IL LONG COVID

LA PROPOSTA ASSISTENZIALE DELLA CARD LAZIO

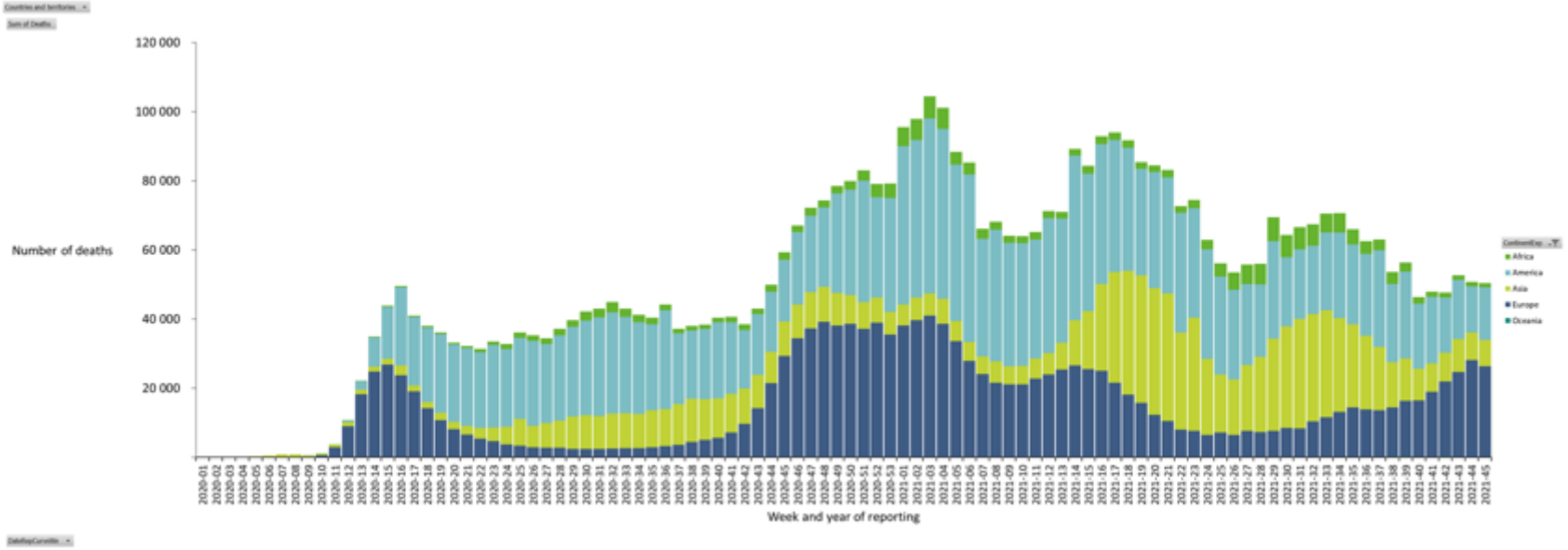
Mercoledì **24** novembre 2021

Il Long Covid in ambito internazionale e le sfide organizzative per i sistemi sanitari

Prof. Gianfranco Damiani, Prof. Corrado De Vito

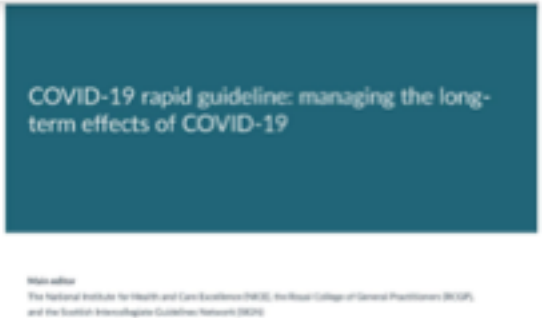
INQUADRAMENTO EPIDEMIOLOGICO

Since 31 December 2019 and as of week 2021-45, **254 053 508 cases** of COVID-19 have been reported, including **5 111 187 deaths**.



DEFINIZIONI

Sintomi che **continuano o si sviluppano** dopo l'infezione acuta da covid-19 e che non possono essere spiegati da una diagnosi alternativa. Questo termine include:



- **COVID-19 sintomatico in corso:** pazienti ancora sintomatici tra le 4 e le 12 settimane dopo l'inizio della sintomatologia acuta (stimati come **1 su 5**);

- **Sindrome post COVID-19 (PCS):** pazienti ancora sintomatici >12 settimane dopo l'insorgenza dei sintomi acuti (stimati come **1 su 10**)

NICE National Institute for Health and Care Excellence
RCGP Royal College of General Practitioners
Healthcare Improvement Scotland | SIGN

National Institute for Health and Care Excellence. COVID-19 rapid guideline: managing the long-term effects of COVID-19 NICE guideline; c2020. https://www.nice.org.uk/guidance/ng188

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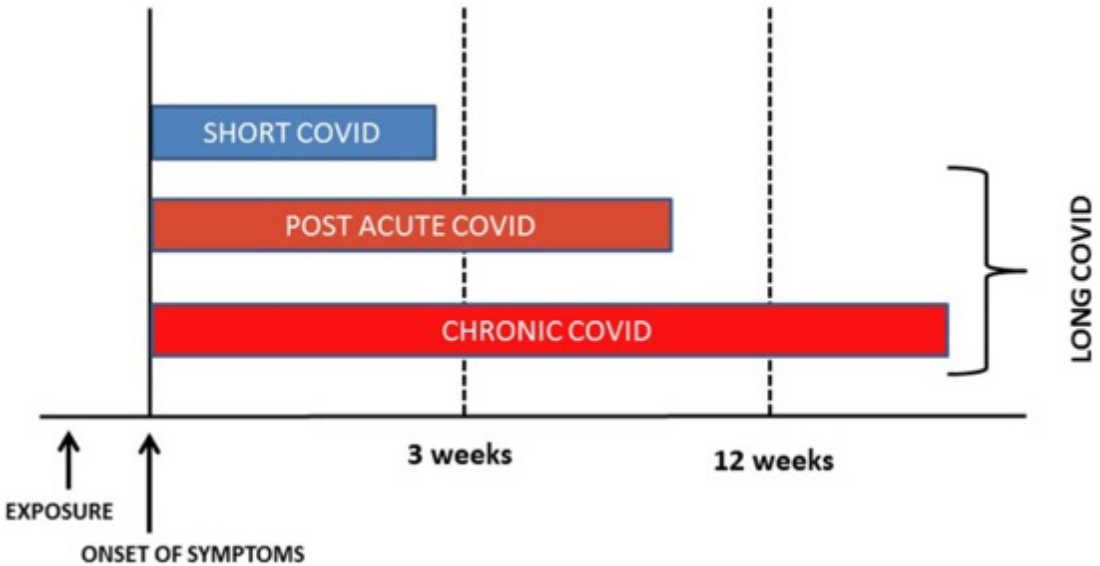
Mercoledì 24 novembre 2021

DEFINIZIONI

Il **National Institutes of Health** (NIH) utilizza, invece, la definizione di long COVID dei Centri statunitensi per il controllo e la prevenzione delle malattie (**CDC**), che descrive la condizione come **sequele** che si estendono **oltre 4 settimane** dopo l'infezione iniziale.



Datta SD, Talwar A, Lee JT. A proposed framework and timeline of the spectrum of disease due to SARS-CoV-2 infection: illness beyond acute infection and public health implications. JAMA2020;324:2251-2.

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Mercoledì 24 novembre 2021

DEFINIZIONI

A clinical case definition of post COVID-19 condition by a Delphi consensus

6 October 2021

World Health Organization

La condizione post COVID-19 si verifica in individui con una storia di infezione da SARSCoV-2 probabile o confermata, di solito **3 mesi dall'inizio di COVID-19 con sintomi che durano per almeno 2 mesi** e non può essere spiegato da una diagnosi alternativa

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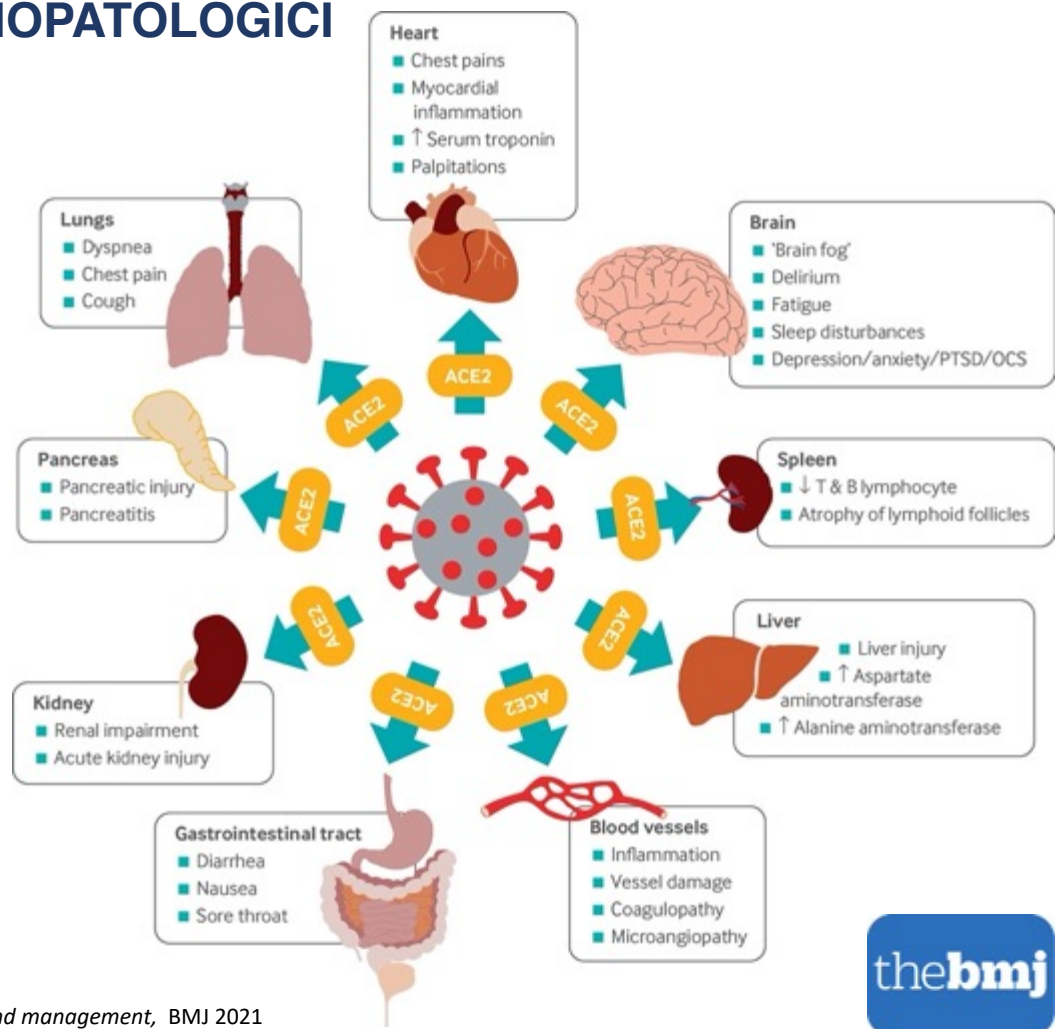
Mercoledì 24 novembre 2021

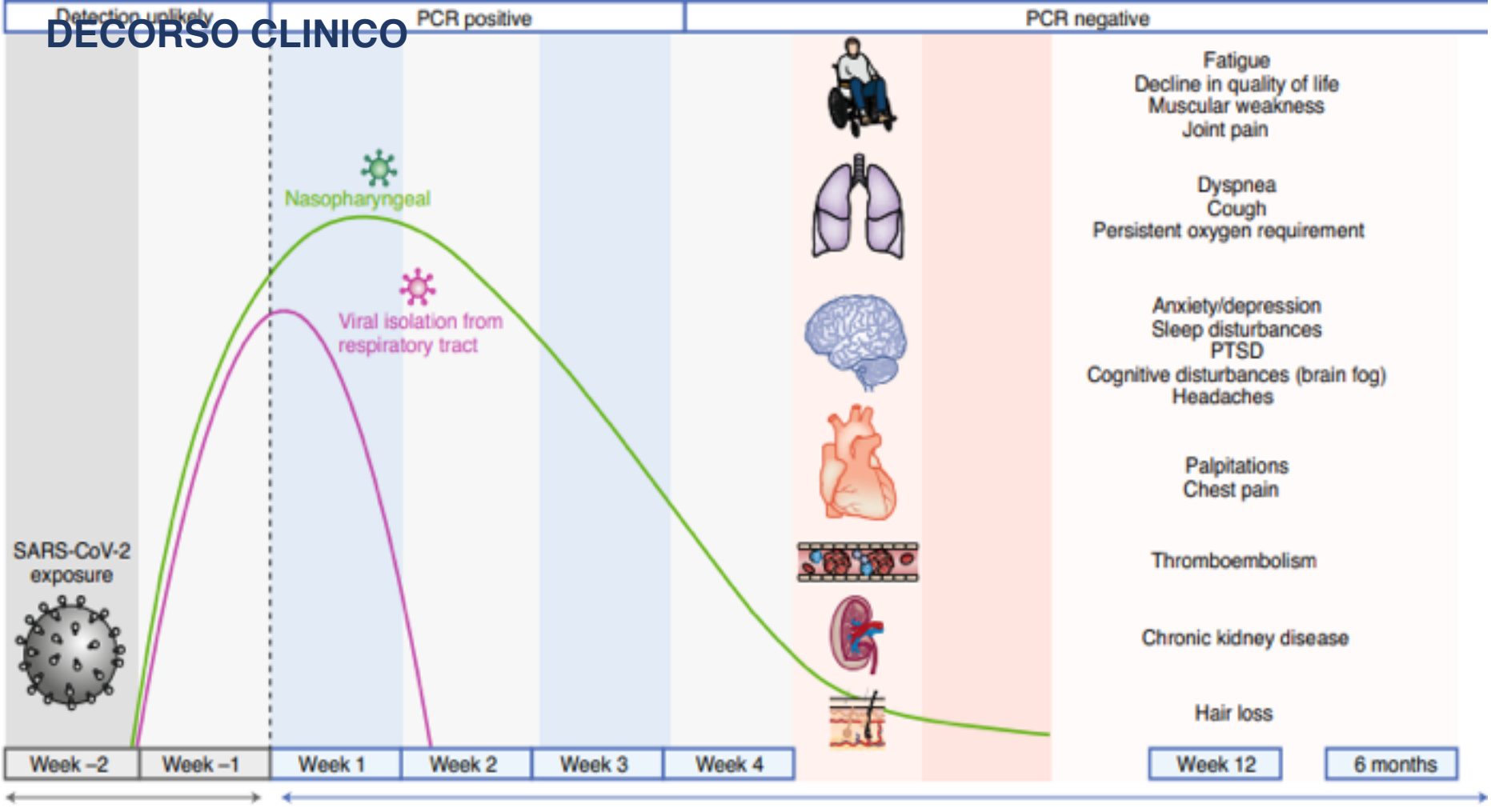
MECCANISMI FISIOPATOLOGICI

Il virus SARS-CoV-2 ottiene l'ingresso nelle cellule di più organi attraverso il **recettore ACE2**. Una volta che queste cellule sono state invase, il virus può causare una moltitudine di danni che alla fine portano a **numerosi sintomi persistenti**.



