



# LE FRATTURE VERTEBRALI NELL'ANZIANO

## INTRODUZIONE

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ASUFC - Presidio Ospedaliero Universitario  
Santa Maria della Misericordia di Udine

**Udine, 9 Novembre 2020**



 REGIONE AUTONOMA FRIULI VENEZIA GIULIA

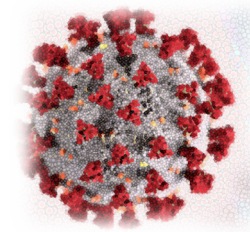
# PREVENZIONE E CONTROLLO DELL'INFEZIONE DA Sars-Cov-2

In tutti i casi va posta la massima attenzione nella gestione della diffusione del COVID-19, ancor più se si tratta di **persone fragili e anziane**.



**Catalyst**

| Innovations in Care Delivery



ARTICLE

# **At the Epicenter of the Covid-19 Pandemic and Humanitarian Crises in Italy: Changing Perspectives on Preparation and Mitigation**

Mirco Nacoti, MD, Andrea Ciocca, MEng, Angelo Giupponi, MD, Pietro Brambillasca, MD, Federico Lussana, MD, Michele Pisano, MD, Giuseppe Goisis, PhD, Daniele Bonacina, MD, Francesco Fazzi, MD, Richard Naspro, MD, Luca Longhi, MD, Maurizio Cereda, MD, Carlo Montaguti, MD

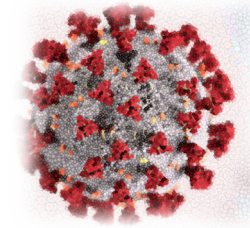
Vol. No. | March 21, 2020

DOI: 10.1056/CAT.20.0080



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AROUND THE WORLD: Lockdowns return to Europe +



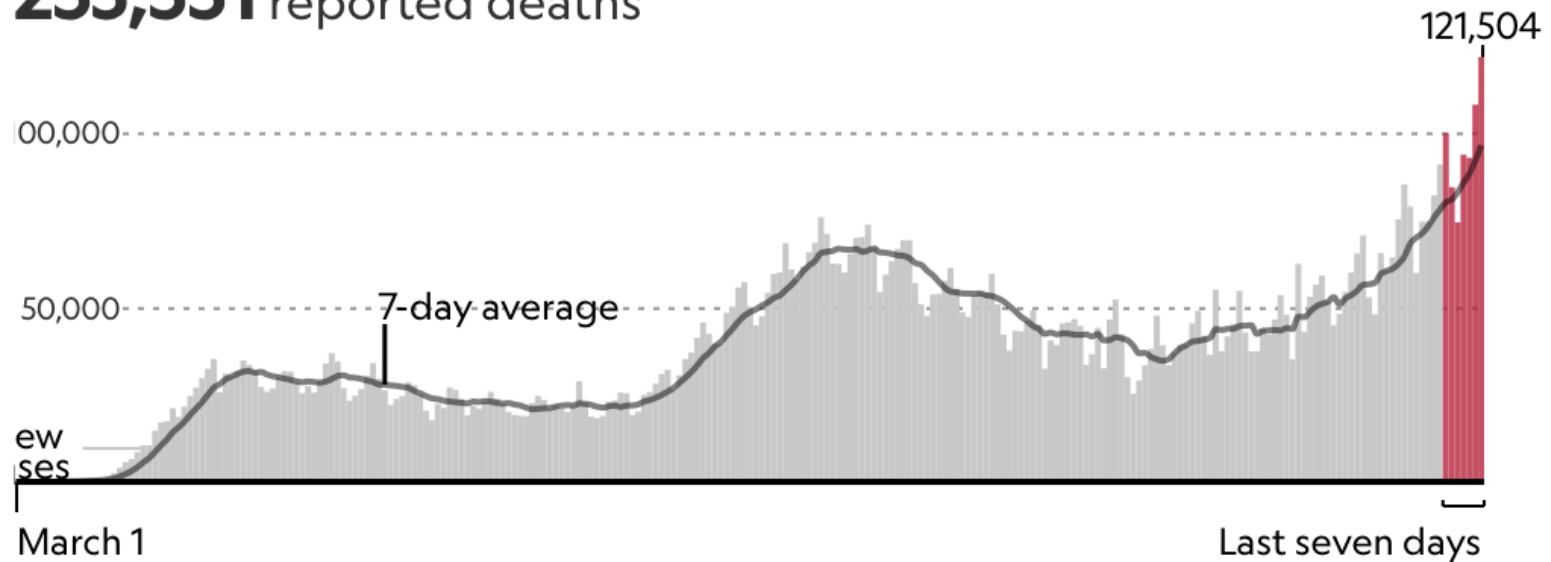
PHOTOGRAPH BY CHUNG SUN-JUN, GETTY IMAGES

UPDATED NOV. 6, 2020, 9:38 A.M. E.T.

