I network di ricerca in Medicina del Lavoro ai tempi del COVID-19: esperienze, opportunità e prospettive

Paolo Durando, Alborz Rahmani

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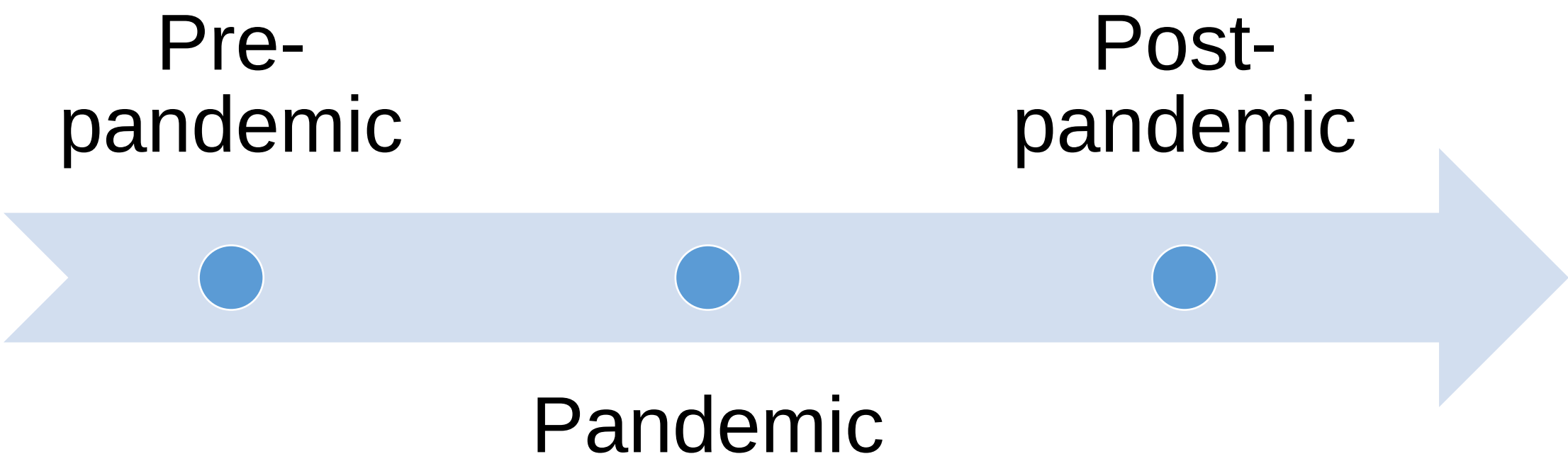
Dipartimento di Scienze della Salute - Università degli Studi di Genova
U.O.C. Medicina del Lavoro
Dipartimento di Staff - Ospedale Policlinico San Martino IRCCS di Genova

I NETWORK NELLA RICERCA IN MEDICINA DEL LAVORO:
UNA PRATICA OBBLIGATA PER LA CRESCITA
COMPLESSIVA DELLA NOSTRA DISCIPLINA

Venerdì 1 dicembre 2023

I network di ricerca in Medicina del Lavoro: esperienze, opportunità e prospettive



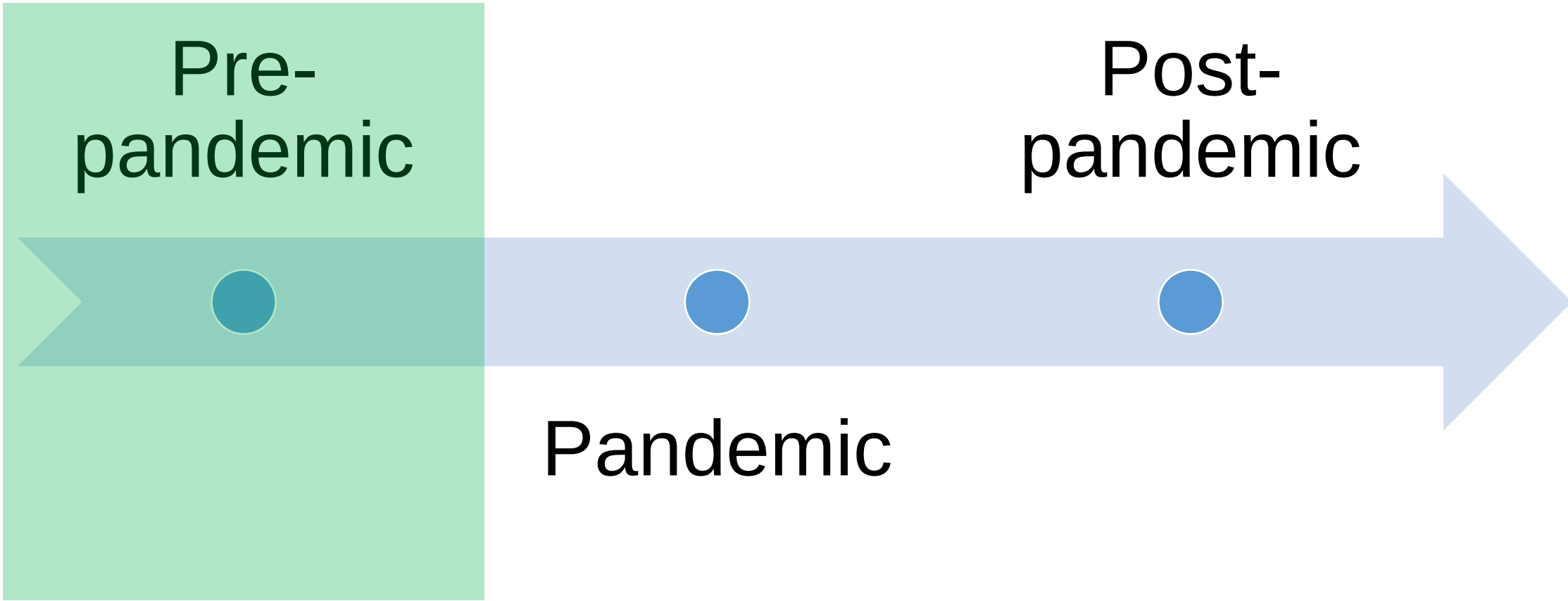
Comitato scientifico

Coordinatore: Prof. Pietro Apostoli

Componenti e specifiche aree tematiche:

Prof.ssa Valentina Bollati, area della medicina molecolare occupazionale e degli stili di vita
Prof. Massimo Corradi, area clinica e strumenti di sorveglianza sanitaria
Prof. Stefano Mattioli, metodologie investigative su malattie lavoro correlate
Prof. Ivo Iavicoli, area tossicologica
Prof. Sergio Iavicoli, area rischi psicosociali
Prof Paolo Boffetta, epidemiologia
Prof. Jos Verbeeck, medicina del lavoro basata sulle prove di efficacia
Prof. Alfonso Cristaudo, strumenti di qualificazione ed aggiornamento
Prof Paolo Durando, area rischio biologico
Prof Francesco Saverio Violante, area patologie muscoloscheletriche

I network di ricerca in Medicina del Lavoro



Gruppi di lavoro

(Delibera C.D.N. 16/06/2016)

I Gruppi di lavoro attualmente operanti sono 10 (più uno ulteriore approvato nel corso dell'ultimo Consiglio Direttivo).
Sono elencati di seguito:

Ruolo del medico del lavoro nella gestione e prevenzione della tubercolosi in ambito occupazionale.

Coordinatore:

Paolo Durando

Membri:

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Monica Lamberti
Vittorio Lodi
Alberto Matteelli
Vincenzo Nicosia
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Maria Gabriella Verso
Guglielmo Dini
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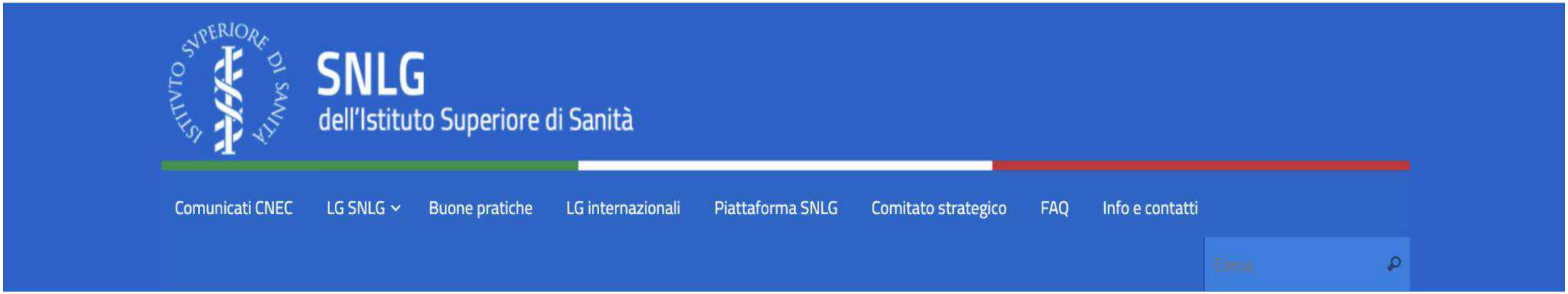
Valentina Marchese
Alfredo Montecucco
Alborz Rahmani

Creazione di un ***network*** **nazionale**, prevalentemente all'interno della comunità dei medici del lavoro – medici competenti, operativo sia per la **redazione di Linee Guida** in ambito di sorveglianza sanitaria, valutazione del rischio, prevenzione e controllo dell'infezione/malattia tubercolare sia in ambito di **progetti di formazione** e **ricerca applicata a valenza nazionale**.

Linee Guida SIML
“Ruolo del medico del lavoro nella gestione e prevenzione della tubercolosi in ambito occupazionale”



Linea guida pubblicata nel Sistema Nazionale Linee Guida, Roma, 28 settembre 2021

Disponibile su: https://newsletter.iss.it/web/guest/-/snlg-tubercolosi-ambito-occupazionale

Gli obiettivi generali delle Linee Guida (LG) sono: […]

Le domande coperte dalle LG sono: […]

I *setting* coperti dalle presenti LG sono: […]

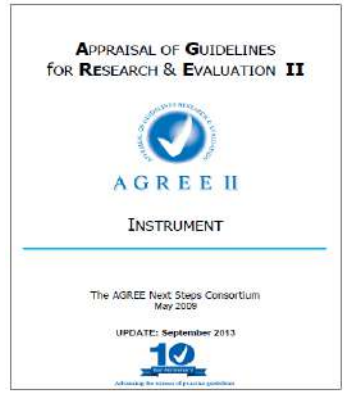
La popolazione *target* oggetto delle presenti LG è rappresentata da: […]

Le Istituzioni a cui sono rivolete le LG sono rappresentate da: […]