Crook H, Raza S, Nowell J, Young M, Edison P. *Long covid—mechanisms, risk factors, and management,* BMJ 2021

DECORSO CLINICO



Nalbandian, A., Sehgal, K., Gupta, A. et al. *Post-acute COVID-19 syndrome.* Nat Med 27, 601–615 (2021). https://doi.org/10.1038/s41591-021-01283-z

DECORSO CLINICO

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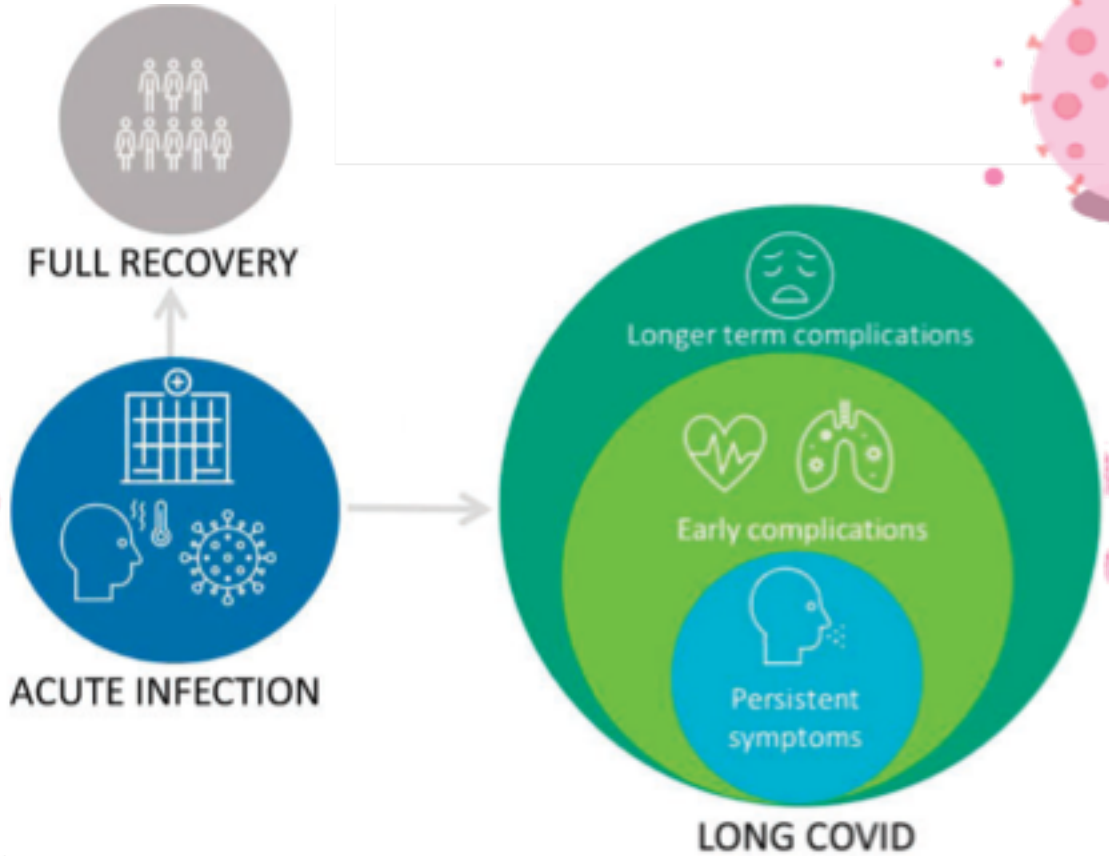

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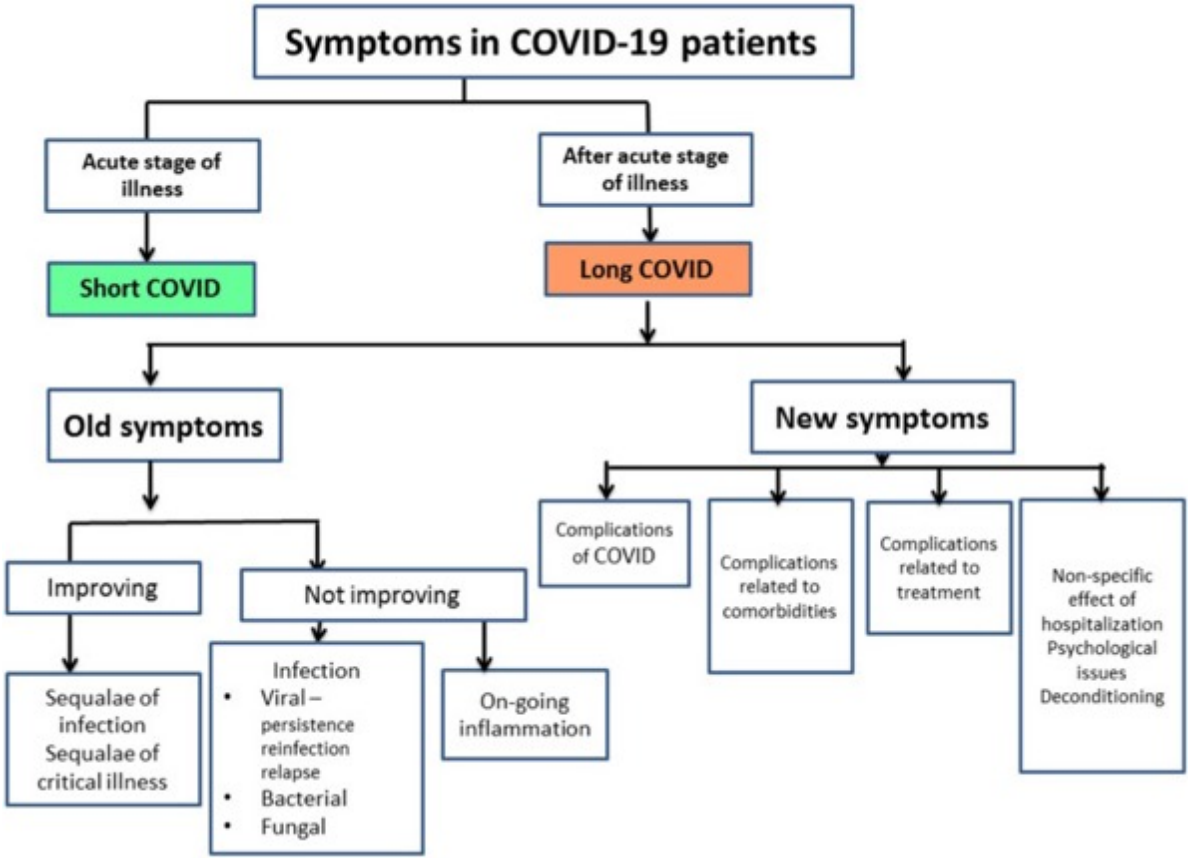
APPROCCIO AL PAZIENTE

Valutazione clinica:

Documentazione problema esistente

Miglioramento o deterioramento

Documentazione nuovi problemi



A.V. Raveendran, Rajeev Jayadevan, S. Sashidharan, *Long COVID: An overview*, Diabetes & Metabolic Syndrome: Clinical Research & Reviews, Volume 15, Issue 3, 2021, Pages 869-875, ISSN

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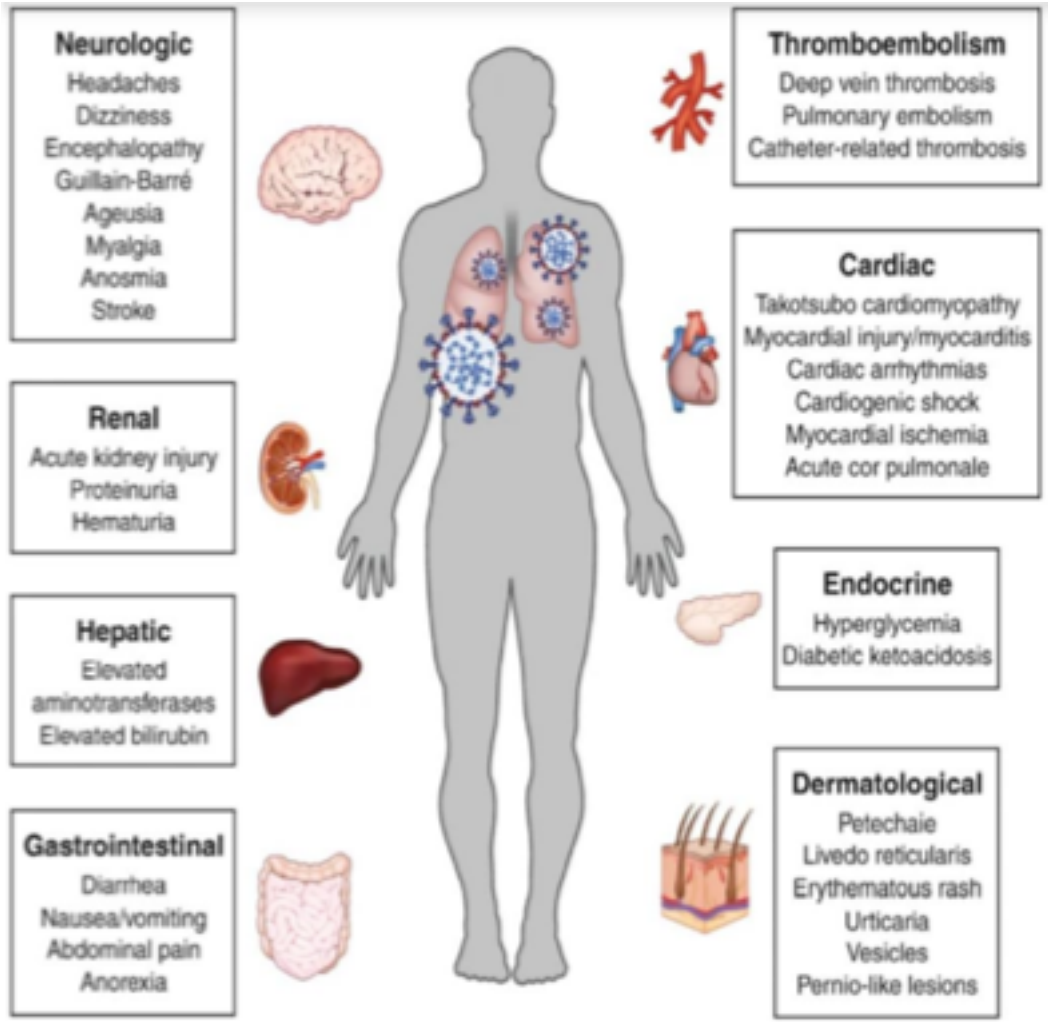
Mercoledì 24 novembre 2021