## New daily confirmed coronavirus cases in the U.S.

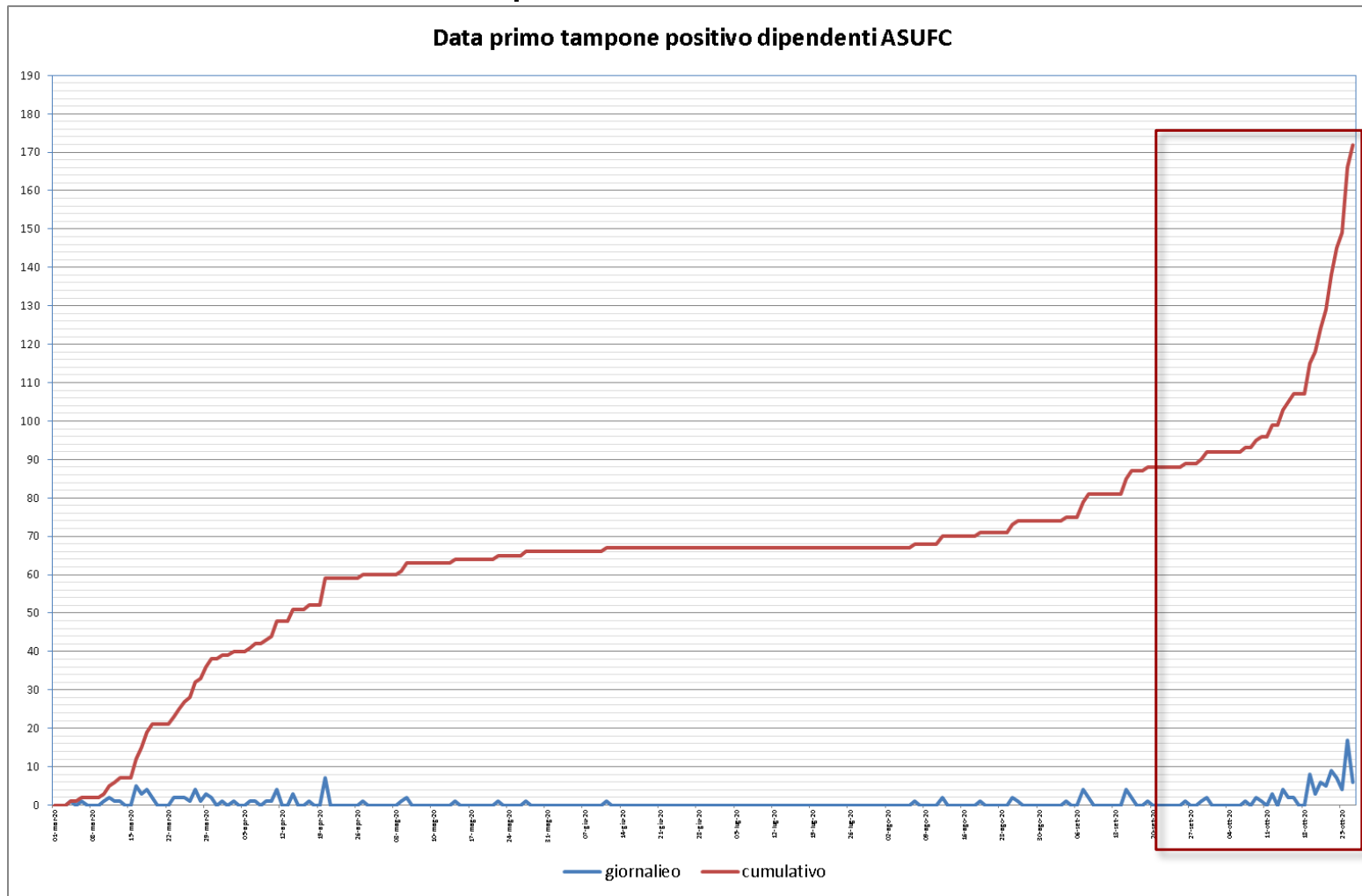
**9,698,098** total cases

**235,331** reported deaths





# Positività operatori sanitari ASUFC



Tamponi totali:  
62710

29 ottobre 2020

# REGOLE DA RISPETTARE

- Indossare le mascherine
- Mantenere le distanze
- Lavare - igienizzare le mani





➤ Indossare le mascherine


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## Wearing face masks in the community during the COVID-19 pandemic: altruism and solidarity

Published Online April 16, 2020 [https://doi.org/10.1016/S0140-6736\(20\)30918-1](https://doi.org/10.1016/S0140-6736(20)30918-1)

**WHO had not yet recommended mass use of masks** for healthy individuals in the community (mass masking) as a way to prevent infection with severe acute respiratory syndrome coronavirus.

People often wear masks to protect themselves, but we suggest a stronger public health rationale is source control to protect others from respiratory droplets. This approach is **important because of possible asymptomatic transmissions** of SARS-CoV-2.



Dismissing a **low-cost** intervention such as mass masking as ineffective because there is no evidence of effectiveness in clinical trials is in our view potentially harmful.

Another concern is the **shortage** of mask supply in the community.

Medical masks must be reserved for health-care workers. Yet to control the infection source rather than to self-protect, we believe that cloth masks, are likely to be adequate, especially if everyone wears a mask.

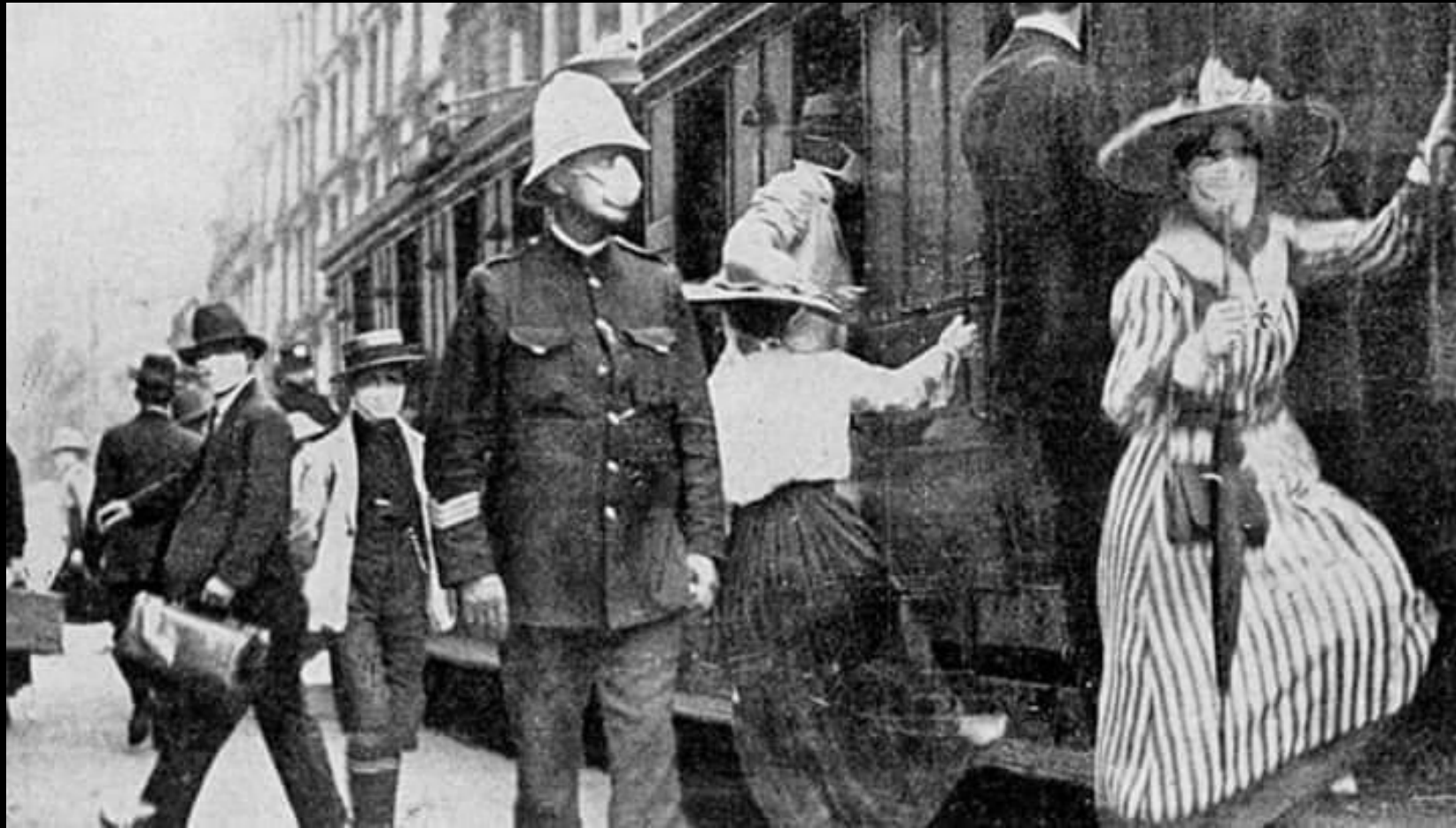
**Cloth masks** can be easily manufactured or made at home and reused after washing. Authorities also worry about correct techniques for wearing, removal, and disposal of face masks, but these **techniques could be learned through public education.**