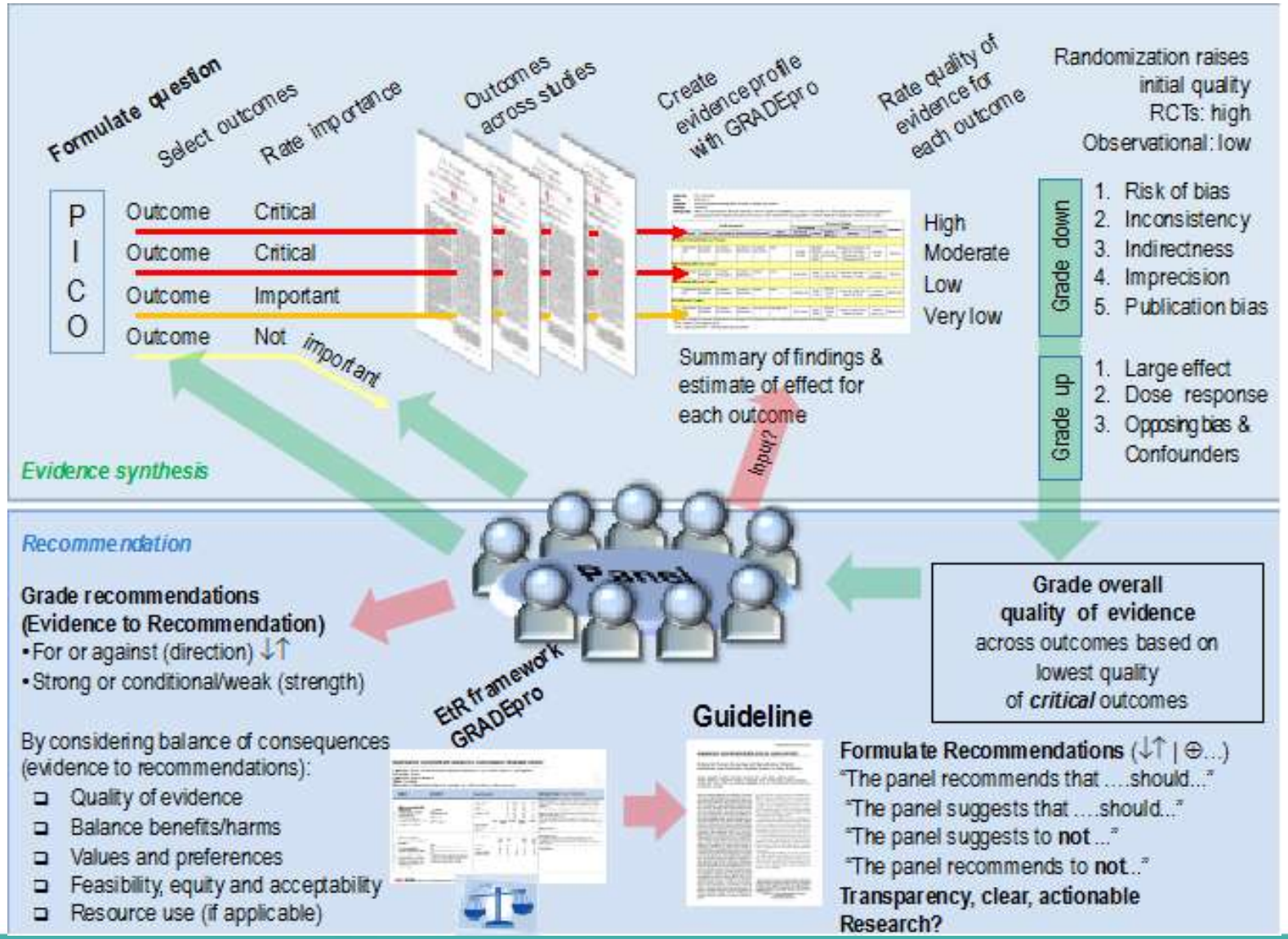
Gli utilizzatori delle presenti LG sono rappresentati da: Medici del Lavoro / Medici Competenti; Medici specialisti di altre discipline […]

La strategia di ricerca sistematica della letteratura scientifica è di seguito delineata: […]

Studi primari, revisioni sistematiche, meta-analisi, altre LG
Quesito posto come PICO e protocollo PRISMA per selezione articoli
Periodo di riferimento: 2000-2020



Qualità dell'evidenza e forza delle Raccomandazioni: approccio *GRADE (Grading of Recommendations, Assessment, Development and Evaluation) (I)*



INAIL
ISTITUTO NAZIONALE PER L'ASSICURAZIONE CONTRO GLI INFORTUNI SUL LAVORO

SCLEROSI MULTIPLA APS/ETS
associazione italiana
un mondo libero dalla SM

OSPEDALE POLICLINICO SAN MARTINO
Sistema Sanitario Regione Liguria
Istituto di Ricovero e Cura a Carattere Scientifico