SINTOMATOLOGIA COVID-19

nature medicine

Extrapulmonary manifestations of COVID-19

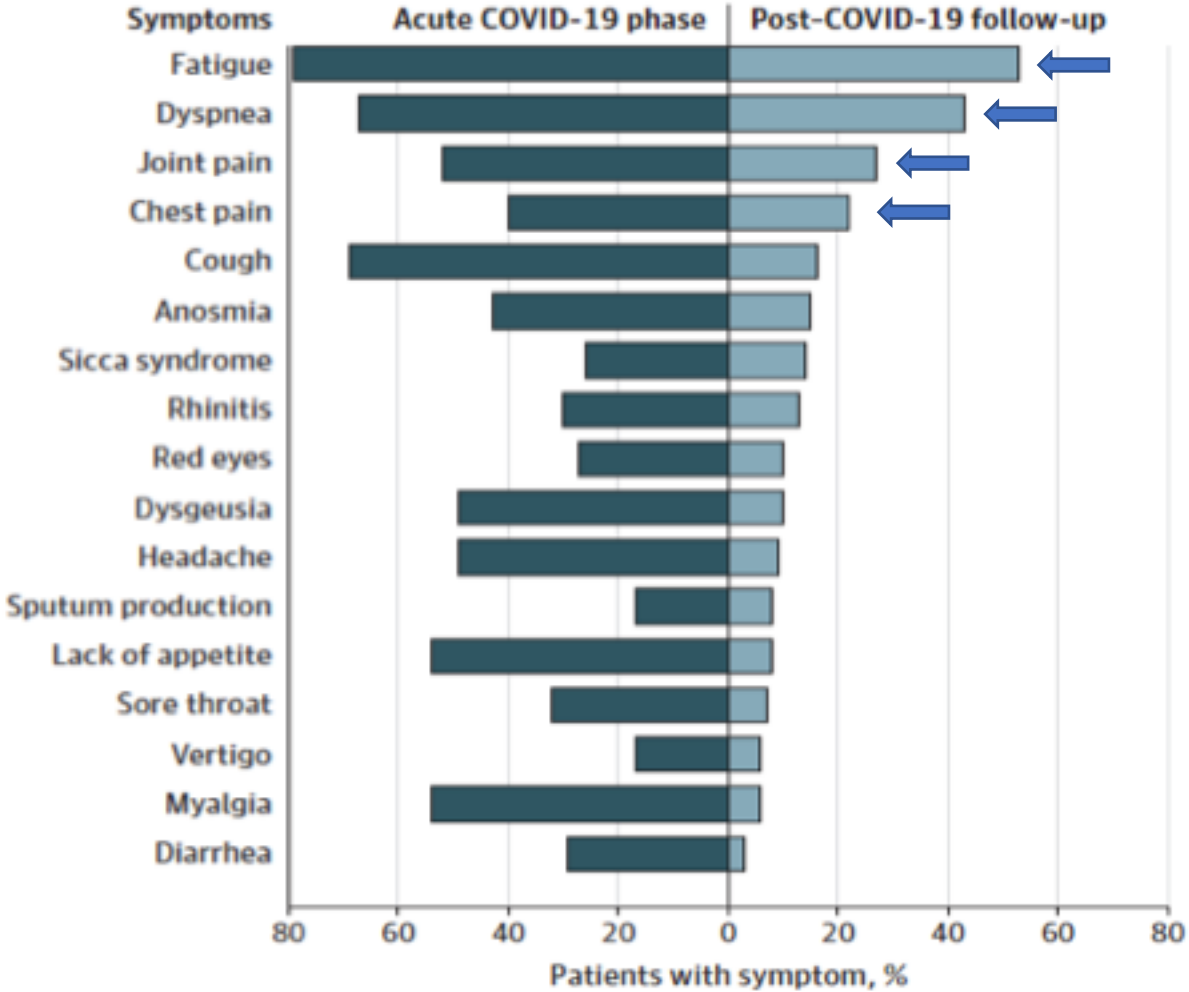
Aakriti Gupta, Mahesh V. Madhavan, Kartik Sehgal, Nandini Nair, Shiwani Mahajan, Tejasav S. Sehrawat, Behnood Bikdeli, Neha Ahluwalia, John C. Ausiello, Elaine Y. Wan, Daniel E. Freedberg, Ajay J. Kirtane, Sahil A. Parikh, Mathew S. Maurer, Anna S. Nordvig, Domenico Accili, Joan M. Bathon, Sumit Mohan, Kenneth A. Bauer, Martin B. Leon, Harlan M. Krumholz, Nir Uriel, Mandeep R. Mehra, Mitchell S. V. Elkind, Gregg W. Stone, Allan Schwartz, David D. Ho, John P. Bilezikian and Donald W. Landry



FOLLOW-UP

3-6 mesi dopo COVID-19 sintomatico i sintomi maggiormente presenti sono:

- **Affaticamento;**
- **Dispnea;**
- **Doloro articolare e toracico**



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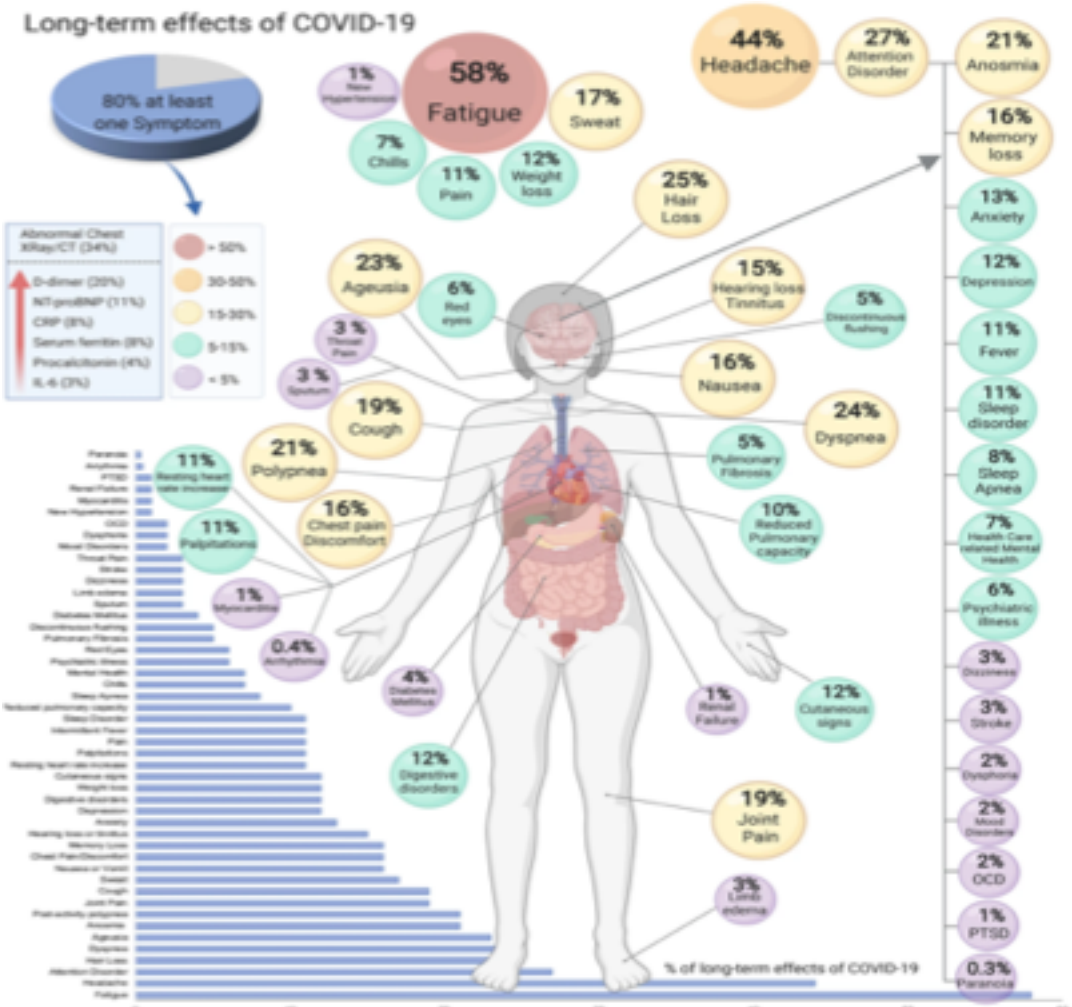
Mercoledì 24 novembre 2021

SINTOMATOLOGIA LONG COVID

Una meta-analisi condotta sugli studi presenti in letteratura ha riportato che **l'80% dei pazienti con COVID-19 sviluppa sintomi a lungo termine.**

La maggior parte degli effetti corrisponde a sintomi clinici come **affaticamento**, mal di testa, dolori articolari, anosmia, ageusia, ansia, palpitazioni ecc. Sono riportate anche patologie come l'**ictus** e il **diabete mellito**.



More than 50 long-term effects of COVID-19: a systematic review and meta-analysis, Scientifc Reports | (2021) 11:16144 https://doi.org/10.1038/s41598-021-95565-8

COMPLICANZE A LUNGO TERMINE

Complicazioni più gravi a lungo termine sembrano essere riportate **soprattutto** nei pazienti con **COVID-19 grave** che sono stati **ricoverati in ospedale** coinvolgendo soprattutto questi sistemi:

CARDIOVASCULAR

inflammation of the heart muscle

RESPIRATORY

lung function abnormalities

DERMATOLOGIC

rash

NEUROLOGIC

loss of taste & smell, sleep disturbance

PSYCHIATRIC

depression, anxiety, changes in mood

https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/late-sequelae.htm
https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2932656-8

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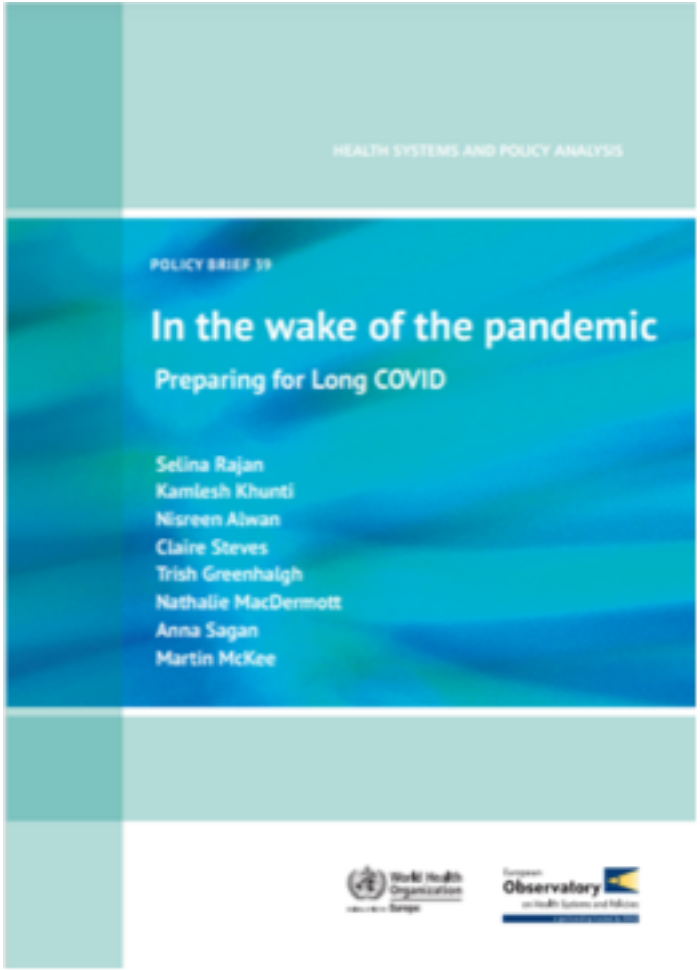
Mercoledì 24 novembre 2021



Foreword

Over the past year the world has tracked the progress of the COVID-19 pandemic using data on cases and deaths. Yet we now know that these provide only a partial picture. Many people struggle to recover from the acute infection, suffering often disabling symptoms that last weeks or months and, in some cases, with disabilities that are likely to be very long lasting. Our understanding of this new condition, now termed Long COVID, is growing rapidly. For this, we owe a great deal to many people, but especially to those affected who have come together to document, analyse and report on the complex nature of this condition and its impact on their lives, as well as the health professionals, in some cases themselves suffering from Long COVID, who have initiated important research projects.

This policy brief seeks to raise awareness of Long COVID and to provide a resource for those in decision-making roles, setting out in basic terms what we know about this condition and what the policy options are for developing a response that leaves no one behind.

This is rapidly changing field and one where we have much to learn from the many initiatives being taken across Europe, some of which are described in this policy brief. We now need to implement and evaluate new models of care, building on the key messages from the 2018 Tallinn Conference that called on us to include, invest, and innovate and from the European Programme of Work 2020–25 United Action for Better Health. The legacy of COVID-19 will, sadly, be with us for a long time.

Hans Kluge
Regional Director
WHO Regional Office for Europe

Table 2 Summary of selected studies on the prevalence of Long COVID in hospitalized patients postdischarge

COUNTRY	STUDY	NUMBER OF CASES INCLUDED	RESULTS
Canada	Wong et al. (2020)	78	• **51%** had persistently reduced quality of life and **50%** had shortness of breath at **12 weeks** after symptom onset
France	Carvalho-Schneider et al. (2020)	130	• **40%** reported persistent fatigue and **30%** breathlessness at **60 days** after symptom onset
Italy	Carfì, Bernabei & Landi (2020)	143	• **87%** had symptoms, **55%** had three or more symptoms at **60 days** after discharge
United Kingdom	Cruz et al. (2020)	119	• **68%** reported persistent fatigue, **57%** sleep disturbance and **32%** breathlessness at **60 days** after discharge
	Arnold et al. (2020)	110	• **74%** had persistent symptoms, typically breathlessness and fatigue and **10%** had persistent anomalies on chest X-ray or respiratory function testing at **12 weeks** after discharge
USA	Donnelly et al. (2020)	2 179	• **19.9%** were readmitted, **9.1%** died and **27%** were readmitted or died within **60 days** after discharge
China	Huang et al. (2021)	1 733	• **76%** reported persistent symptoms, and **50%** had residual anomalies on chest imaging **6 months** after discharge

Table 1 Summary of selected studies on the prevalence of Long COVID in nonhospitalized patients[a]

COUNTRY	STUDY	SAMPLE	NUMBER OF CASES INCLUDED	RESULTS
United Kingdom	Office for National Statistics (2020)	Population representative	8 193	• **21%** had symptoms **5 weeks** after infection • **10%** had symptoms **12 weeks** after infection
	Sudre et al. (2020)	COVID Symptom App users (out of which 14% were hospitalized)	4 182	• **13%** of cases had symptoms lasting **28 days** after symptom onset • **5%** of cases had symptoms for over **8 weeks** and **2%** for over **12 weeks** after symptom onset
	Townsend et al. (2020)	Hospital outpatients (out of which 56% were hospitalized)	127	• **52%** reported persistent fatigue at **10 weeks** after symptom onset
USA	Tenforde et al. (2020)	Hospital outpatients (out of which 7% were hospitalized)	292	• **35%** had symptoms after a median of **16 days** after testing positively for SARS-CoV-2 infection
Switzerland	Nehme et al. (2020)	Hospital outpatients	669	• About **33%** of cases had symptoms **30–45 days** after diagnosis
The Netherlands and Belgium	Goërtz et al. (2020)[b]	Facebook group for coronavirus patients with persistent complaints (out of which 5% were hospitalized)	2 113	• Over **99%** infected individuals did not fully recover within **12 weeks** after symptom onset