**Mass masking** for source control is in our view a useful and low-cost adjunct to **social distancing** and **hand hygiene** during the COVID-19 pandemic.

This measure shifts the focus from self-protection to altruism, actively involves every citizen, and is a symbol of **social solidarity in the global response to the pandemic.**



1918



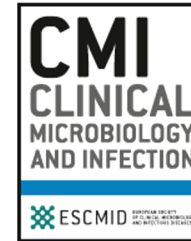
1918



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## Clinical Microbiology and Infection

journal homepage: [www.clinicalmicrobiologyandinfection.com](http://www.clinicalmicrobiologyandinfection.com)



Research Note

### Overall decrease in SARS-CoV-2 viral load and reduction in clinical burden: the experience of a hospital in northern Italy

Chiara Piubelli <sup>1</sup>, Michela Deiana <sup>1</sup>, Elena Pomari <sup>1</sup>, Ronaldo Silva <sup>1</sup>, Zeno Bisoffi <sup>1,2</sup>,  
Fabio Formenti <sup>1</sup>, Francesca Perandin <sup>1</sup>, Federico Gobbi <sup>1</sup>, Dora Buonfrate <sup>1,\*</sup>

<sup>1</sup>) Department of Infectious and Tropical Diseases and Microbiology, IRCCS Sacro Cuore Don Calabria Hospital, Negrar di Valpolicella, 37024 Verona, Italy

<sup>2</sup>) Department of Diagnostics and Public Health, University of Verona, 37134 Verona, Italy

**Conclusions:** We observed a **reduction** over time in the proportion of **patients with COVID-19 requiring intensive care**, along with decreasing median values of viral load. As the epidemiological context changes from high-to low-transmission settings, **people are presumably exposed to a lower viral load** which has been previously associated with less severe clinical manifestations.



*The* NEW ENGLAND JOURNAL *of* MEDICINE

## Perspective

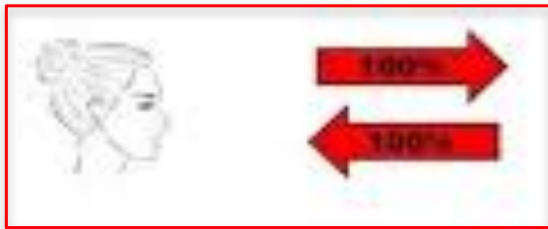
### **Facial Masking for Covid-19 — Potential for “Variolation” as We Await a Vaccine**

Monica Gandhi, M.D., M.P.H., and George W. Rutherford, M.D.

**A**s SARS-CoV-2 continues its global spread, it’s possible that one of the pillars of Covid-19 pandemic control — universal facial masking — might help reduce the severity of disease

Published on September 8, 2020, at NEJM.org. DOI:  
10.1056/NEJMp2026913

Senza protezione



Mascherina chirurgica



Con valvola...  
ATTENZIONE!!!

## RIEPILOGO PROTEZIONE MASCHERINE

Tratta la **MASCHERINA**  
come trattile **MUTANDE**



NON SCAMBIARLA CON  
QUELLA DEGLI ALTRI.

METTINE OGNI GIORNO  
UNA PULITA.

FALLA ADERIRE BENE,  
MA NON STRINGERE.

NON INDOSSARLA AL  
CONTRARIO.

ASSICURATI CHE COPRA  
CIO' CHE DEVE COPRIRE.

EVITA DI TOCCARLA SE  
NON C'E' BISOGNO.

E, SOPRATTUTTO, SE LA VUOI ABBASSARE  
FALLO IN UN POSTO NON TROPPO  
AFFOLLATO!!!





