

Don't let germs tag along for the ride



Sparkling Surfaces: Products and Practices

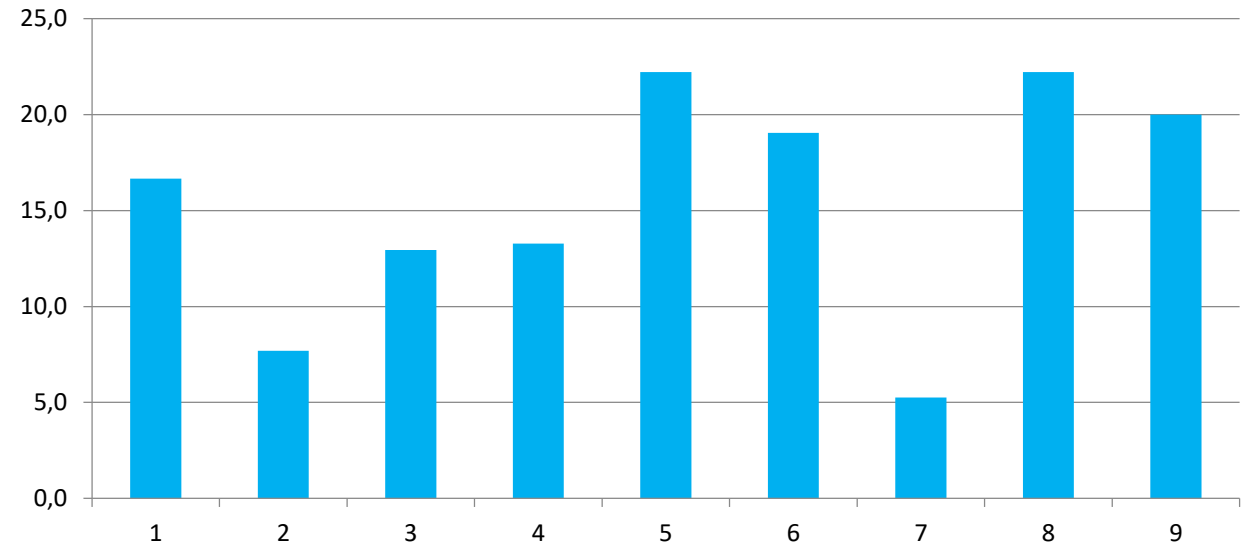
- Know which products should be used for each surface being cleaned
 - *Have them easily available when you need them*
- Know how to apply products
 - *Clean the surface first, and then apply the disinfectant*
 - *Many products need to remain on surfaces for several minutes to fully kill the germs (contact time)*
- Build surface cleaning into resident care workflow
 - *Wipe down the bedside table and call button before or after delivering meals*
 - *Wipe down the faucet and toilet rails after assisting a resident*



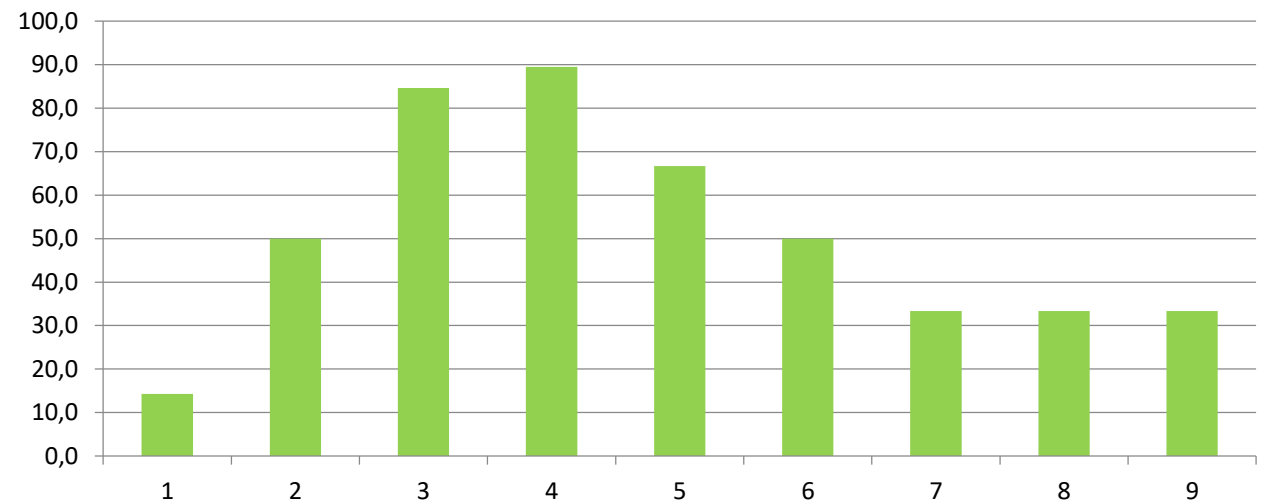
Nelle prime settimane si è avuta l'impressione che COVID-19 avesse causato la scomparsa delle altre ICA in ospedale, ma presto ci siamo dovuti ricredere:

COVID e infezioni da MDRO patogeni opportunisti, Il caso NDM

Andamento temporale della proporzione (%) di pazienti COVID con infezione/colonizzazione NDM per settimana epidemica.

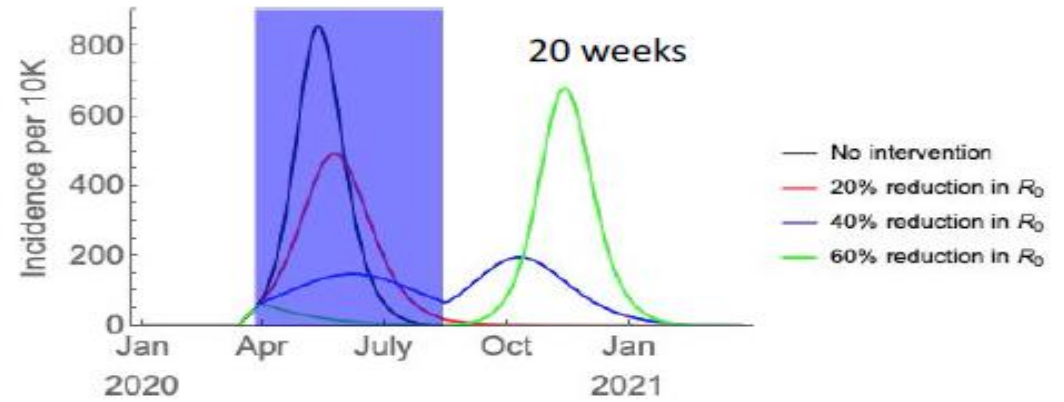
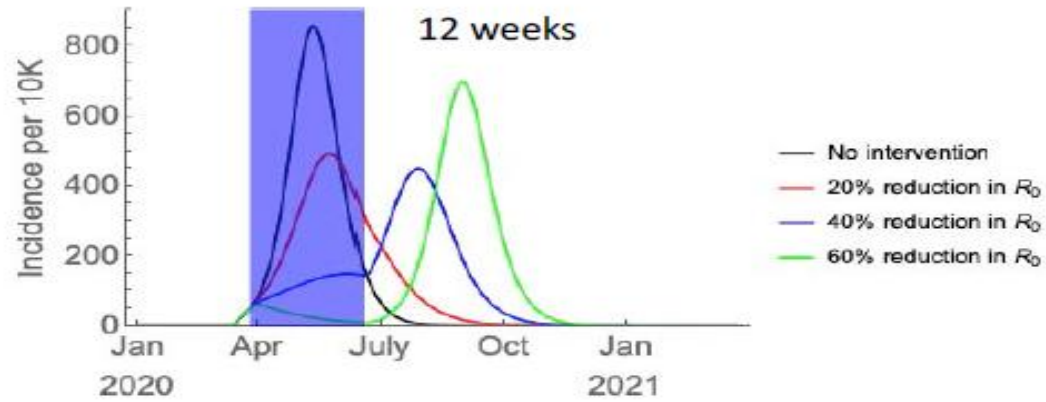
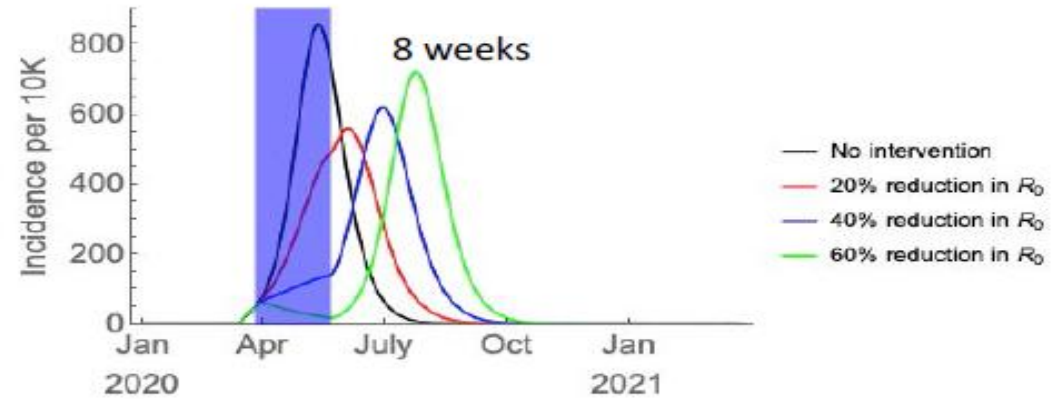
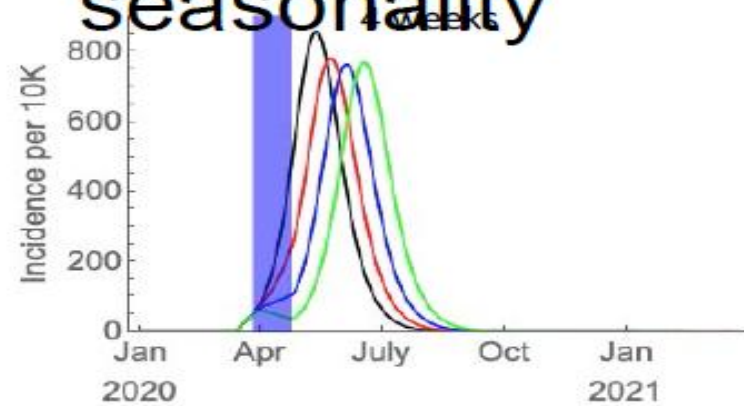