Long Covid symptoms and signs

Frequency: Very common · Common · Less commo

People hospitalised during acute phase of Covid-19

Based on 26 studies with 7147 people*

Neurological and neuromuscular
Headache
Tremors
Slowness of movement*
Lack of coordination*
Muscle atrophy*
Abnormal muscle tone*
Walking/ gait abnormality
Taste disturbance
Smell disturbance
Visual disturbance*
Decreased sensation or sensibility
Tingling
Trigeminal neuralgia
Abnormal reflex status*
Other neurological diseases*

Neurocognitive
Memory impairment
Concentration impairment
Confusion*
Frontal release signs*
Other cognitive impairment

Psychological and social
Anxiety
Depression
Sleep disorder
Post-traumatic stress disorder
Low mood
Reduced quality of life
Care dependency

Upper respiratory
Sore throat
Nasal congestion
Voice change
Other respiratory symptoms

Cardiopulmonary
Breathlessness
Chest pain
Cough
Excessive sputum
Palpitations
Flushing
Newly diagnosed hypertension
Other cardiovascular symptoms*

Musculoskeletal
Muscle pain
Joint pain
Impaired mobility

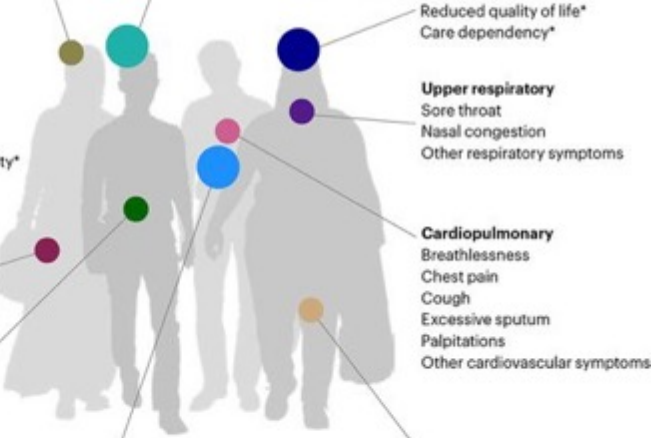
Gastrointestinal
Nausea or vomiting
Diarrhoea
Loss of appetite
Stomach/abdominal pain
Other stomach/abdominal discomfort
Weight loss
Bloody stools

Systemic
Fatigue
Weakness
Fever
Sweat or night sweats
General malaise
Dizziness

Other
Skin rash
Hair loss

People non-hospitalised during acute phase of Covid-19

Based on 4 studies with 1168 people*



Neurological and neuromuscular
Headache
Tremors
Seizures/ cramps
Slowness of movement*
Lack of coordination*
Muscle atrophy*
Abnormal muscle tone*
Walking/ gait abnormality*
Taste disturbance
Smell disturbance
Ear/ hearing conditions
Visual disturbance
Decreased sensation or sensibility*
Tingling*
Abnormal reflex status*
Other neurological diseases*

Neurocognitive
Memory impairment
Concentration impairment
Confusion
Frontal release signs*
Other cognitive impairment*

Psychological and social
Anxiety*
Depression*
Sleep disorder*
Post-traumatic stress disorder
Low mood*
Reduced quality of life*
Care dependency*

Upper respiratory
Sore throat
Nasal congestion
Other respiratory symptoms

Cardiopulmonary
Breathlessness
Chest pain
Cough
Excessive sputum
Palpitations
Other cardiovascular symptoms

Musculoskeletal
Muscle pain
Joint pain
Impaired mobility*

Gastrointestinal
Nausea or vomiting
Diarrhoea
Stomach/abdominal pain
Weight loss

Systemic
Fatigue
Weakness*
Fever
Sweat or night sweats*
Enlarged lymph nodes
Dizziness

Other
Skin rash
Hair loss
Conjunctivitis

Michelen M, Manoharan L, Elkheir N, et al, *Characterising long COVID: a living systematic review* BMJ Global Health 2021;6:e005427

IL LONG COVID

Mercoledì 24 novembre 2021

SEQUELE POLMONARI

I pazienti post-infezione da COVID-19 hanno mostrato una funzione respiratoria alterata. Tra i test di funzione polmonare la più grande modificazione si ha nella **capacità di diffusione alterata** in quasi il **40% dei pazienti**.

- **Dispnea/Affanno**
- **Tosse persistente**

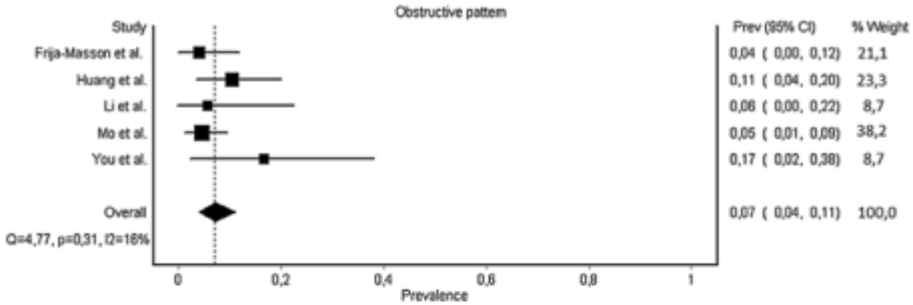
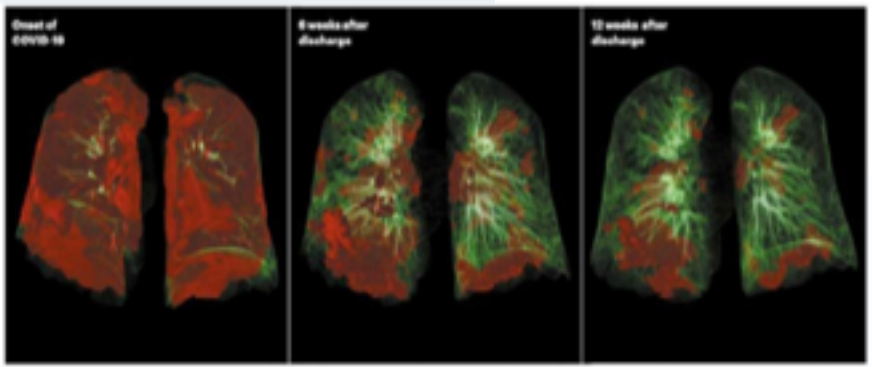


Figure 3 Prevalence of obstructive pattern.



Lung scans from a 50-year-old show that damage from COVID-19 (red) can improve with time — but many patients have lasting symptoms.

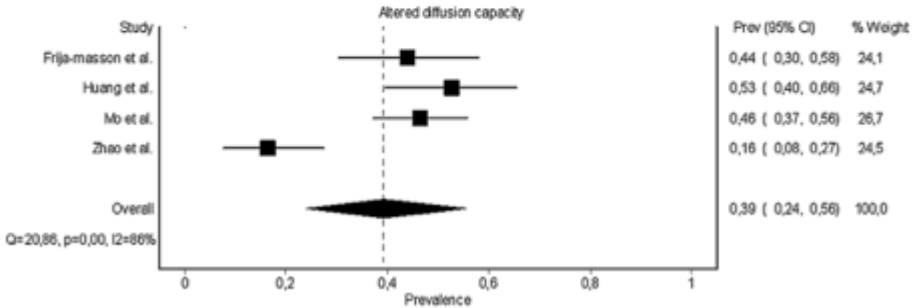


Figure 4 Prevalence of altered diffusion.

R, L. Vasconcello-Castillo, X. Alsina-Restoy et al. *Respiratory function in patients post-infection by COVID-19: a systematic review and meta-analysis*, Pulmonology 27 (2021) 328---337

SEQUELE NEURO-PSICHIATRICHE

Le pandemie passate hanno dimostrato che diversi sintomi neuropsichiatrici, come **encefalopatia, cambiamenti di umore, psicosi, disfunzione neuromuscolare, o processi di demielinizzazione**, possono accompagnare l'infezione virale acuta, o possono manifestarsi dopo settimane/mesi o a maggior distanza di tempo dalla guarigione.

6-month neurological and psychiatric outcomes in 236 379 survivors of COVID-19: a retrospective cohort study using electronic health records

Maxime Taquet, John R Geddes, Masud Husain, Sierra Luciano, Paul J Harrison

Lancet Psychiatry 2021; 8: 416–27
Published Online April 6, 2021

Summary

Background Neurological and psychiatric sequelae of COVID-19 have been reported, but more data are needed to adequately assess the effects of COVID-19 on brain health. We aimed to provide robust estimates of incidence rates and relative risks of neurological and psychiatric diagnoses in patients in the 6 months following a COVID-19 diagnosis.

Methods For this retrospective cohort study and time-to-event analysis, we used data obtained from the TriNetX electronic health records network (with over 81 million patients). Our primary cohort comprised patients who had a COVID-19 diagnosis; one matched control cohort included patients diagnosed with influenza, and the other matched control cohort included patients diagnosed with any respiratory tract infection including influenza in the same period. Patients with a diagnosis of COVID-19 or a positive test for SARS-CoV-2 were excluded from the control cohorts. All

Dementia	1·88 (1·27–2·77)	0·0008	1·95 (1·55–2·45)	<0·0001
Mood, anxiety, or psychotic disorder (any)	1·49 (1·45–1·54)	<0·0001	1·18 (1·15–1·21)	<0·0001
Mood, anxiety, or psychotic disorder (first)	1·85 (1·72–1·99)	<0·0001	1·40 (1·32–1·48)	<0·0001
Mood disorder (any)	1·49 (1·43–1·55)	<0·0001	1·22 (1·19–1·26)	<0·0001
Mood disorder (first)	1·78 (1·61–1·96)	<0·0001	1·37 (1·27–1·47)	<0·0001
Anxiety disorder (any)	1·48 (1·43–1·54)	<0·0001	1·16 (1·13–1·19)	<0·0001
Anxiety disorder (first)	1·80 (1·67–1·94)	<0·0001	1·37 (1·30–1·45)	<0·0001
Psychotic disorder (any)	1·93 (1·63–2·28)	<0·0001	1·44 (1·27–1·62)	<0·0001
Psychotic disorder (first)	2·27 (1·56–3·30)	<0·0001	1·49 (1·15–1·93)	0·0016
Substance use disorder (any)	1·26 (1·19–1·33)	<0·0001	1·11 (1·07–1·17)	<0·0001
Substance use disorder (first)	1·21 (1·05–1·38)	0·0054	0·89 (0·81–0·97)	0·013
Insomnia (any)	1·52 (1·42–1·63)	<0·0001	1·18 (1·12–1·24)	<0·0001
Insomnia (first)	2·06 (1·82–2·33)	<0·0001	1·51 (1·38–1·66)	<0·0001
Any outcome	1·47 (1·44–1·51)	<0·0001	1·16 (1·14–1·17)	<0·0001
Any first outcome	1·83 (1·71–1·96)	<0·0001	1·28 (1·23–1·33)	<0·0001

Details on cohort characteristics are presented in the appendix (pp 37–40). HR=hazard ratio. RTI=respiratory tract infection. *Matched cohorts.

Table 4: HRs for the major outcomes in patients without hospitalisation after COVID-19 compared with those after influenza or other RTIs

Thor Mertz Schou, Samia Joca, Gregers Wegener, Cecilie Bay-Richter, *Psychiatric and neuropsychiatric sequelae of COVID-19 – A systematic review*, Brain, Behavior, and Immunity.

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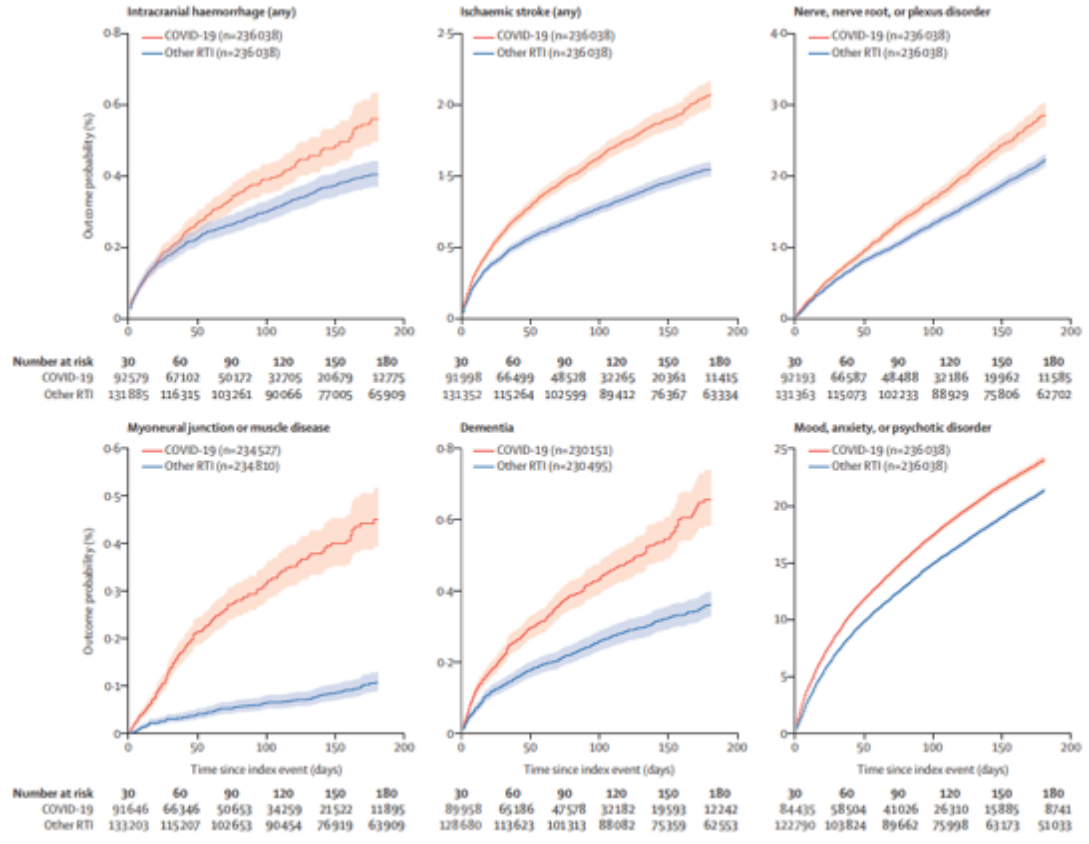
Mercoledì 24 novembre 2021

SEQUELE NEURO-PSICHIATRICHE

- Depressione
- Ansia
- PTSD
- DOC
- Delirium (negli anziani)
- Psicosi



igure 1: Kaplan-Meier estimates for the incidence of major outcomes after COVID-19 compared with other RTIs

shaded areas are 95% CIs. For incidences of first diagnoses, the number in brackets corresponds to all patients who did not have the outcome before the follow-up period. For diagnostic subcategories, ee appendix (pp 8–10). RTI=respiratory tract infection.