- **Mantenere le distanze**



# LA DISTANCIATION SOCIALE DES EFFETS PUISSANTS

leem

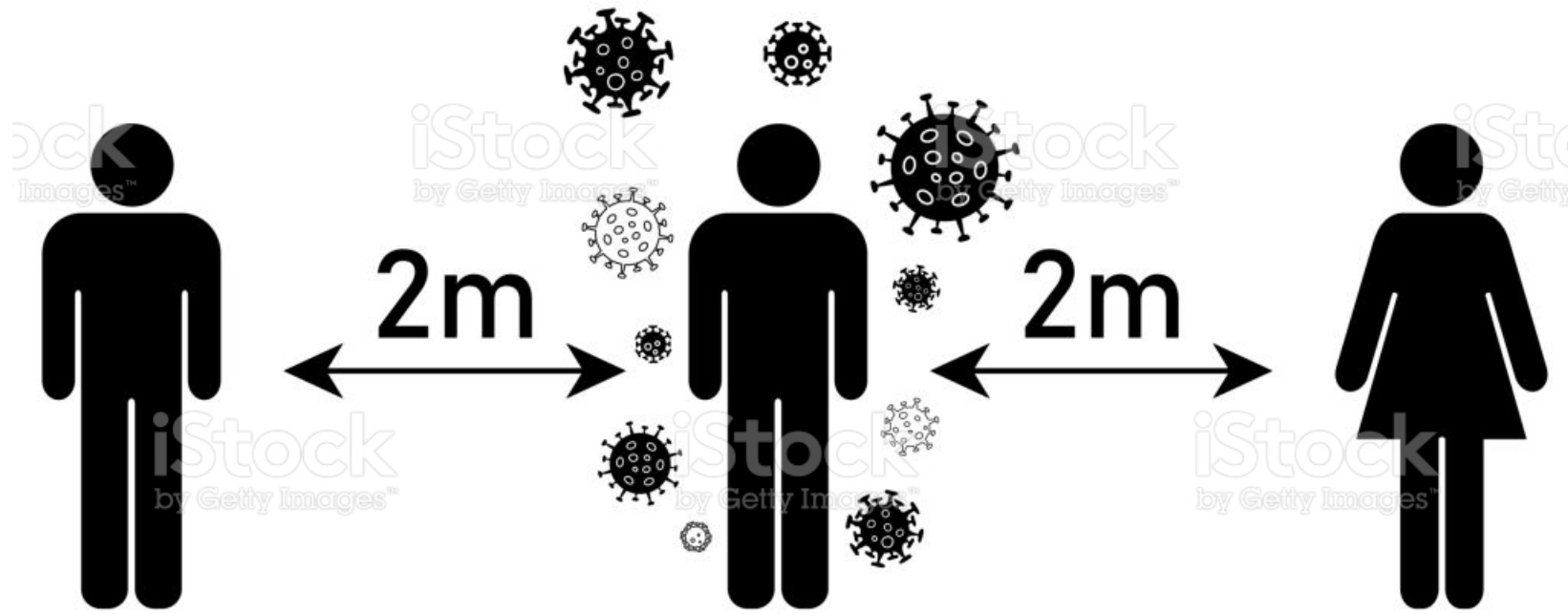


## AVEC UNE EXPOSITION DIMINUÉE DE 50%



## AVEC UNE EXPOSITION DIMINUÉE DE 75%

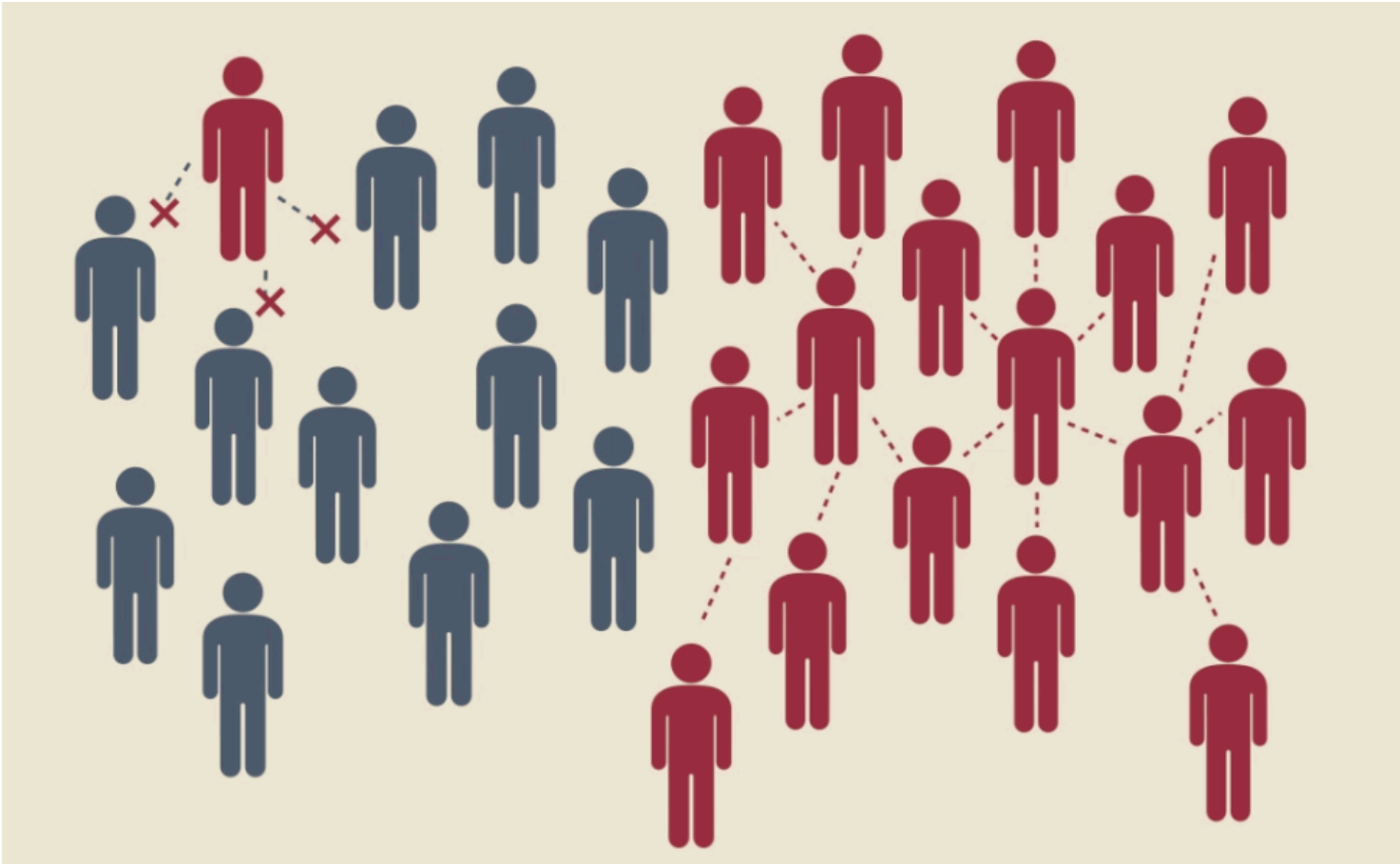




**SOCIAL DISTANCING CAN HELP REDUCE  
THE SPREAD OF AN INFECTIOUS DISEASE**



1215021562

# I superdiffusori



persone che, per  
vari motivi,  
trasmettono il  
virus a più di altre  
sei

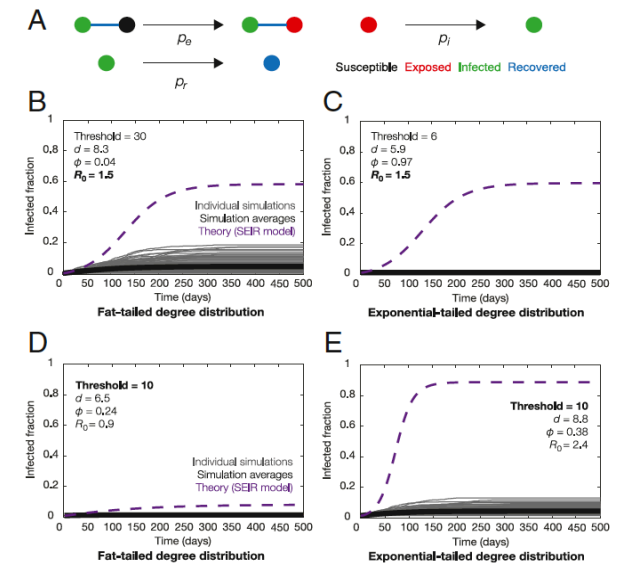
# Evidence that coronavirus superspreading is fat-tailed