SOCIETÀ ITALIANA DI MEDICINA DEL LAVORO
Fondata nel 1929
SIML

BRIC 2019

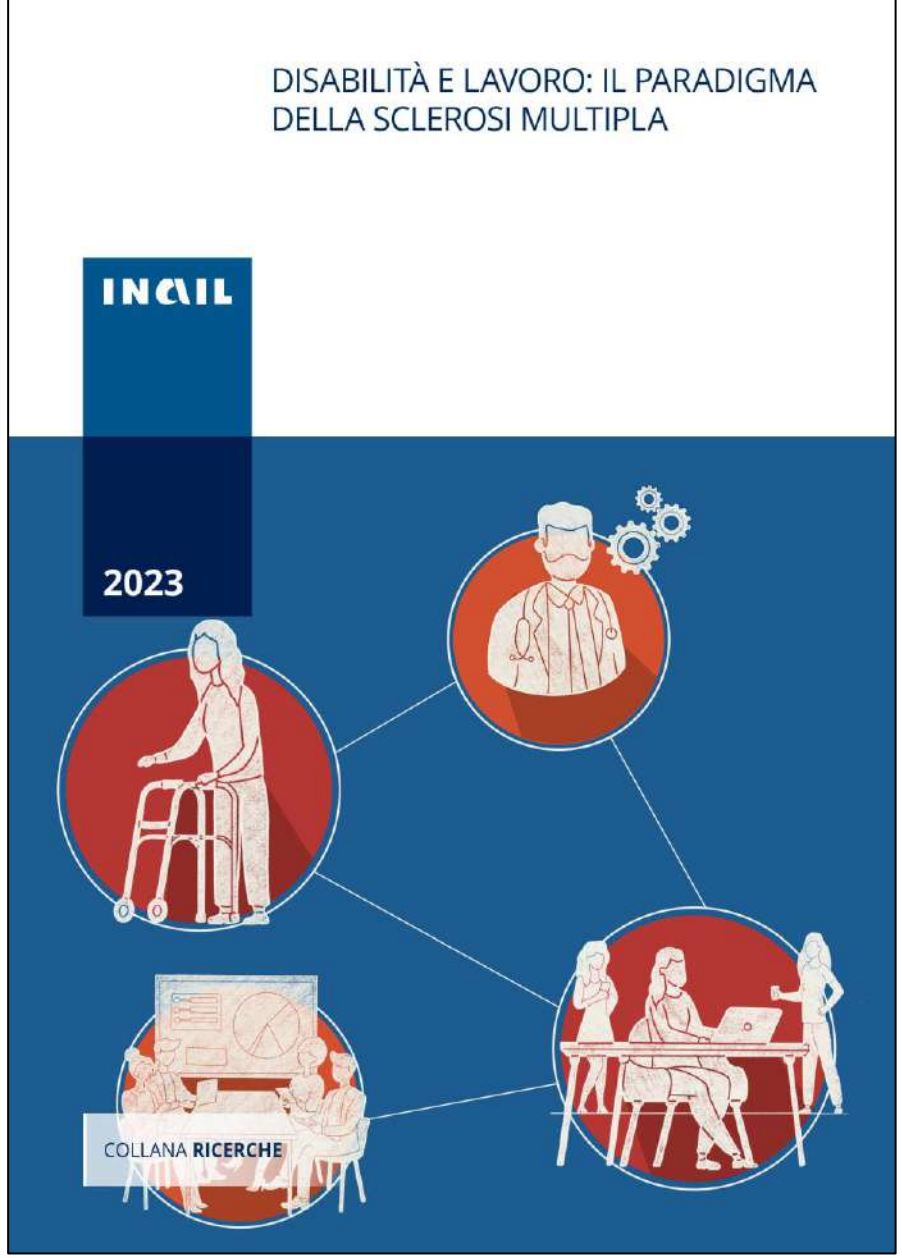
PRISMA: Prevenzione rischi, Reti collaborative, Inclusione lavorativa nella Sclerosi Multipla: dalla conoscenza della realtà lavorativa delle persone con SM in Italia alla messa a punto di modelli e programmi innovativi per l'inclusione lavorativa

Università di Genova | DISSAL Dipartimento di scienze della salute

I NETWORK NELLA RICERCA IN MEDICINA DEL LAVORO:
UNA PRATICA OBBLIGATA PER LA CRESCITA COMPLESSIVA DELLA NOSTRA DISCIPLINA

BRIC 2019

PRISMA: Prevenzione rischi, Reti collaborative, Inclusione lavorativa nella Sclerosi Multipla: dalla conoscenza della realtà lavorativa delle persone con SM in Italia alla messa a punto di modelli e programmi innovativi per l'inclusione lavorativa



Coordinamento scientifico
Benedetta Persechino[1,7]

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I risultati del progetto, ottenuti utilizzando un approccio metodologico caratterizzato da elevato rigore scientifico, contribuiranno ad aggiornare lo stato delle conoscenze relativamente alle criticità e alle opportunità per la tutela della salute in lavoratori affetti da SM in ambito occupazionale, fornendo spunto per ulteriori progetti di ricerca sulle principali tematiche identificate da implementare nell'ambito di riferimento. In particolare, diversi risultati raggiunti andranno a configurarsi quale solido supporto razionale alle attività che saranno intraprese dallo specifico **gruppo di lavoro multidisciplinare sulla tematica 'SM e lavoro'** la cui composizione è stata **approvata a novembre 2022 dal Consiglio direttivo nazionale della Società italiana di medicina del lavoro (SIML).**