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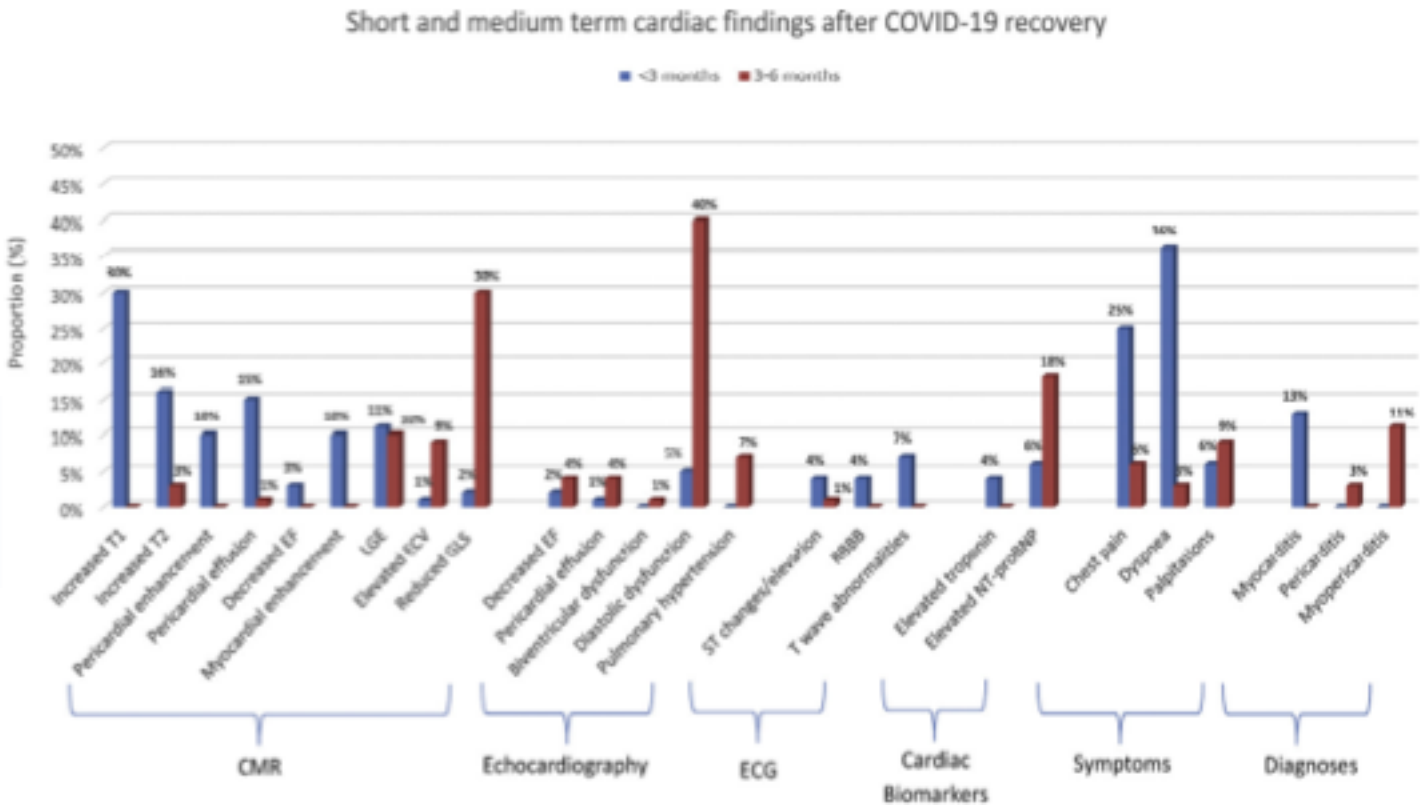
Mercoledì 24 novembre 2021

SEQUELE CARDIACHE

Revisione sistematica:
52.609 pazienti, età mediana 53 anni.
Follow-up mediano: **48 giorni** (1-180 giorni)

- Senso di oppressione
- Dolore toracico
- Palpitazioni
- Tachicardia
- Aritmie
- Variazione Pa



M.S. Ramadan et al., *Cardiac sequelae after coronavirus disease 2019 recovery: a systematic review,* Clinical Microbiology and Infection 27 (2021), https://doi.org/10.1016/j.cmi.2021.06.015

QUALITÀ DELLA VITA

IL LONG COVID

Mercoledì 24 novembre 2021

RESEARCH ARTICLE

JOURNAL OF MEDICAL VIROLOGY WILEY

Post-acute COVID-19 syndrome (PCS) and health-related quality of life (HRQoL)—A systematic review and meta-analysis

Preeti Malik[1] | Karan Patel[2] | Candida Pinto[1] | Richa Jaiswal[3] | Raghavendra Tirupathi[4] | Shreejith Pillai[5] | Urvish Patel[1]

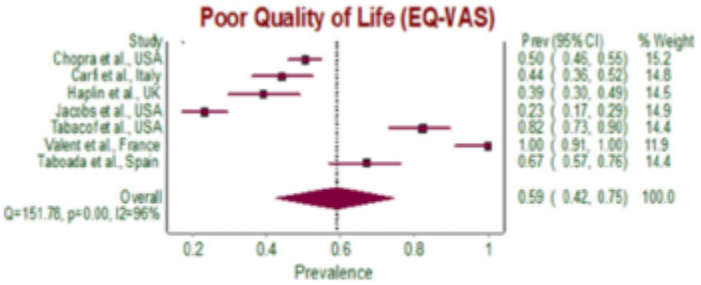
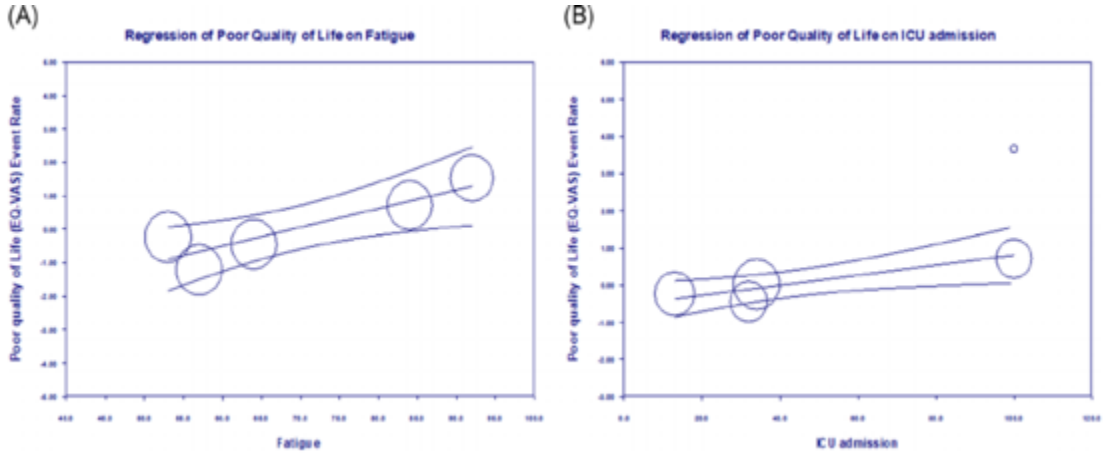


FIGURE 2 Forest plot of pooled prevalence of poor quality of life (EQ-VAS) in post-COVID-19 patients. CI, confidence interval



J Med Virol. 2021;94:253–262, DOI: 10.1002/jmv.27309

Risk factors and disease profile of post-vaccination SARS-CoV-2 infection in UK users of the COVID Symptom Study app: a prospective, community-based, nested, case-control study

Michela Antonelli, Rose S Penfold, Jordi Merino, Carole H Sudre, Erika Molteni, Sarah Berry, Liane S Canas, Mark S Graham, Kerstin Klaser, Marc Modat, Benjamin Murray, Eric Kerfoot, Liyuan Chen, Jie Deng, Marc F Österdahl, Nathan J Cheetham, David A Drew, Long H Nguyen, Joan Capdevila Pujol, Christina Hu, Somesh Selvachandran, Lorenzo Polidori, Anna May, Jonathan Wolf, Andrew T Chan, Alexander Hammers, Emma L Duncan, Tim D Spector, Sebastien Ourselin, Claire J Steves**

Summary

Background COVID-19 vaccines show excellent efficacy in clinical trials and effectiveness in real-world data, but some people still become infected with SARS-CoV-2 after vaccination. This study aimed to identify risk factors for post-vaccination SARS-CoV-2 infection and describe the characteristics of post-vaccination illness.

Lancet Infect Dis 2021
Published Online
September 1, 2021
https://doi.org/10.1016/

Findings Between Dec 8, 2020, and July 4, 2021, 1 240 009 COVID Symptom Study app users reported a first vaccine dose, of whom 6030 (0·5%) subsequently tested positive for SARS-CoV-2 (cases 1), and 971 504 reported a second dose, of whom 2370 (0·2%) subsequently tested positive for SARS-CoV-2 (cases 2). In the risk factor analysis, frailty was associated with post-vaccination infection in older adults (≥60 years) after their first vaccine dose (odds ratio [OR] 1·93, 95% CI 1·50–2·48; p<0·0001), and individuals living in highly deprived areas had increased odds of post-vaccination infection following their first vaccine dose (OR 1·11, 95% CI 1·01–1·23; p=0·039). Individuals without obesity (BMI <30 kg/m²) had lower odds of infection following their first vaccine dose (OR 0·84, 95% CI 0·75–0·94; p=0·0030). For the disease profile analysis, 3825 users from cases 1 were included in cases 3 and 906 users from cases 2 were included in cases 4. Vaccination (compared with no vaccination) was associated with reduced odds of hospitalisation or having more than five symptoms in the first week of illness following the first or second dose, and long-duration (≥28 days) symptoms following the second dose. Almost all symptoms were reported less frequently in infected vaccinated individuals than in infected unvaccinated individuals, and vaccinated participants were more likely to be completely asymptomatic, especially if they were 60 years or older.

Interpretation To minimise SARS-CoV-2 infection, at-risk populations must be targeted in efforts to boost vaccine effectiveness and infection control measures. Our findings might support caution around relaxing physical distancing and other personal protective measures in the post-vaccination era, particularly around frail older adults and individuals living in more deprived areas, even if these individuals are vaccinated, and might have implications for strategies such as booster vaccinations.

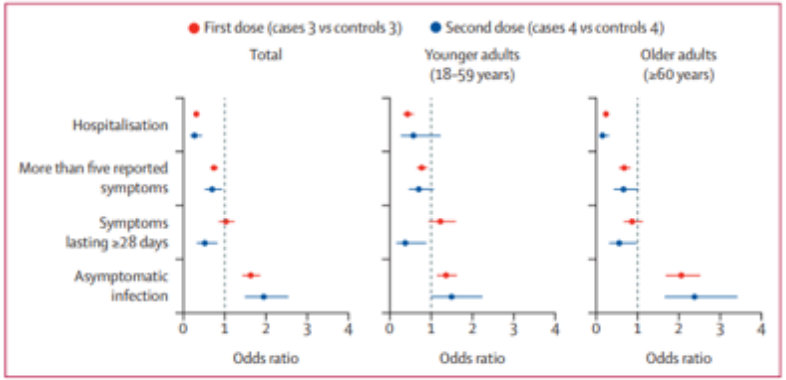


Figure 3: Disease severity and duration factors in SARS-CoV-2-infected vaccinated versus unvaccinated participants

IL LONG COVID

Mercoledì 24 novembre 2021

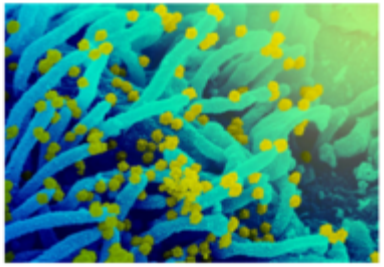
Molti studi in corso...

Monday, November 15, 2021

Long-term study of children with COVID-19 begins

NIH-supported research will track effects of COVID-19 infection on children over three years.

A large, long-term study of the impacts of COVID-19 on children has enrolled its first participant at the National Institutes of Health's Clinical Center in Bethesda, Maryland. The study, which is supported by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, will track up to 1,000 children and young adults who previously tested positive for COVID-19 and evaluate the impact of COVID-19 on their physical and mental health over three years. The study is expected to yield a detailed picture of COVID-19's effects on the overall health of children, their development and immune responses to infection, and their overall quality of life in the years following infection. This work is part of NIH's Researching COVID to Enhance Recovery (RECOVER) Initiative, to better understand the long-term consequences of SARS-CoV-2 infection.