Felix Wong<sup>a,b,c</sup>  and James J. Collins<sup>a,b,c,d,1</sup> 

<sup>a</sup>Institute for Medical Engineering and Science, Massachusetts Institute of Technology, Cambridge, MA 02139; <sup>b</sup>Department of Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139; <sup>c</sup>Infectious Disease and Microbiome Program, Broad Institute of MIT and Harvard, Cambridge, MA 02142; and <sup>d</sup>Wyss Institute for Biologically Inspired Engineering, Harvard University, Boston, MA 02115

Edited by Simon A. Levin, Princeton University, Princeton, NJ, and approved September 28, 2020 (received for review September 1, 2020)

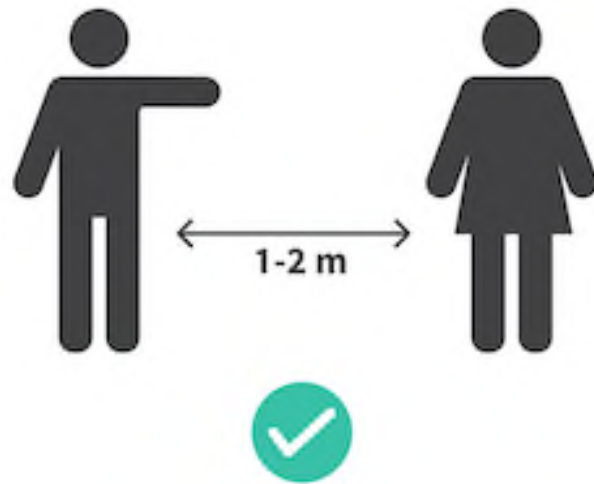
I risultati suggeriscono che **prevenire eventi di super diffusione** potrebbe avere un impatto significativo sulla trasmissione complessiva di Covid-19, e che sarebbe opportuno **limitare la possibilità di interagire con più di 10 persone alla volta**.



**Fig. 2.** Forward modeling of intervention strategies. (A) State transitions in a fine-grained network model of disease transmission. (B–E) Predicted total infected fraction for an intervention strategy that isolates a fraction  $\phi$  of all individuals, namely those with degree greater than the threshold number, and yielding decreased mean connectivity of  $d$  and effective basic reproduction number of  $R_0$ . Here,  $R_0$  depends on the coefficient of variation of the degree distribution, as detailed in [Dataset S3](#). Trajectories from 100 simulations for BA random graphs (B and D) and WS random graphs (C and E) and their averages are shown, compared to the theoretical predictions for a well-mixed model.



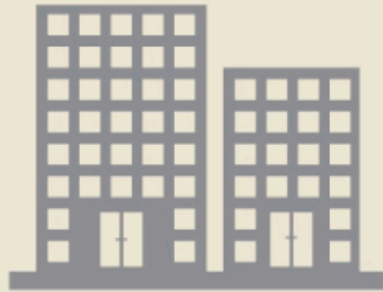
RISPETTARE IL  
DISTANZIAMENTO



EVITARE  
ASSEMBRAMENTI



Just one person can lead to a burst of new cases,  
in what is called a **superspreading event**.



Nel posto sbagliato...al chiuso



Nel momento sbagliato... massima infettività



Facendo la cosa sbagliata... cantare



For example, one person attending an indoor choir practice in Washington state in March **infected at least 32 others.** Two died.



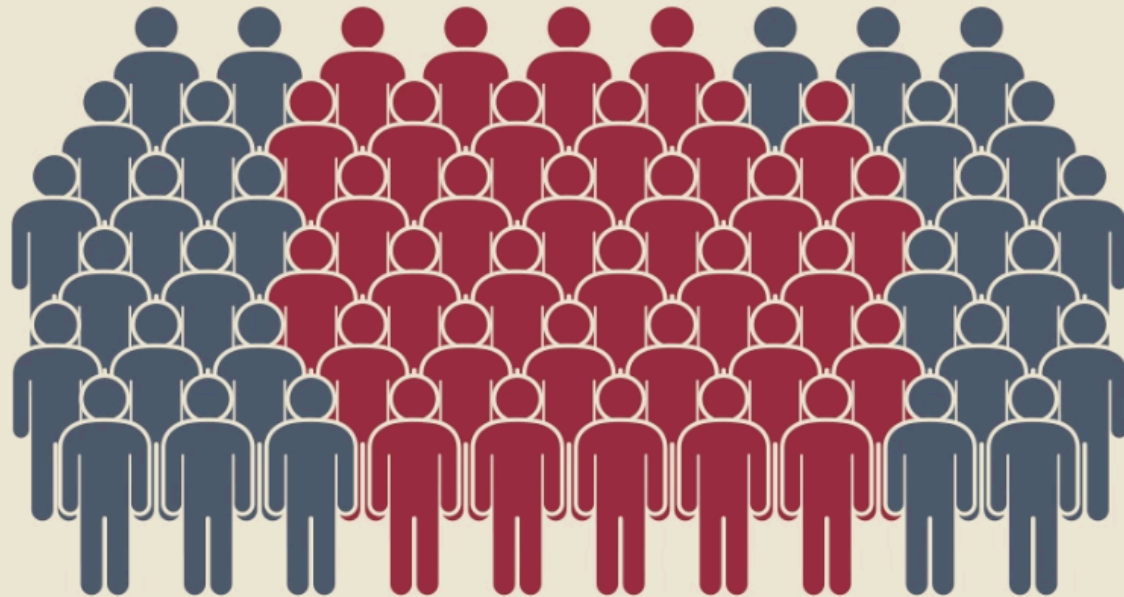




For example, one person attending an indoor choir practice in Washington state in March **infected at least 32 others.** Two died.