Il Gruppo di lavoro della SIML
Sclerosi Multipla e Lavoro

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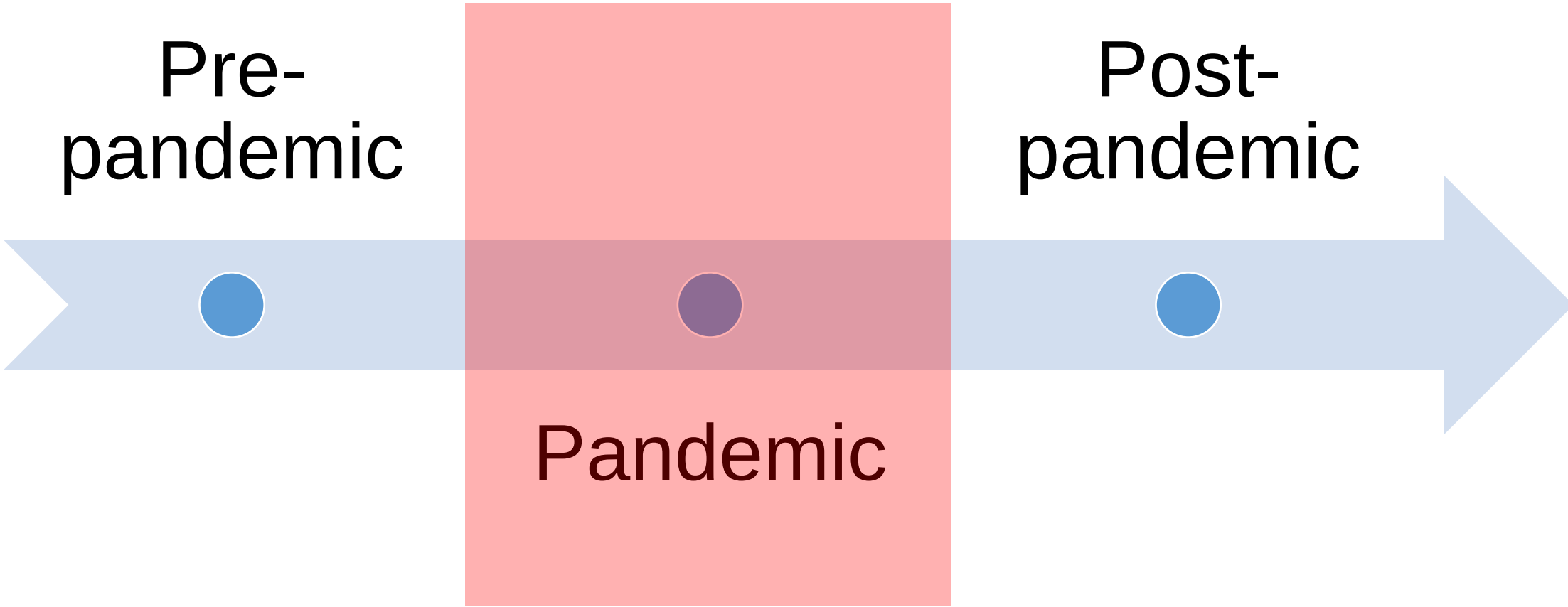
I NETWORK NELLA RICERCA IN MEDICINA DEL LAVORO:
UNA PRATICA OBBLIGATA PER LA CRESCITA COMPLESSIVA DELLA NOSTRA DISCIPLINA

I network di ricerca in Medicina del Lavoro



WHO Health in the World of Work Network

The H-WoW Network is a cross-departmental initiative between Health and Multilateral Partnerships, Global Infectious Hazards Preparedness and Environment, Climate Change and Health.

The initiative follows the World of Work Dialogue in December 2020 which took stock of lessons learned from COVID-19 for future epidemic and pandemic preparedness.

WHO convenes the Health in the World of Work Network with the **goal to increase access to accurate and relevant information and build a community of collaborative sharing** on topics related to health emergency preparedness and response and the **intersection between public health and the workplace**.

Prevention, identification and management of health worker infection in the context of COVID-19

Interim guidance

30 October 2020

World Health Organization

Key points

- Health workers in contact with and/or who care for COVID-19 patients are at a higher risk of infection than the general population. Mitigating and reducing this risk is essential to protecting their well-being and reducing the spread of COVID-19.
- Available scientific evidence suggests that appropriate personal protective equipment use, hand hygiene best practices, implementation of universal masking policies in health care facilities and adequate infection prevention and control (IPC) training and education are associated with decreased risk of COVID-19 among health workers.
- The prevention of SARS-CoV-2 infections in health workers requires a multi-pronged integrated approach that includes occupational health and safety (OHS) measures as well as IPC. All health-care facilities should establish or strengthen and implement (a) IPC programmes and (b) Occupational Health and Safety programmes with protocols to ensure HW safety and prevent HW infections while in the work environment. Ensuring adequate clinical staffing levels is recommended to prevent the transmission of health care-associated infections.
- Early detection of SARS-CoV-2 infection among health workers can be achieved through syndromic surveillance and/or laboratory testing and is a key strategy to prevent secondary transmission from health workers to patients, between health workers throughout health-care settings and from health workers to contacts outside of health facilities. A national and/or local surveillance and testing strategy should be developed and implemented.
- A system for managing exposures based on risk assessment should be in place to promote and support health workers' reporting of occupational and non-occupational exposures to or symptoms of COVID-19.
- A system for managing suspected infections, including measures for health workers who test positive for SARS-CoV-2 and those who are symptomatic and test negative for SARS-CoV-2, should be in place.
- Clear criteria for returning to work should be established according to the WHO principles for discontinuing isolation for COVID-19.
- Health systems and facilities should maintain a blame-free culture with regards to COVID-19 infections in health workers.
- WHO has provided several tools for surveillance and studies to better understand the extent of infections and risk factors for SARS-CoV-2 infection among health workers.

Background

Health workers,[1] in particular those in contact with and/or who care for COVID-19 patients, are at higher risk of being infected with SARS-CoV-2 than the general population.(1,2) Data collected by the World Health Organization (WHO) global surveillance for COVID-19, primarily from European and American countries, estimate that approximately 14% of COVID-19 cases reported to WHO are among health workers. Transmission of the SARS-CoV-2 virus to health workers has been documented to occur in both acute care and long-term care settings; from patients and residents to health workers as well as among health workers, also potentially associated with exposures to infected co-workers in common areas and break rooms.(3–7)

As the pandemic evolves, studies indicate that transmission involving health workers is also occurring in community settings (such as in households) in addition to health care settings.(6,8–12) COVID-19 infections among health workers may lead to a depleted workforce during a time when the demand on the health care system has increased. In addition, health workers who are infected are at risk of transmitting SARS-CoV-2 virus to others in households and other community settings. For more information on evidence of the epidemiology and risk factors of health worker infections see Box 1. An understanding of the transmission of SARS-CoV-2, as described in the WHO Transmission of SARS-CoV-2: implications for infection prevention precautions(1) a key element to implementing appropriate infection prevention measures.