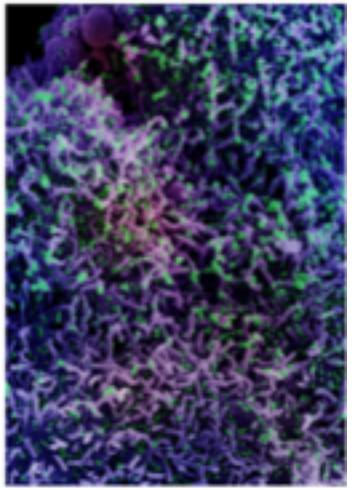
This scanning electron microscope image shows SARS-CoV-2 (round yellow particles) emerging from the surface of a cell cultured in the lab. SARS-CoV-2, also known as 2019-

anni.

Che cosa

Il National Institutes of Health sosterrà uno studio di follow-up di quattro anni sui potenziali effetti a lungo termine di COVID-19 sulle donne infette da SARS-CoV-2 durante la gravidanza. Lo studio seguirà anche la loro prole per eventuali potenziali effetti a lungo termine.

Lo sforzo fa parte del NIH Iniziativa di ricerca COVID per migliorare la ripresa (RECOVER), che mira a capire perché alcune persone che hanno avuto COVID-19 non si riprendono completamente o sviluppano sintomi dopo il recupero. Conosciute come sequele post-acute dell'infezione da SARS-CoV-2 (PASC), o più comunemente come Long COVID, queste condizioni colpiscono tutte le età. Gli effetti a lungo termine includono affaticamento, mancanza di respiro, difficoltà di concentrazione, disturbi del sonno, febbre, ansia e depressione.



micrografia elettronica incastonata di una cellula (viola) infettata da un ceppo variante di particelle virali SARS-CoV-2 (verde), isolata da un campione di paziente e colorata nei colori di Halloween. NIAID

L'attuale studio arruolerà alcuni partecipanti da uno studio precedente della rete Maternal-Fetal Medicine Units (MFMU), una collaborazione di ricerca di 36 siti supportata dall'Istituto nazionale per la salute infantile e lo sviluppo umano (NICHD) *eunice Kennedy Shriver* del NIH. I partecipanti saranno reclutati da circa 4.100 pazienti con infezione asintomatica e sintomatica da SARS-CoV-2 durante la gravidanza che hanno partorito negli ospedali della rete MFMU. I gruppi di ricerca valuteranno periodicamente i sintomi dei pazienti durante il periodo di quattro anni e valuteranno la loro prole per i sintomi neurologici e le condizioni cardiovascolari.

Utilità della telemedicina, machine learning e AI

Health and Technology (2021) 11:257–266
REVIEW PAPER

Telemedicine and e-Health research solutions in literature for combatting COVID-19: a systematic review

Susel Góngora Alonso · Gonzalo Marques · Isidro Barrachina · Begonya Garcia-Zapirain · Jon Arambarri · Javier Cabo Salvador · Isabel de la Torre Díez

Received: 13 August 2020 / Accepted: 28 January 2021 / Published online: 3 February 2021

Front Immunol. 2021 Jun 28;12:700782. doi: 10.3389/fimmu.2021.700782. eCollection 2021.

Immune-Based Prediction of COVID-19 Severity and Chronicity Decoded Using Machine Learning

Bruce K Patterson, Jose Guevara-Coto, Ram Yogendra, Edgar B Francisco, Emily Long, Amruta Pise, Hallison Rodrigues, Purvi Parikh, Javier Mora, Rodrigo A Mora-Rodríguez

Affiliations + expand

PMID: 34262570 PMCID: PMC8273732 DOI: 10.3389/fimmu.2021.700782

ESC European Society of Cardiology
European Journal of Preventive Cardiology (2021) 28, 522–523
doi:10.1093/eurjpc/zwaa016
INVITED EDITORIAL

Telehealth during COVID-19 pandemic: will the future last?

Jean-Paul Schmid*

Department Cardiology, Clinic Barmelweid, 5017 Barmelweid, Switzerland

Online publish-ahead-of-print 27 September 2020

This editorial refers to ... for cardiac telerehabil... from the Secondary Prevention and Rehabilitation section of the European Association of Preventive Cardiology' by Martijn Scherrenberg et. al. doi: 10.1177/2047487320939671.

Cardiac rehabilitation (CR) constitutes a major pillar of secondary prevention measures in cardiac patients, in particular for those with coronary artery disease and heart failure, but also for patients with other cardiovascular diseases (CVDs), such as valvular heart disease, heart transplantation, congenital heart disease, or patients with an extensive cardiovascular risk profile.[1] Hospital- or centre-based, multidisciplinary CR programs are the gold standard for delivery of optimal post-interventional care and implementation of secondary prevention goals in cardiac patients. The current COVID-19 pandemic

...elated quality of life (QoL) while producing persistent health benefits and being cost-effective up to 2 years after the intervention.[3] A significant improvement in peak oxygen consumption and QoL has also been reported in patients with heart failure, without serious adverse events during exercise over a period of 9 weeks.[4]

Regarding remote counselling and education about cardiovascular risk factors, there is little evidence, but multiple strategies can be used. Especially, telephone counselling and text messaging seem feasible approaches for a quick set-up. For remote smoking cessation, effective methods for guidance include internet-based, text-messaging-based, video consultation, and mobile applications-based interventions. Especially, text-messaging shows great potential. Mobile applications are also effective in improving blood pressure and medication compliance, at least in small studies with a short duration. Regarding remote management of diabetes, different technology-based interventions are

(CNN) — The US National Institutes of Health said Wednesday it's starting a $470 million study to try to understand what's become known as long Covid—the long-term, sometimes serious effects of Covid-19.

The study will aim to include 30,000-40,000 people and will make use of digital data – including input from wearable devices, the NIH said.

"We know some people have had their lives completely upended by the major long term effects of Covid-19," NIH Director Dr. Francis Collins said.

"These studies will aim to determine the cause and find much-needed answers to prevent this often-debilitating condition and help those who suffer move toward recovery."

The study, called Researching Covid to Enhance Recovery or RECOVER, will include researchers at more than 30 institutions across the country, the NIH said. They'll study existing and new patients with some of the mystifying conditions that show up after people supposedly get over the intense, acute effects of a bout with Covid-19.

Related Article: Being fully vaccinated reduces odds of long-term Covid-19 symptoms by half, UK study suggests

"These post-Covid conditions are often referred to as long Covid, long-haul Covid, post-acute Covid-19, long-term effects of Covid, or chronic Covid. NIH refers to this scientifically as PASC- post-acute sequelae of SARS-CoV-2," Collins told a briefing.

IL LONG COVID

Mercoledì 24 novembre 2021

What you need to know

- Most patients with covid-19 can be managed remotely with advice on symptomatic management and self isolation
- Although such consultations can be done by telephone in many cases, video provides additional visual cues and therapeutic presence
- Breathlessness is a concerning symptom, though there is currently no validated tool for assessing it remotely
- Safety-netting advice is crucial because some patients deteriorate in week 2, most commonly with pneumonia

thebmj Visual summary

Covid-19: remote consultations

A quick guide to assessing patients by video or voice call

Version 1.3
25 Mar 2020

This graphic, intended for use in a primary care setting, is based on data available in March 2020, much of which is from hospital settings in China. It will be revised as more relevant data emerges.

1 Set up

Prepare yourself and decide how to connect

Have current 'stay at home' covid-19 guidance on hand

UK government advice: http://bit.ly/ukgovisol

Video is useful for
- Severe illness
- Anxious patients
- Comorbidities
- Hard of hearing

Scan medical record for risk factors such as:
- Diabetes
- Pregnancy
- Smoking
- Chronic kidney or liver disease
- COPD
- Steroids or other immunosuppressants
- Cardiovascular disease
- Asthma

2 Connect

Make video link if possible, otherwise call on the phone

Check video and audio: Can you hear/see me?

Confirm the patient's identity
- Name
- Date of birth

Check where patient is: Where are you right now?

Note patient's phone number in case connection fails

If possible, ensure the patient has privacy

3 Get started

Quickly assess whether sick or less sick

Rapid assessment

If they sound or look very sick, such as too breathless to talk, go direct to key clinical questions

Establish what the patient wants out of the consultation, such as:
- Clinical assessment
- Referral
- Certificate
- Reassurance
- Advice on self isolation

4 History

Adapt questions to patient's own medical history

Contacts
- Close contact with known covid-19 case
- Immediate family member unwell
- Occupational risk group

History of current illness
- Date of first symptoms

Most common presentation
- Cough
- Fatigue
- Fever
- Short of breath

Cough is usually dry but sputum is not uncommon

Up to 50% of patients do not have fever at presentation

Clinical characteristics

Based on 1099 hospitalised patients in Wuhan, China

69%	Cough
22%	Temperature 37.5-38°C
22%	Temperature >38°C
38%	Fatigue
34%	Sputum
19%	Shortness of breath
15%	Muscle aches
14%	Sore throat
14%	Headache
12%	Chills
5%	Nasal congestion
5%	Nausea or vomiting
4%	Diarrhoea

IL LONG COVID

Mercoledì 24 novembre 2021

What you need to know

- Most patients with covid-19 can be managed remotely with advice on symptomatic management and self isolation
- Although such consultations can be done by telephone in many cases, video provides additional visual cues and therapeutic presence
- Breathlessness is a concerning symptom, though there is currently no validated tool for assessing it remotely
- Safety-netting advice is crucial because some patients deteriorate in week 2, most commonly with pneumonia

5 Examination

Assess physical and mental function as best as you can

Over phone, ask carer or patient to describe:
- State of breathing
- Colour of face and lips

Over video, look for:
- General demeanour
- Skin colour

Check respiratory function - inability to talk in full sentences is common in severe illness

How is your breathing?

Is it worse today than yesterday?

What does your breathlessness prevent you doing?

Patient may be able to take their own measurements if they have instruments at home
- Temperature
- Pulse
- Peak flow
- Blood pressure
- Oxygen saturation

Interpret self monitoring results with caution and in the context of your wider assessment

6 Decision and action

Advise and arrange follow-up, taking account of local capacity

Which pneumonia patients to send to hospital?

Clinical concern, such as:
- Temperature > 38°C
- Respiratory rate > 20*
- Heart rate > 100† with new confusion
- Oxygen saturation ≤ 94%‡

Likely covid-19 but well, with mild symptoms	Likely covid-19, unwell, deteriorating	Relevant comorbidities	Unwell and needs admission
Self management: fluids, paracetamol	Arrange follow up by video. Monitor closely if you suspect pneumonia	Proactive, whole patient care	Ambulance protocol (999)

Reduce spread of virus - follow current government 'stay at home' advice

Safety netting
- If living alone, someone to check on them
- Maintain fluid intake - 6 to 8 glasses per day
- Seek immediate medical help for red flag symptoms

24% Any comorbidity

Red flags

Covid-19:
- Severe shortness of breath at rest
- Difficulty breathing
- Pain or pressure in the chest
- Cold, clammy, or pale and mottled skin
- New confusion
- Becoming difficult to rouse
- Blue lips or face
- Little or no urine output
- Coughing up blood

Other conditions, such as:
- Neck stiffness
- Non-blanching rash

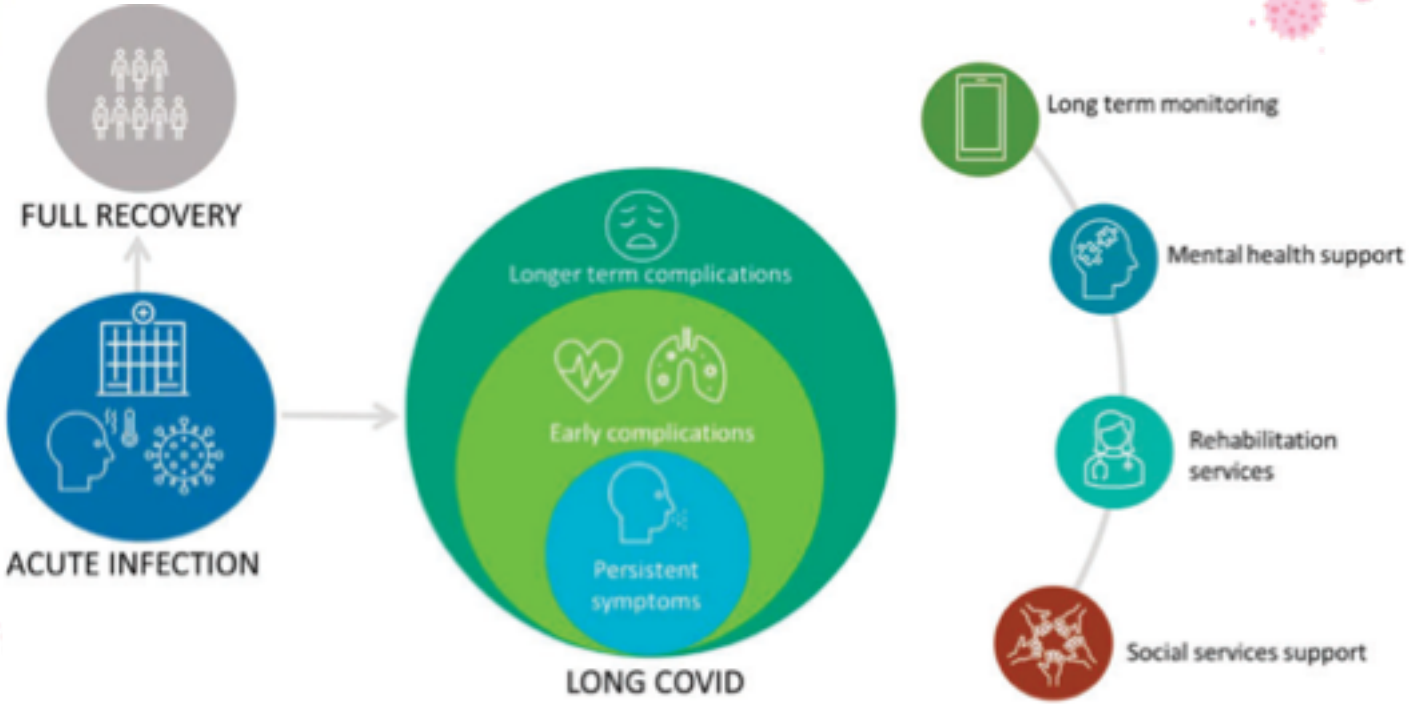
* Breaths per minute † Beats per minute ‡ If oximetry available for self monitoring

thebmj Read the full article online https://bit.ly/BMJremcon

TAKE HOME MESSAGES

IL LONG COVID

Mercoledì 24 novembre 2021



Prevalenza Long COVID

- Circa un quarto delle persone con infezione da Sars-CoV-2 manifesta sintomi che continuano per almeno 1 mese;
- per 1 persona su 10 i sintomi persistono oltre le 12 settimane[1].