**Many experts worry that we will see more superspreading events as people shift indoors in colder months.**



## POEMs Research Summaries

Your Daily Update for the Latest Patient Oriented Evidence that Matters

### **COVID-19 research briefs: Using public transportation or socializing in food/beverage outlets increases rates of infection**

#### **Clinical Question**

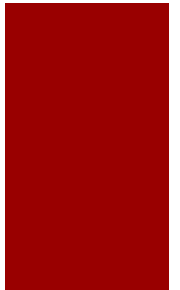
Which factors increase the risk of transmission of SARS-CoV-2?

#### **Bottom Line**

There was significant SARS-CoV-2 transmission among bus riders in China. People who have dined at a restaurant or visited a bar or coffee shop are more likely to have COVID-19. ([LOE = 2c](#))

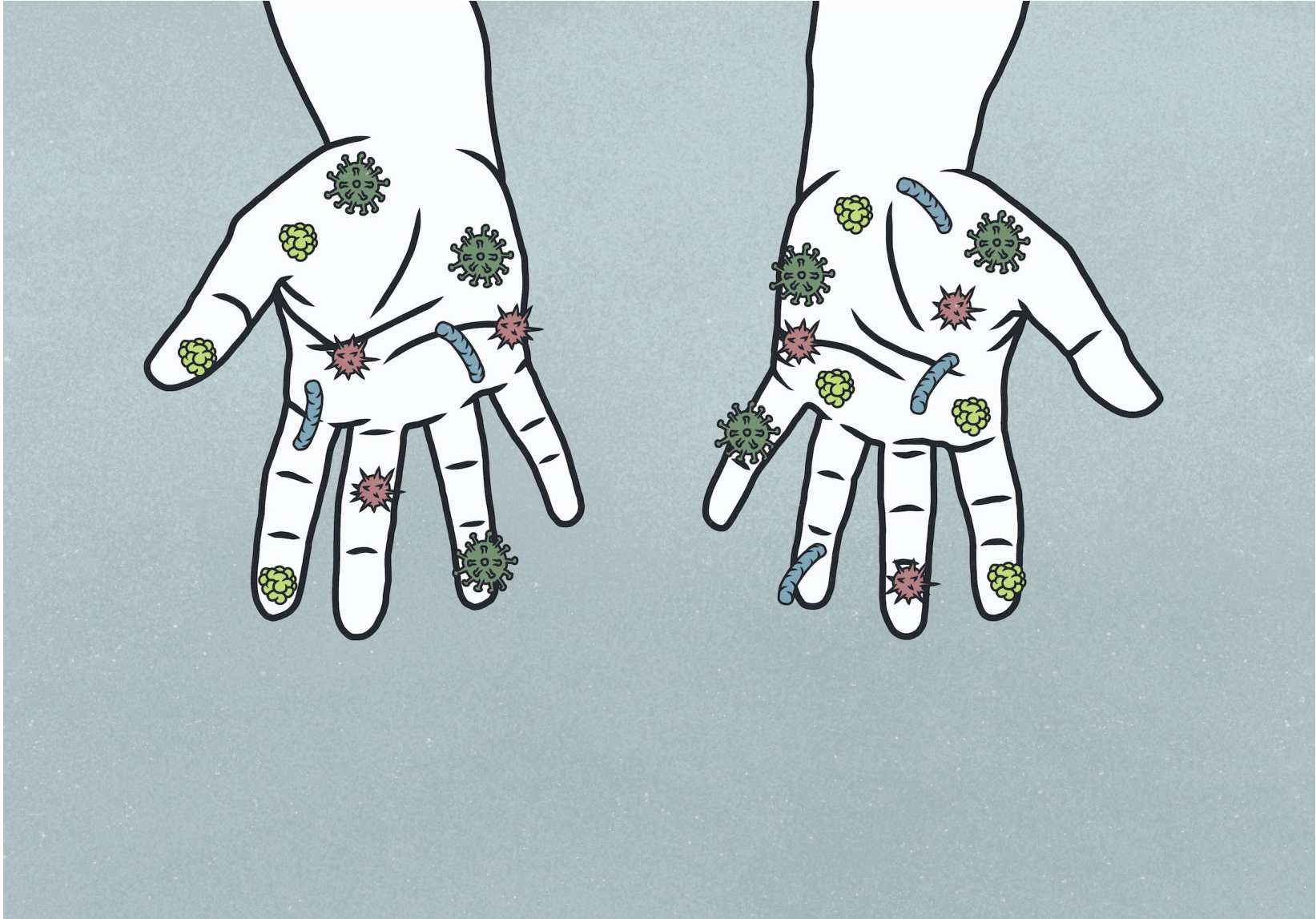
#### **Reference**

[Shen Y, Li C, Dong H, et al. Community outbreak investigation of SARS-CoV-2 transmission among bus riders in eastern China. JAMA Intern Med. Published online September 01, 2020. doi:10.1001/jamainternmed.2020.5225.](#)





- Lavare - igienizzare le mani



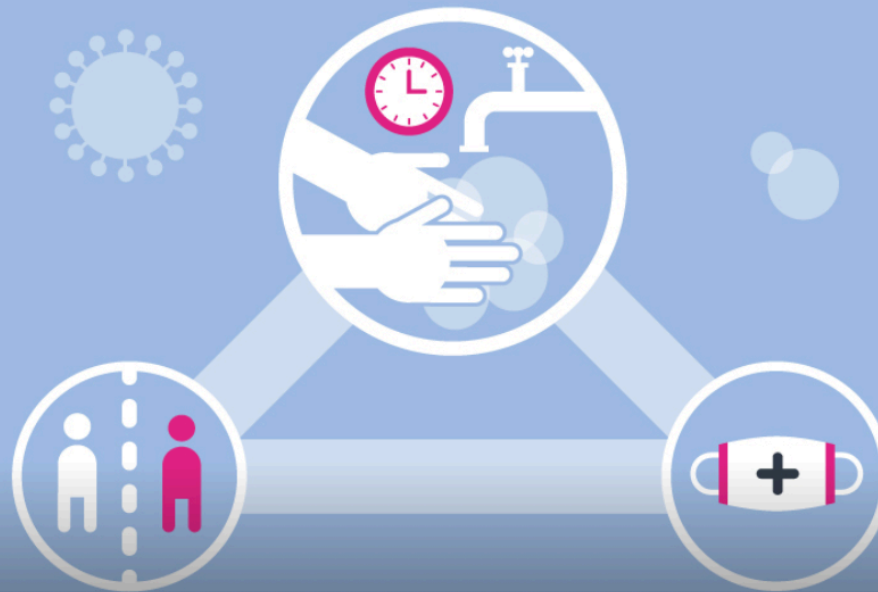
CORONAVIRUS  
COVID-19

5 MAGGIO 2020

Giornata mondiale per il lavaggio mani

# NON ABBASSARE LA GUARDIA, LAVATI LE MANI

Mantieni la distanza di sicurezza di 1,8 mt e usa la mascherina





## **Letter: Strategies for Prevention and Control of 2019 Novel Coronavirus Infection Among Medical Staff**

To the Editor:

Since December 2019, the outbreak of the novel coronavirus SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) that originated in Wuhan, Hubei province has spread rapidly across China. Many hospitals in Wuhan are the epicenter of the outbreak. The first 14 staff members who were infected with SARS-Cov-2 were from our department. All of them recovered. In such an urgent and unexpected situation, our department began immediate and effective prevention and control strategies to stop the spread of the epidemic in the department. We believe that clinical departments, especially those related to non-infectious diseases in geographic areas of high risk for virus transmission, should take appropriate management and control measures to improve safety during this epidemic. For this purpose, we summarize and share our experiences which should help medical staff prepare in advance for a similar situation. These include the characteristics of SARS-Cov-2 infection, principles of prevention and control of infection, management of infected patients, and epidemic prevention in the outpatient department, ward, operating room, and medical staff.

Xuan Wang, MD\*

Min-Jie Wang, MD\*

Xiao-Bing Jiang, PhD

Hai-Jun Wang, MD

Hong-Yang Zhao, PhD

*Department of Neurosurgery*

*Union Hospital, Tongji Medical College Huazhong*

## Prevention and Control Strategies in the Neurosurgery Ward

- Thorough **cleaning and disinfection** is essential after contact with each **patient**. Hands must be carefully washed for 2 to 3 min with disinfectant (75% ethanol or chlorine containing disinfectant).
- As far as practicable, **the medical staff should remain 1.5 to 2 meters away from the patient during diagnosis and treatment**, and **time of contact should be minimized**. If an atomizer, **stethoscope**, or **other examination instrument** must be used, the medical personnel should avoid contact with patients' secretions, especially for patients with trachea intubation or tracheotomy. Medical personnel should note the color of phlegm when suctioning sputum, avoid the airway opening as much as possible, and **wear a protective mask**. Body fluids, secretions, excreta, and used articles collected from confirmed and suspected patients should be regarded as **biological pollutants, and treated as clinical waste at the highest biosafety level**.
- **Testing throat swabs for nucleic acid is important for diagnosing COVID-19 infection**. However, the sampling process poses great risk to the healthcare worker. ... level III protection measures.

## Ward Management and Disinfection and Sterilization

- Inpatients and accompanying persons should be instructed and required to wear **masks** in the ward. Warnings should be posted at the entrance of the ward, and **information** regarding protection against infection should be promoted and disseminated to **increase public knowledge**. Accompanying persons should **not be permitted to take the inpatients outside the hospital** without permission, or visit other wards or congregate.
- All wards should institute a **layered management system**, with the wards strictly divided into **3 levels** according to risk:

1. **common** ward,
2. isolation ward **for suspected** patients *(la nostra area grigia)*
3. single **isolation for the diagnosed** patient *(la strategia del nostro ospedale è quella di riunire tutti i pazienti positivi, qualunque patologia abbiano e far afferire gli specialisti)*

Free movement of persons among the 3 ward levels should be strictly limited to avoid cross contamination. Each level should deliver its own medical treatment.





## Prevention and Control Strategies for Medical Staff in Operating Rooms

- For patients undergoing **elective** neurosurgery, stepwise **preoperative screening** for COVID-19 should be conducted based on the diagnostic criteria. **The surgery should be performed only after no abnormality is detected.** Due to the long incubation period, medical staff should take level II protection measures (Table 1).
- In principle, no elective surgery should be scheduled for patients with suspected or confirmed COVID-19. **If emergency** craniotomy is needed, the medical staff must take the following **level III precautions.**



## Prevention and Control Strategies for Medical Staff in Operating Rooms

- **Level III precautions:**

- strictly wearing disinfected first-layer work clothes (hospital scrubs) and additional gown with hood;
- double latex gloves;
- 2 layers of cap;
- goggles and other facial protection tools;
- medical protective masks (N95).

- **After surgery**, medical staff must use **quick-drying hand disinfectant before and after removing** protective clothing, after taking off goggles and hat, after removing the inner gloves, and again after removing masks before donning new masks and immediately leaving the operating room.

# PERCHE' questo corso ora?

Siamo in mezzo ad una seconda ondata COVID...

... ma non vogliamo subire e questo è il nostro modo di reagire: sostenere e promuovere la conoscenza.

# PERCHE' questo corso ora?

E' stato organizzato a distanza adattandoci ad una nuova situazione di pandemia che ha cambiato il nostro modo di vivere, di lavorare, di studiare.

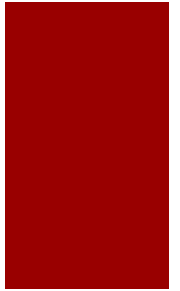
Auspichiamo sia una adattamento temporaneo e che si ritorni al mondo pre-COVID...



**“Dobbiamo far di tutto per vivere secondo la parte più nobile che è in noi [l'intelletto] e l'insegnamento-apprendimento è perciò l'attività principale.”**

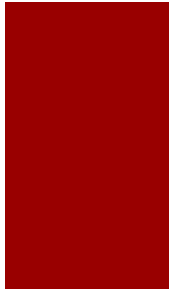
Aristotele

# + **PREMESSA**



Abbiamo sentito l'esigenza di proporre questo incontro per chiarire e condividere alcuni aspetti clinici, radiologici e gestionali dei pazienti **anziani** che presentano una **frattura vertebrale**.

# + PREMESSA



E' nostro desiderio interagire e discutere con i medici e gli operatori che si prendono cura di questi pazienti dall'urgenza al domicilio, per definire un **percorso che porti al superamento della fase critica** fino alla ripresa della normale quotidianità.