[1] Health workers are defined by WHO as all people engaged in actions with the primary intent of enhancing health, including social care workers who often have roles in the provision of care in long-term care facilities and in community settings. (61)

Acknowledgments

This document was developed in consultation with:

1. The WHO Health Emergencies Programme (WHE) Ad-hoc COVID-19 Guidance Development Group:
Jameela Alsalman, Ministry of Health, Bahrain; Anucha Apisarnthanarak, Thammsat University Hospital, Thailand; Baba Aye, Public Services International, France; Roger Chou, Oregon Health Science University, USA; May Chu, Colorado School of Public Health, USA; John Conly, Alberta Health Services, Canada; Barry Cookson, University College London, United Kingdom (UK); Nizam Damani, Southern Health & Social Care Trust, UK; Dale Fisher, GOARN, Singapore; Tiouiri Benaissa Hanene, CHU La Rabta Tunisia; Joost Hopman, Radboud University Medical Center, The Netherlands; Mushtuq Husain, Institute of Epidemiology, Disease Control & Research, Bangladesh; Kushlani Jayatilleke, Sri Jayewardenapura General Hospital, Sri Lanka; Seto Wing Jong, School of Public Health, Hong Kong SAR, China; Souha Kanj, American University of Beirut Medical Center, Lebanon; Daniele Lantagne, Tufts University, USA; Fernanda Lessa, Centers for Disease Control and Prevention, USA; Anna Levin, University of São Paulo, Brazil; Yuguo Li, The University of Hong Kong, China; Lin Moi Ling, Sing Health, Singapore; Caline Mattar, World Health Professions Alliance, USA; MaryLouise McLaws, University of New South Wales, Australia; Geeta Mehta, Journal of Patient Safety and Infection Control, India; Shaheen Mehtar, Infection Control Africa Network, South Africa; Ziad Memish, Ministry of Health, Saudi Arabia; Babacar Ndoye, Infection Control Africa Network, Senegal; Fernando Otaiza, Ministry of Health, Chile; Diamantis Plachouras, European Centre for Disease Prevention and Control, Sweden; Maria Clara Padoveze, School of Nursing, University of São Paulo, Brazil; Mathias Pletz, Jena University, Germany; Marina Salvadori, Public Health Agency of Canada, Canada; Ingrid Schoeman, TB Proof, South Africa; Mitchell Schwaber, Ministry of Health, Israel; Nandini Shetty, Public Health England, United Kingdom; Mark Sobsey, University of North Carolina, USA; Paul Ananth Tambyah, National University Hospital, Singapore; Andreas Voss, Canisus-Wilhelmina Ziekenhuis, The Netherlands; Walter Zingg, University of Geneva Hospitals, Switzerland.

2. Experts from UNICEF:
Gregory Built, Nagwa Hasanin, Raoul Kamadjeu

3. External Reviewers:
Howard Catton, International Council of Nurses, Switzerland, Raoul Kamadjeu, UNICEF, Antoon De Schryver. IDEWE-Universiteit Antwerpen, The Netherlands; Paolo Durando,University of Geneva,Switzerland; Annalee Yassi, University of British Columbia, Canada.

4. WHO Secretariat:
Benedetta Allegranzi, Gertrude Avortri, Mekdim Ayana, ,April Baller, Elizabeth Barrera-Cancedda, Alessandro Cassini, Giorgio Cometto, Ana Paula Coutinho Rehse, Sophie Harriet Dennis, Sergey Eremin, Dennis Falzon, Nathan Ford, Lice Angulo Gonzalez, Ivan Ivanov, Pierre Claver Kariyo, Ying Ling Lin, Ornella Lincetto, Madison Moon, Takeshi Nishijima, Kevin Ousman, Nahoko Shindo, Alice Simniceanu, Valeska Stempliuk, Maha Talaat Ismail, Joao Paulo Toledo, Maria Van Kerkhove, Vicky Willet, Masahiro Zakoji, Bassim Zayed, Matteo Zignol.

0014915-29/04/2020-DGPRE-DGPRE-P

Ministero della Salute

DIREZIONE GENERALE DELLA PREVENZIONE SANITARIA
Ufficio 4

Oggetto: Indicazioni operative relative alle attività del medico competente nel contesto delle misure per il contrasto e il contenimento della diffusione del virus SARS-CoV-2 negli ambienti di lavoro e nella collettività.

La salute e la sicurezza dei luoghi di lavoro vedono coinvolte numerose figure professionali, ciascuna con compiti e responsabilità ben precisi, secondo quanto regolamentato dal D.lgs. 81/2008 e s.m.i..
Il sistema di prevenzione nazionale ed aziendale realizzatosi nel tempo offre la naturale infrastruttura per l'adozione di un **approccio integrato alla valutazione e gestione del rischio connesso all'attuale emergenza pandemica.**
L'attività di prevenzione nei luoghi di lavoro, sia nella fase di "lockdown" sia nella fase di riapertura delle attività produttive sospese in corso di pandemia da SARS-COV 2 ha, con maggiore valenza di sempre, un duplice obiettivo:

- Tutela salute e sicurezza del lavoratore
- Tutela della collettività

Se il ruolo del medico competente risulta di primo piano nella tutela della salute e sicurezza sul lavoro nell'ordinarietà dello svolgimento delle attività lavorative, esso si amplifica nell'attuale momento di emergenza pandemica, periodo durante il quale egli va a confermare il proprio ruolo di "consulente globale" del datore di lavoro.