Al 2 ottobre 2021, nel Regno Unito, 1,2 milioni di persone (che vivono nella propria abitazione) hanno riferito di soffrire di Long COVID, di cui circa il 5,7% costituito da bambini e adolescenti di età compresa tra 2 e 16 anni[2].

1. In the wake of the pandemic. Preparing for Long COVID. WHO, 2021.
2. https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/4november2021.

Peso economico del Long COVID

Il Regno Unito sta investendo £ 100 milioni nella cura del Long COVID[1]. A questa somma, si aggiunge a un investimento di £ 34 milioni per cliniche specializzate in tutto il paese.

In un ampio studio condotto in 56 paesi, su 3072 soggetti con COVID-19 confermato o sospetto e durata della malattia oltre i 28 gg:

- quasi la metà (45%) ha riportato un orario di lavoro ridotto a causa dei sintomi in corso;
- il 22% non lavora più a distanza di 6 mesi dall'insorgenza della malattia[2].

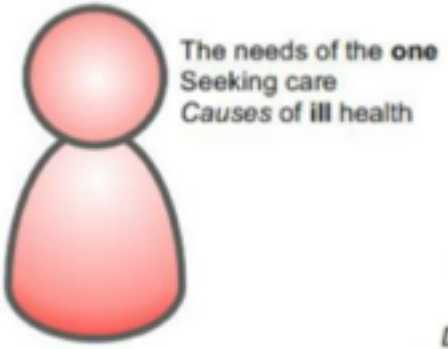
1. https://www.england.nhs.uk/2021/06/nhs-sets-up-specialist-young-peoples-services-in-100-million-long-covid-care-expansion/

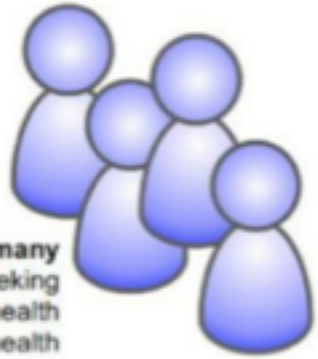
2. Davis HE, Assaf GS, McCorkell L, Wei H, Low RJ, Re'em Y, Redfield S, Austin JP, Akrami A. Characterizing long COVID in an international cohort: 7 months of symptoms and their impact. EClinicalMedicine. 2021.

Sfide organizzative per i sistemi sanitari

- Attenzione ai bisogni salute della popolazione e non solo del singolo
- Flessibilità organizzativa
- Soluzioni digitali e telemedicina
- Integrazione tra diversi livelli di assistenza e lavoro in équipe

Attenzione ai bisogni di salute della popolazione e non solo del singolo 1/2





BMJ. 2020 Sep 25;370:m3691. doi: 10.1136/bmj.m3691.

Strengthening the UK primary care response to covid-19

Sophie Park [1], Josephine Elliott [2], Anita Berlin [3], Julia Hanner-Hunt [4], Andy Haines [5]

PREVENTING CHRONIC DISEASE
PUBLIC HEALTH RESEARCH, PRACTICE, AND POLICY
Volume 17, E79 AUGUST 2020

COMMENTARY

The Critical Need for a Population Health Approach: Addressing the Nation's Behavioral Health During the COVID-19 Pandemic and Beyond

Arthur C. Evans, PhD[1]; Lynn F. Bufka, PhD[1]

The Essential Role of Population Health During and Beyond COVID-19

September 30, 2020

Salina Bakshi, MD, MPH, Katherine H. Schiavoni, MD, MPP, Lucas C. Carlson, MD, MPH, Trina E. Chang, MD, MPH, Amy O. Flaster, MD, MBA, Brent P. Forester, MD, MSc, Frannie R. Kronenberg, MD, MSc, Charles T. Pu, MD, Jack S. Rowe, MD, MPH, Dellara F. Terry, MD, MPH, Jason H. Wasfy, MD, Stephen J. Bartels, MD, MS, Thomas D. Sequist, MD, MPH, Gregg S. Meyer, MD, MSc, Mallika L. Mendu, MD, MBA

The American Journal of Managed Care, March 2021, Volume 27, Issue 3

Attenzione ai bisogni di salute della popolazione e non solo del singolo 2/2

Institute for Healthcare Improvement

Population medicine is the design, delivery, coordination, and payment of high-quality health care services to manage Triple aim of care for a population using the best resources we have available to us within the health care system.

Populations, Population Health, and the Evolution of Population Management: Making Sense of the Terminology in US Health Care Today. ***(2014) Niñon Lewis***

Table 1. Clinical Population Medicine (CPM): What it Is and What it Is Not

Clinical Population Medicine is the conscientious, explicit, and judicious application of population health approaches to care for individual patients and design health care systems.

Clinical Population Medicine is:	Clinical Population Medicine is not:
• a deliberate practice applied by practitioners and institutions	• a threat to patient-centered clinical care through rationing or undermining patient or clinician autonomy
• engaged health care institutions that reduce health inequity through improved access, health promotion, and disease prevention	• a substitute for comprehensive, multi-sector public health practice
• using patient and population level data to deliver immediate and accessible indicators for clinical decisions and system design that are responsive to changing community health needs	• limited to partnerships between public health institutions and health care institutions
• grounded in the science of epidemiology and medicine, and the practices of public health and clinical care	• a new medical specialty or discipline limited to specially trained practitioners
	• the same as health services research or quality improvement

Clinical Population Medicine: Integrating Clinical Medicine and Population Health in Practice

Aaron M. Orkin, MD, MSc, MPH, CCFP(EM), FRCPC

Ann Fam Med 2017;15:405-409. https://doi.org/10.1370/afm.2143.

Flessibilità organizzativa

Flexibility has been defined as an entity's ability to change its policies, practices or procedures quickly and easily to adapt to the diverse and changing demands of the environment (Rowe &Wright, 1997).

Pianificare nuove forme organizzative e gestionali con **capacità adattativa** nel breve periodo, per rispondere tempestivamente all'evoluzione dei bisogni sanitari della popolazione.

Soluzioni digitali e telemedicina 1/6

Soluzioni digitali e telemedicina

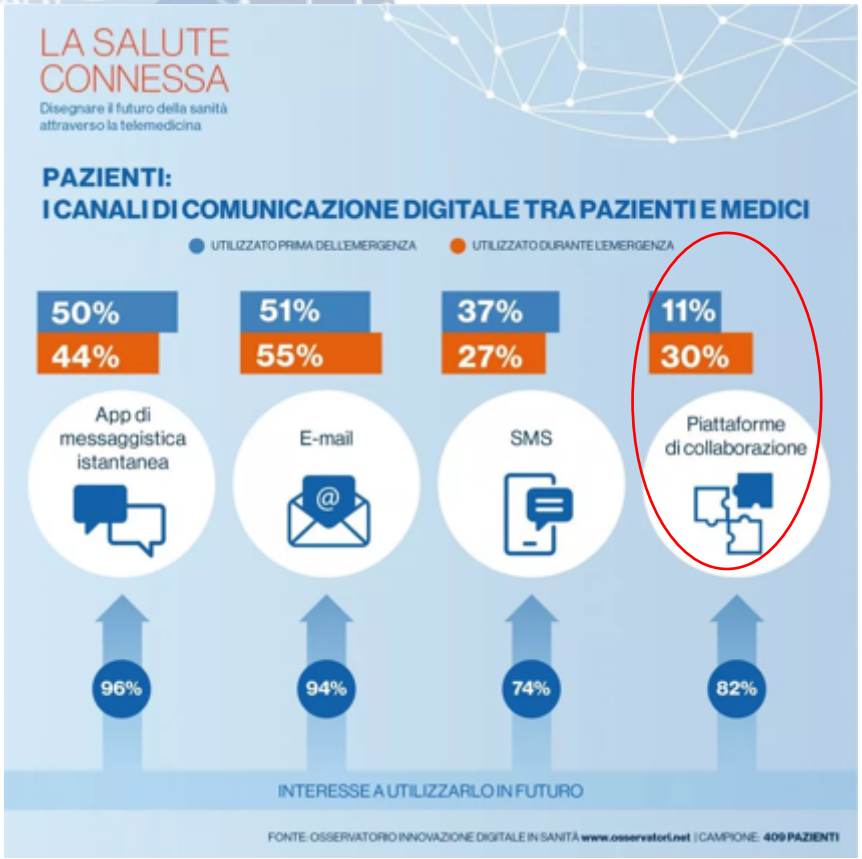
Garantire la sicurezza di pazienti e personale sanitario

Ridurre le disuguaglianze sanitarie, migliorando l'accesso e la continuità delle cure

Migliorare efficacia, efficienza e appropriatezza dell'assistenza, con facilitazione delle tempistiche

After COVID-19: How To Rejuvenate Primary Care For The Future Thomas Bodenheimer, Brian Yoshio Laing May 21, 2020.
Park S, Elliott J, Berlin A, Hamer-Hunt J, Haines A. Strengthening the UK primary care response to covid-19. bmj. 2020 Sep 25;370.
The technology legacy of COVID-19 in primary care Posted by BJGP Life | 15 Apr 2020.

Soluzioni digitali e telemedicina 2/6

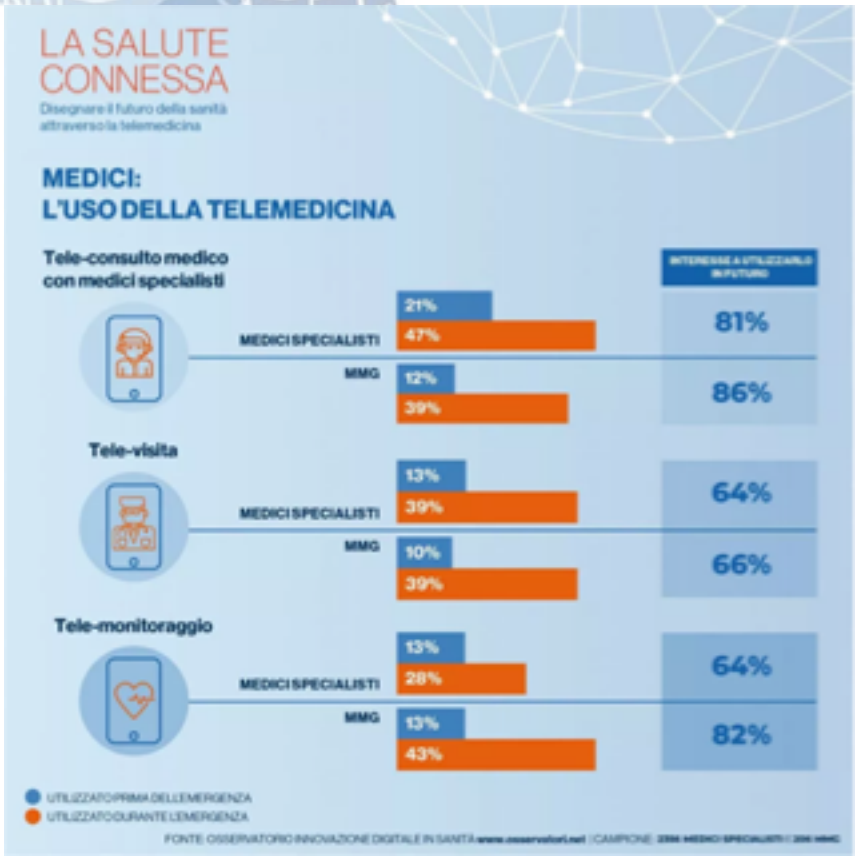


<u>Durante l'emergenza</u>

Aumento di quasi 20 punti percentuali dell'utilizzo di piattaforme digitali di collaborazione tra medici e pazienti.

Osservatorio Innovazione Digitale in Sanità della School of Management del Politecnico di Milano

Soluzioni digitali e telemedicina 3/6



Durante l'emergenza

Aumento dell'utilizzo della telemedicina, per:

- tele-consulto;
- tele-visita;
- tele-monitoraggio.

Osservatorio Innovazione Digitale in Sanità della School of Management del Politecnico di Milano

Soluzioni digitali e telemedicina 4/6

Accordo Stato-Regioni sul documento recante “Indicazioni nazionali per l’erogazione di prestazioni in telemedicina” del 17/12/2020.

«…adeguare i flussi informativi di erogazione/rendicontazione delle attività di specialistica ambulatoriale al fine di tenere traccia delle prestazioni in telemedicina la cui tariffazione sarà equivalente alle analoghe prestazioni erogate in presenza…»

Presidenza del Consiglio dei Ministri

CONFERENZA PERMANENTE PER I RAPPORTI
TRA LO STATO, LE REGIONI E LE PROVINCIE AUTONOME
DI TRENTO E DI BOLZANO

Accordo, ai sensi dell'articolo 4, comma 1, del decreto legislativo 28 agosto 1997, n. 281, sul documento recante "Indicazioni nazionali per l'erogazione di prestazioni in telemedicina".

Repertorio atti n. 215/CSR del 17 dicembre 2020

Soluzioni digitali e telemedicina 5/6

Alcuni sviluppi

Health Systems to Use mHealth to Help COVID-19 Patients With 'Brain Fog'

Three health systems will be testing an mHealth platform that uses video gaming concepts to help patients recovering from COVID-19 who are experiencing cognitive dysfunction.