# QUANDO SI DIVENTA ANZIANI?



Grande scalpore oggetto di innumerevoli segnalazioni su tanti giornali e anche programmi televisivi è stata la notizia che... **l'anzianità è stata posticipata!**





# QUANDO SI DIVENTA ANZIANI?



Ciò è stato enunciato in occasione del 63° Congresso Nazionale della SIGG (Società Italiana di Gerontologia e Geriatria) che si è tenuto a Roma alla fine di Novembre del 2018.

# + QUANDO SI DIVENTA ANZIANI?

La proposta che arriva dalla **SIGG** è quella di aggiornare il concetto di anzianità, portando a **75 anni** l'età ideale per definire una persona come anziana.



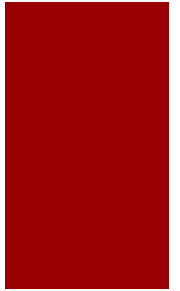
# + QUANDO SI DIVENTA ANZIANI?



Le diverse fasi dell'anzianità oggi vengono suddivise in quattro sottogruppi:

- giovani anziani (persone tra i 64 e i 74 anni)
- **anziani (75 – 84 anni)**
- grandi vecchi (85 – 99 anni)
- centenari

# + FRATTURE DA FRAGILITA'



L'osteoporosi con le fratture da fragilità che ne conseguono è un fenomeno globale, che **si sviluppa in modo silenzioso negli anziani.**

Non vi sono sintomi – segni tangibili di malattia nelle prime fasi delle alterazioni metaboliche.

# **+ LE FRATTURE VERTEBRALI**



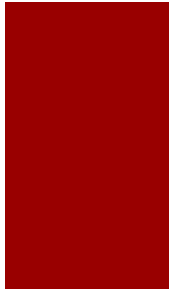
Le vertebre rappresentano la sede più comune di fratture da fragilità, ancora ampiamente sottodiagnosticate e non trattate.

# + ALCUNI NUMERI...



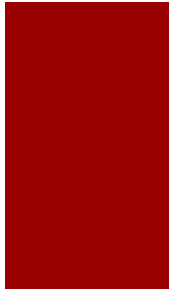
- Il 20-25% della popolazione di etnia caucasica sopra i 50 anni subisce una frattura vertebrale.
- Il 50% delle donne ultraottantenni riporta una frattura vertebrale.

# + CONSIDERAZIONI



- Una donna su cinque con una frattura vertebrale nell'arco di 12 mesi andrà incontro ad una nuova frattura vertebrale (*effetto domino*).
- Con l'aumentare del numero di fratture vertebrali, aumenta il tasso di mortalità.

# + **CONSIDERAZIONI**



- Diagnosi e trattamento precoce della prima frattura vertebrale condurrebbero a un miglioramento significativo della qualità della vita e ridurrebbero il rischio di ulteriori fratture.



## + EFFETTI

Le fratture vertebrali causano:

- dolore
- diminuzione d'altezza
- deformità
- ridotta mobilità
- necessità di ausili per il cammino
- riduzione della funzionalità polmonare
- distorsione dell'immagine corporea
- isolamento sociale
- depressione



# + Chi è a rischio?

- genere femminile
- età > 65 anni
- **incongrue sollecitazioni del tronco** (fratt. da compressione)
- **traumi a bassa energia**
- storia familiare di fratture osteoporotiche
- terapia steroidea cronica
- sindromi da malassorbimento
- disordini endocrinologici
- menopausa precoce (<45 anni)



# Traumi a bassa energia



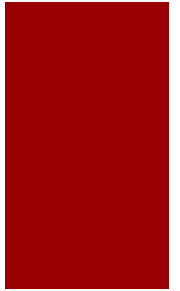
❖ Fratture di C2

❖ Fratture da compressione



Accesso al Pronto Soccorso

# + PREVENZIONE



La migliore prevenzione per la salute della nostra colonna trova le sue basi in una **alimentazione sana, abolizione fumo e attività fisica continuativa**, quella stessa che contribuisce a prevenire le malattie cardiovascolari, il diabete, l'obesità ed i tumori.

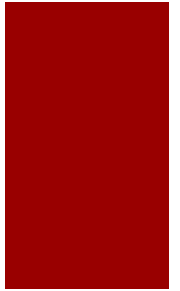
**Prevenzione delle cadute!**

# + SCOPI DEL CORSO



Definire un **percorso univoco per la diagnosi e il trattamento** di una patologia sempre più frequente negli ultimi anni.

# + **STRUTTURA DEL CORSO**



Le relazioni verteranno:

- su epidemiologia, approccio e terapia dell'osteoporosi e dei cedimenti vertebrali e il relativo iter diagnostico neuroradiologico;
- sui meccanismi e le conseguenze del trauma a bassa energia, sulla terapia conservativa e chirurgica.

# **+** **PROGRAMMA DEL CORSO**

**Indicazioni per la prevenzione e il controllo dell'infezione da Sars-Cov-2. Introduzione.**

Barbara Cappelletto – SOC Chirurgia Vertebro-midollare

**Una struttura portante che si sgretola. Diffusione, terapia e strategie preventive.**

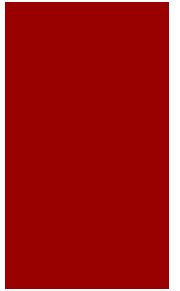
Fabio Vescini – SOC Endocrinologia

**Le immagini del crollo**

Maria Cristina De Colle – SOC Neuroradiologia

**Il cemento oggi**

Edi Copetti – SOC Chirurgia Vertebro-midollare





# **PROGRAMMA DEL CORSO**

## **Le cadute che rompono un dente**

Rossella Rispoli – SOC Chirurgia Vertebro-midollare

## **Un giorno al Pronto Soccorso...**

Domenico Arcidiacono – SOC Pronto Soccorso PO Pordenone

## **Un aiuto dall'esterno: l'assistenza nel trattamento ortesico**

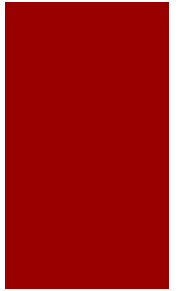
Michela Cima – SOC Chirurgia Vertebro-midollare

## **Discussione di casi clinici**

## **Verifica e conclusioni**



## **+** Ringrazio



- i relatori che, forse con qualche perplessità e nonostante il lavoro sfibrante quotidiano, hanno preparato le loro presentazioni;
- tutti i partecipanti che dimostrano la volontà di superare le difficoltà del momento;
- lo staff della «formazione» che sempre supporta e rende possibile la realizzazione dei corsi.



Buon  
corso!