Istituto Superiore di Sanità
EpiCentro - L'epidemiologia per la sanità pubblica

SARS-CoV-2: Rapporti tecnici IPC
A partire dal 7 marzo 2020

SOCIETÀ ITALIANA DI MEDICINA DEL LAVORO
Fondata nel 1929
SIML

Gruppo di Lavoro ISS Prevenzione e Controllo delle Infezioni

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Antonella Agodi, Università degli Studi di Catania, Catania
Luigi Bertinato, Istituto Superiore di Sanità, Roma
Paolo Durando, Università degli Studi Genova, Genova
Roberto Monaco - FNOMCEO
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Maria Luisa Moro, Agenzia sanitaria e sociale regionale Emilia-Romagna, Bologna
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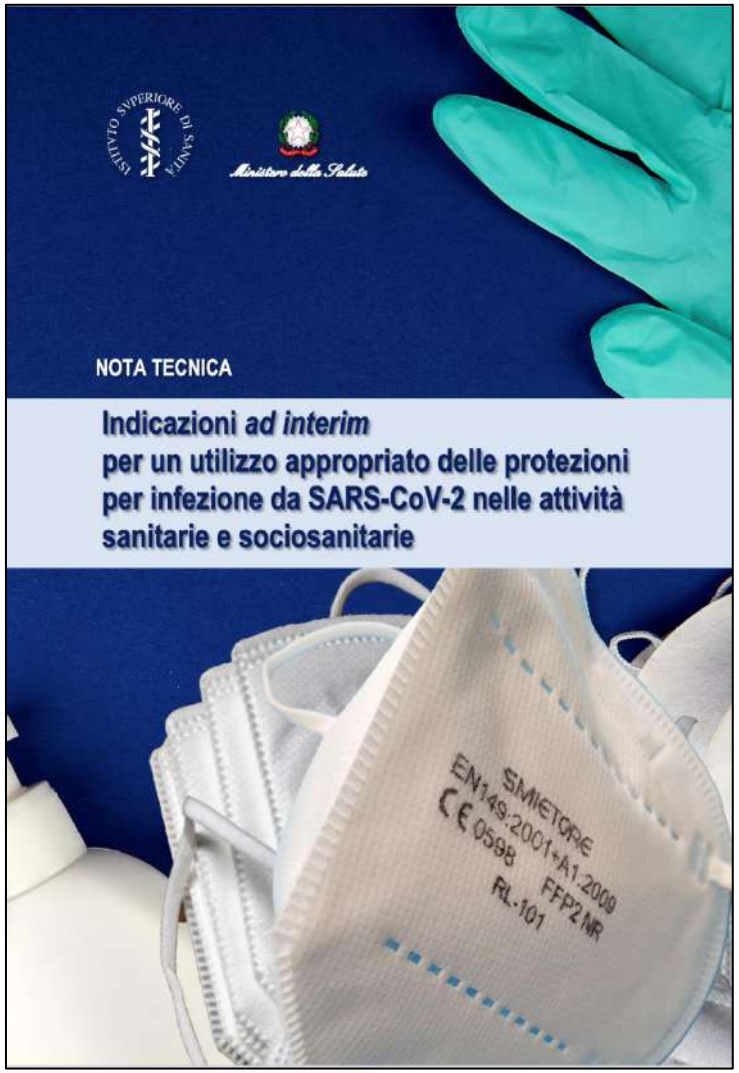
Angelo Pan, ASST Cremona, Cremona
Annalisa Pantosti, Istituto Superiore di Sanità, Roma
Nicola Petrosillo, Istituto Nazionale per le Malattie Infettive
Gaetano Privitera, Università degli studi di Pisa, Pisa

con la collaborazione di
Organizzazione Mondiale della Sanità HQ – Ginevra

Istituto Superiore di Sanità
EpiCentro - L'epidemiologia per la sanità pubblica

Nota Tecnica
ISS – Ministero della Salute



Indicazioni *ad interim* per un utilizzo appropriato delle protezioni per infezione da SARS-CoV-2 nelle attività sanitarie e sociosanitarie

aggiornato al 27 maggio 2022

Fortunato "Paolo" D'Ancona, Istituto Superiore di Sanità, Roma
Giulia Fadda, Istituto Superiore di Sanità, Roma
Adriano Grossi, Istituto Superiore di Sanità, Roma
Jessica Iera, Istituto Superiore di Sanità, Roma
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Alessia D'Alisera, Ministero della Salute, Roma
Guglielmo Dini, Università degli Studi Genova, Genova
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Angelo Pan, ASST Cremona, Cremona
Annalisa Pantosti, già Istituto Superiore di Sanità, Roma
Nicola Petrosillo, Policlinico Universitario Campus Bio-Medico, Roma
Gaetano Privitera, Istituto Superiore di Sanità, Roma
Gianluca Pucciarelli, Università degli Studi di Roma "Tor Vergata", Roma

A1. DPI e dispositivi medici indicati per la prevenzione del contagio da SARS-CoV-2 per contesto e destinatari dell'indicazione