Sviluppo di una piattaforma terapeutica digitale per pazienti con disfunzioni cognitive conseguenti al COVID-19.

3 Health Systems Join Project to Create Continuous mHealth COVID-19 Monitor

Intermountain Health, Rush University Medical Center and the University of Texas Health Science Center are joining the effort to create an mHealth wearable for remote patient monitoring programs.

Sviluppo di un biomarcatore digitale in un dispositivo mHealth indossabile, per consentire il continuo monitoraggio da remoto dei pazienti COVID-19. Utile anche per la gestione del Long COVID.

https://mhealthintelligence.com/news/health-systems-to-use-mhealth-to-help-covid-19-patients-with-brain-fog
https://mhealthintelligence.com/news/3-health-systems-join-project-to-create-continuous-mhealth-covid-19-monitor

Soluzioni digitali e telemedicina 6/6

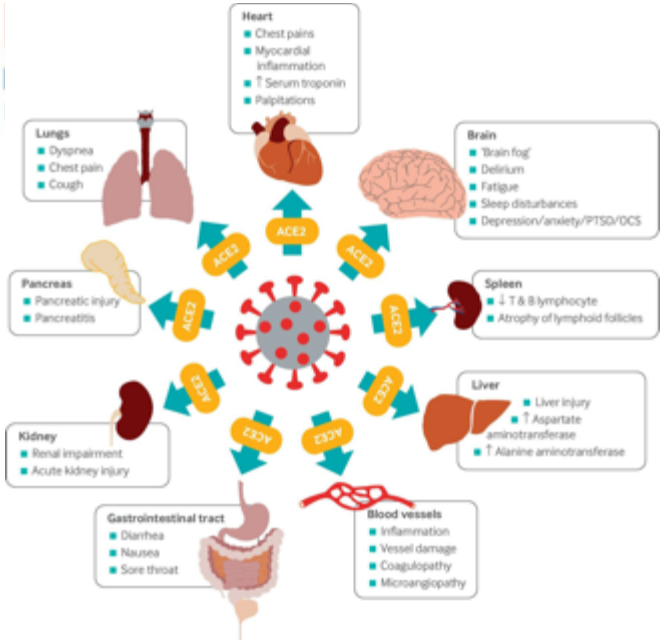
Per **ampliare le soluzioni digital-first**, i sistemi sanitari devono attivarsi per:

- identificare e allocare le risorse;
- migliorare l'infrastruttura tecnica;
- implementare meccanismi di data-sharing per integrare i dati della telemedicina con la sorveglianza epidemiologica;
- sviluppare interconnessione tra i servizi di telemedicina utilizzati nei diversi setting assistenziali;
- fornire formazione e supporto al personale;
- assistere le persone con una minore alfabetizzazione sanitaria digitale;
- adeguare norme e regolamenti;
- rafforzare la governance.

The technology legacy of COVID-19 in primary care Posted by BJGP Life | 15 Apr 2020.
The organisation of resilient health and social care following the COVID-19 pandemic. Opinion of the Expert Panel on Effective ways of investing in Health (EXPH). 2020.

Integrazione tra i diversi livelli di assistenza e lavoro in équipe 1/6

Multi-organ complications of COVID-19 and Long-COVID



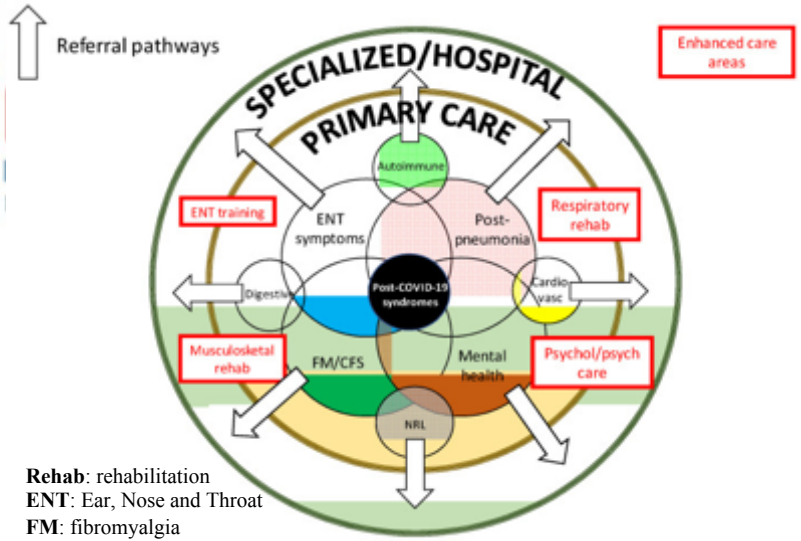
La gestione delle persone con Long-COVID deve essere multidisciplinare per dare risposta alle diverse manifestazioni cliniche, funzionali, cognitive, psicologiche e nutrizionali.

Questo approccio deve essere personalizzato, modulato e adattato tenendo conto della varietà delle condizioni che si presentano nel singolo paziente.

Indicazioni ad interim sui principi di gestione del Long-COVID.
Rapporto ISS COVID-19 n. 15/2021

Crook H, Raza S, Nowell J, Young M, Edison P. Long covid—mechanisms, risk factors, and management *BMJ* 2021; 374 :n1648 doi:10.1136/bmj.n1648

Integrazione tra i diversi livelli di assistenza e lavoro in équipe 2/6



Rehab: rehabilitation
ENT: Ear, Nose and Throat
FM: fibromyalgia
CFS: chronic fatigue syndrome
NRL: neurological
Cardiovasc: cardiovascular
Psychol/psych: psychological/psychiatric

L'organizzazione delle cure dovrebbe

- essere guidata da un medico con competenze ed esperienza in tema di COVID-19 (es. MMG, pneumologo, geriatra, infettivologo, internista), secondo il grado di complessità clinica,
- avvalersi di un supporto specialistico appropriato,
- seguire percorsi locali che prevedano l'integrazione di assistenza primaria e specialistica, servizi di riabilitazione multidisciplinare e ospedalieri.

Indicazioni ad interim sui principi di gestione del Long-COVID. Rapporto ISS COVID-19 n. 15/2021

Sisó-Almirall A, Brito-Zerón P, Conangla Ferrín L, Kostov B, Moragas Moreno A, Mestres J, Sellarès J, Galindo G, Morera R, Basora J, Trilla A, Ramos-Casals M, On Behalf Of The CAMFiC Long Covid-Study Group. Long Covid-19: Proposed Primary Care Clinical Guidelines for Diagnosis and Disease Management. Int J Environ Res Public Health. 2021 Apr 20;18(8):4350. doi: 10.3390/ijerph18084350. PMID: 33923972; PMCID: PMC8073248.

Integrazione tra i diversi livelli di assistenza e lavoro in équipe 3/6

Alcune esperienze internazionali

UK

NHS to offer 'long covid' sufferers help at specialist centres

People suffering 'long covid' symptoms will be offered specialist help at clinics across England, the head of the NHS announced today. Respiratory consultants, physiotherapists, other specialists and GPs will all help assess, diagnose and treat thousands of sufferers who have reported symptoms ranging from breathlessness, chronic fatigue, "brain fog", anxiety and stress. Increasing medical evidence [...]

News 7 October 2020

Emergency Preparedness, Resilience and Response | Patient care

https://www.england.nhs.uk/2020/10/nhs-to-offer-long-covid-help/

Leeds - Inghilterra

A Multidisciplinary NHS COVID-19 Service to Manage Post-COVID-19 Syndrome in the Community

Journal of Primary Care & Community Health
Volume 12: 1-9
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SAGE

Amy Parkin[1], Jennifer Davison[2], Rachel Tarrant[3], Denise Ross[1], Stephen Halpin[1,2,3], Alex Simms[1], Rashad Salman[1], and Manoj Sivan[1,2,3]

Ann Arbor, Michigan - USA

Post COVID-19 (Long COVID-19) Clinic

The Multidisciplinary Post COVID-19 Clinic, or COVID-19 Long Haul Clinic, provides post-discharge care to adult patients experiencing long-term post COVID symptoms and complications. See the Pediatric Post-COVID Syndrome Clinic page on mottchildren.org for information about treating post-COVID syndrome (or "Long COVID") in children.

Baltimora, Maryland, USA

Am J Med. 2021 Apr;134(4):462-467.e1. doi: 10.1016/j.amjmed.2020.12.009. Epub 2021 Jan 12.

The Johns Hopkins Post-Acute COVID-19 Team (PACT): A Multidisciplinary, Collaborative, Ambulatory Framework Supporting COVID-19 Survivors

Emily Brigham [1], Jacqueline O'Toole [2], Soo Yeon Kim [3], Michael Friedman [3], Laura Daly [2], Adam Kaplin [4], Meghan Swarthout [5], Brian Hasselfeld [6], Melissa Lantz-Garnish [7], Tracy Vannorsdall [4], Anna Agranovich [3], Sarath Raju [2], Ann Parker [8]

Gloucester - Inghilterra

Long-term COVID-19 complications: a multidisciplinary clinic follow-up approach

Hina Iftikhar, Warren L Doherty and Charles Sharp

DOI: https://doi.org/10.7861/clinmed.21-2-s3
Clin Med March 2021

Integrazione tra i diversi livelli di assistenza e lavoro in équipe 4/6

Alcune esperienze regionali

Regione Liguria

- Atto N. 842-2020 del 05/08/2020 - Percorso regionale per la presa in carico post-guarigione da COVID-19 – Presa d'Atto.
- Per persone ospedalizzate per infezione COVID-19 con quadro polmonitico correlato
- Esenzione ticket per tutte le prestazioni di follow-up
- Équipe multispecialistica

Regione Emilia Romagna

- Documento luglio 2020 – Indicazioni regionali sulla organizzazione del follow-up dei pazienti con pregressa infezione da SARS-CoV-2
- Esenzione ticket per tutte le prestazioni di follow-up
- Per pazienti sintomatici, con pregressa polmonite interstiziale ad ampio interessamento d'organo e/o che hanno effettuato terapia steroidea nella fase acuta e/o dimessi in ossigenoterapia (Scenario di riferimento 3): équipe multidisciplinare/multiprofessionale, con infettivologo, internista/geriatra, pneumologo, cardiologo, fisiatra, fisioterapista, neurologo e psichiatra.

Integrazione tra i diversi livelli di assistenza e lavoro in équipe 5/6

Alcune esperienze regionali

Regione Toscana

- DGR n. 744/2020 del 15/06/2020 - Linee di indirizzo regionali per la presa in carico post-guarigione da COVID-19
- Pazienti contattati dall'ospedale o dal MMG, a seconda del setting in cui è avvenuto il percorso di cura della fase acuta
- Approccio multidisciplinare e personalizzato, al fine di identificare precocemente eventuali esiti fisici, psicologici e neurocognitivi.

Regione Abruzzo

- DGR n. 121/2021 del 12/03/2021 – Linee di indirizzo per il follow-up dei pazienti con pregressa infezione da COVID-19
- Un ambulatorio Long-COVID per ogni ASL
- Pazienti contattati dal MMG o medico USCA per questionario/intervista preliminare di screening
- Ambulatorio coordinato da un medico specialista infettivologo
- Équipe multidisciplinare: pneumologo, cardiologo, neurologo, nefrologo, psicologo/psichiatra e almeno un infermiere con specifica formazione.

Integrazione tra i diversi livelli di assistenza e lavoro in équipe 6/6

Alcune esperienze locali

Ambulatorio LONG COVID-Genzano - ASL ROMA 6

- Per pazienti dimessi da reparti di degenza COVID
- Pazienti idonei indirizzati e segnalati alla struttura
- PDTA specifico
- Èquipe multidisciplinare: pneumologi, internisti, geriatri, fisioterapisti, infermieri, psicologi.

Ambulatorio (2 a Frosinone, 1 a Cassino) - ASL FROSINONE

- Dedicato al follow-up dei pazienti COVID-19
- Pazienti contattati direttamente da operatore, tramite lista fornita dal Servizio di Igiene Pubblica
- Équipe multispecialistica

Ospedale Pediatrico Bambino Gesù - Roma

- Ambulatorio pediatrico per pazienti con pregressa infezione lieve da SARS-CoV-2.
- Day Hospital, per pazienti che hanno presentato forme moderate/severe di COVID-19, con équipe multispecialistica: pediatra, infettivologo, reumatologo, broncopneumologo, cardiologo, neurologo, fisiatra e psicologo/psichiatra.

Day Hospital Post-COVID FPG IRCCS - Roma

- Per individui convalescenti dal COVID-19
- Processo di cura coordinato da un geriatra che svolge una valutazione multidimensionale del paziente
- Équipe multidisciplinare: valutazione pneumologica, infettivologica, gastroenterologica, oculistica, otorinolaringoiatrica, angiologica, neurologica, psichiatrica e geriatrica.

In conclusione…

Per una gestione sistemica del Long Covid, le aree da affrontare includono:

- sviluppo di un approccio multidisciplinare e multiprofessionale per la valutazione e la gestione del Long Covid;
- sviluppo di linee guida per gli operatori sanitari, soprattutto dell'assistenza primaria;
- sviluppo, in associazione con pazienti e famiglie, di nuovi percorsi assistenziali;
- creazione di servizi adeguati, tra cui strumenti di riabilitazione e supporto online;
- azioni per affrontare le più ampie conseguenze del Long COVID, compresa l'attenzione ai diritti dei lavoratori, le indennità di malattia, l'accesso ai pacchetti di prestazioni sanitarie;
- implementazione dei registri dei pazienti e altri sistemi di sorveglianza, con creazione di coorti di pazienti da seguire per sostenere la ricerca.

IL LONG COVID

Mercoledì 24 novembre 2021

Grazie per l’attenzione!