Andamento temporale della proporzione (%) di pazienti COVID tra i pazienti con infezione/colonizzazione NDM per settimana epidemica.



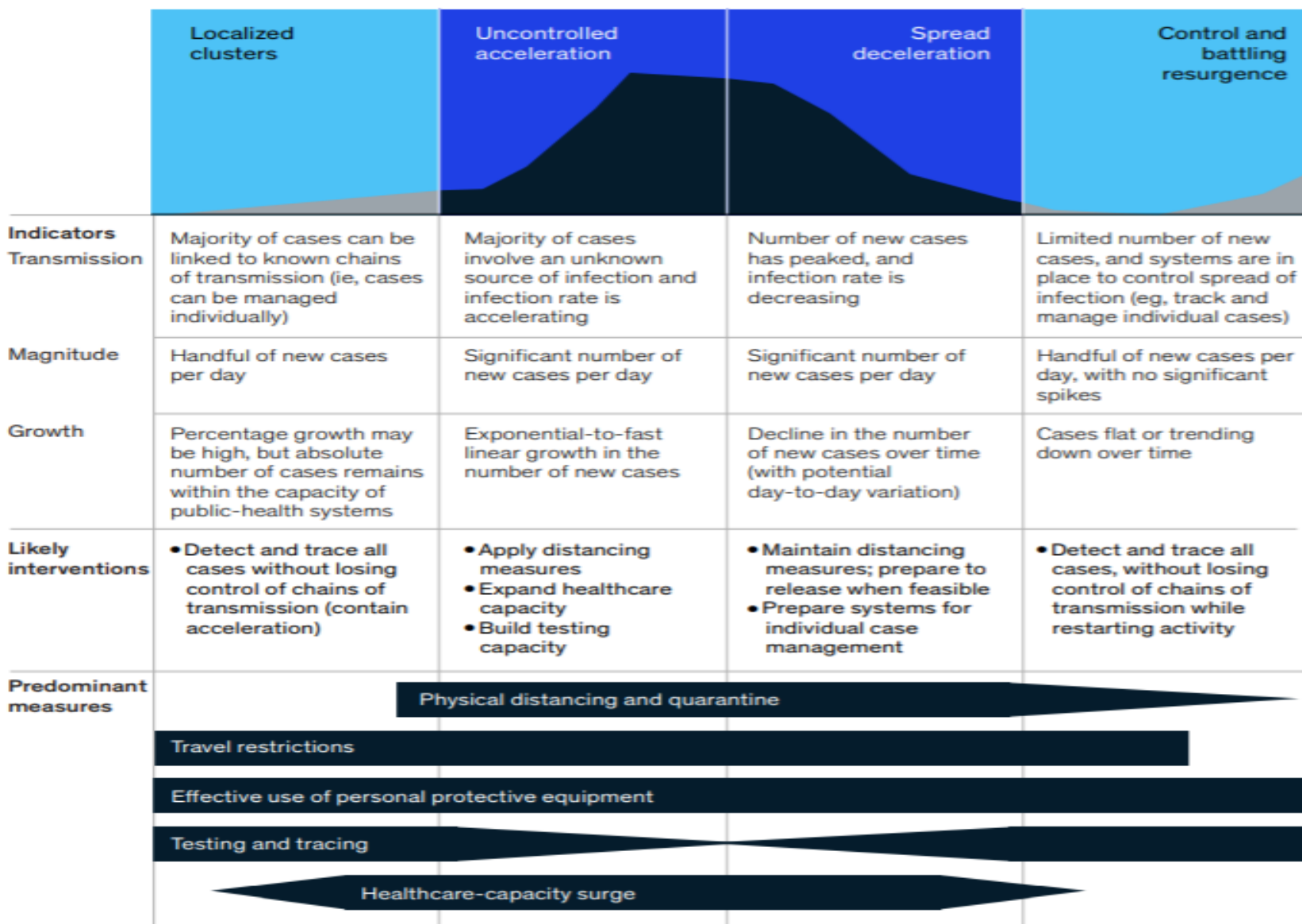
QUANDO FINIRA'?

Incidence for one-shot interventions w/out seasonality



Countries will base decisions about which measures to implement on local situations and the progression of the disease.

Disease progression by phase and response



Controllo infezioni e fase 2: non deve andare così!



Cogliere l'opportunità per valorizzare e rinforzare la
Prevenzione e il Controllo delle Infezioni

Le attività di prevenzione e controllo delle infezioni nella “nuova normalità” durante e dopo l’epidemia di COVID-19

- Non dimenticare per non ripetere gli errori del passato: abbandono dei piani pandemici, lentezza dei sistemi di alert e di reazione
- Rinforzare e stabilizzare il quadro normativo
- Mai abbandonare i basics: igiene delle mani, misure di precauzione, igiene
- Presidiare tutti i contesti: ospedale, continuità assistenziale, RSA, cure primarie
- Dedicare risorse umane e materiali, implementando anche le **nuove tecnologie**: apps, telemedicina....
- Rinforzare gli organici, ricordando che l’IPC è una definita professionalità che richiede **formazione medica, infermieristica e di altre professioni sanitarie** pur mantenendo un approccio multiprofessionale.
- Mantenere e rinnovare le competenze attraverso la formazione

Grazie per l'attenzione