Contesto	Destinatari dell'indicazione	Tipologia di DPI
Caso sospetto o confermato di COVID-19 (in tutti i setting)	Personale sanitario/socio-assistenziale Visitatori (se ammessi)	Filtrante FFP2/FFP3
		Occhiali di protezione / occhiale a mascherina / visiera
		Guanti o doppio guanto*
		Camice monouso/grembiule monouso/tuta
		Cuffia (opzionale)
		Calzari (opzionale)
Procedure o setting a rischio di generazione di aerosol	Personale sanitario/socio-assistenziale	Filtrante FFP2/FFP3
		Occhiali di protezione / occhiale a mascherina / visiera
		Guanti
		Camice monouso/grembiule monouso
		Cuffia
		Calzari
Reparti di degenza non-COVID-19	Personale sanitario/socio-assistenziale	FFP2, per visita guanti e altri DPI in base a valutazione del rischio
	Pazienti	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
	Visitatori	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
Pronto soccorso	Personale sanitario/socio-assistenziale	FFP2, per visita guanti e altri DPI in base a valutazione del rischio
	Pazienti	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
	Accompagnatori	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
Ambulatorio (incluse le sale di attesa)	Personale sanitario/socio-assistenziale	FFP2, per visita guanti e altri DPI in base a valutazione del rischio
	Pazienti e accompagnatori	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
Aree amministrative	Tutto il personale	Secondo la valutazione del rischio del datore di lavoro
Ambulanza o mezzo di trasporto	Personale sanitario/socio-assistenziale	FFP2, altri DPI in base a valutazione del rischio
	Paziente	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
Assistenza domiciliare a paziente non-COVID-19	Personale sanitario/socio-assistenziale	FFP2, per visita guanti e altri DPI in base a valutazione del rischio
	Paziente	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente
	Caregiver	Mascherina chirurgica/altro dispositivo previsto dalla normativa vigente

*Il doppio guanto può essere considerato in contesti ad elevato rischio di esposizione in cui sia necessario cambiare frequentemente i guanti, come sopra dettagliato nel testo.

PROVIDER N. 2224

Corso di Formazione a Distanza

Campagna vaccinale Covid-19: focus di approfondimento per la somministrazione in sicurezza del vaccino anti SARS-CoV2/COVID19 nei luoghi di lavoro (II edizione)

22 dicembre 2021 – 26 maggio 2022

organizzato da

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e
INAIL – Dipartimento di Medicina Epidemiologia Igiene del Lavoro e Ambientale (DiMEILA)
e
Società Italiana di Medicina del Lavoro (SIML)

scientific reports Sci Rep. 2021 Mar 11;11(1):5788.

Determinants of SARS-CoV-2 infection in Italian healthcare workers: a multicenter study

Paolo Boffetta[1,2✉], Francesco Violante[2], Paolo Durando[3,4], Giuseppe De Palma[5], Enrico Pira[6], Luigi Vimercati[7], Alfonso Cristaudo[8,9], Giancarlo Icardi[3,4], Emma Sala[10], Maurizio Coggiola[11], Silvio Tafuri[7], Vittorio Gattini[8,9], Pietro Apostoli[5,12], Giovanna Spatari[13] & Working Group on SARS-CoV-2 Infection in Italian Healthcare Workers*

Working Group on SARS-CoV-2 Infection in Italian Healthcare Workers

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- Given the lack of information on determinants of infection in this important occupational group, and the relevance of such data for other groups of the population, we undertook an **analysis of clinical and occupational data collected among more than 10,000 Italian HCWs** who were tested for presence of SARS-CoV-2 **during March and April 2020**.

- **No differences in the risk of infection were detected for job titles**, although there was some heterogeneity in results among centers.

- **Working in a COVID-19 designated department was not a risk factor for infection**.

- **Contact with a patient was associated with a higher risk of SARS-CoV-2 infection** compared to contact with a colleague, which represented the majority of contacts at the workplace.

- **The use of any mask appeared to be the single most effective approach to reduce risk**.

- **Strong protection offered by the use of a surgical or FFP2/3 mask by both the HCW and the patient: the effects of the two devices appear to be additive**.

Table 5. Odds ratio of SARS-CoV-2 infection in HCW according to source of contact and use of PPE

Variable	*N pos/neg*	*OR*	*95% CI*
Job *			
Nurse	278/3635	1·0	Ref·
Physician	168/2949	1·01	0·80-1·26
Health care assistant	112/1359	1·10	0·86-1·41
Technician	55/567	1·05	0·76-1·45
Other	36/498	0·92	0·62-1·36
Department of employment **			
Non-COVID-19 designated	419/7905	1·0	Ref·
COVID-19 designated	144/1185	0.96	0.76-1.23
Exposure †			
Out of workplace	30/138	0·98	0·47-2·05
At workplace	350/2706	0·52	0·21-1·27
Colleague	223/2715	0·60	0·43-0·84
Patient	229/2434	1·18	0·84-1·65
Use of PPE ‡			
Any mask	267/4794	0·69	0·47-1.00
Face shield	121/3164	1·22	0·83-1·79
Gloves	215/4053	0·72	0·50-1·02
Gown	127/3220	1·39	0·94-2·09
Any PPE	317/6427	0·94	0·76-1·16
Use of mask by contact			
Any mask (contact) §	32/742	0·52	0·32-0·85
Any mask (HCW and contact)	22/659	0·30	0·16-0·55

OR, odds ratio; CI, confidence interval; Ref, reference category
* OR adjusted for sex, age, and center
** OR adjusted for sex, age, center, and job title
† Self-reported source of contact at least one contact; OR adjusted for sex, age, center and other sources of contacts
‡ Self-reported PPE at least one contact; OR adjusted for sex, age, center, job title and other PPE
§ Self-reported at least one contact; OR adjusted for sex, age, center and use of mask by HCW

Collaborazione multi-disciplinare in ambito di innovazione tecnologica e ricerca scientifica

La Medicina del Lavoro

Med Lav 2021; 112, 2: 107-114
DOI: 10.23749/mdl.v112i2.10032

Modified full-face snorkeling mask for thoracic surgery and otolaryngology surgical use: comfort and usability assessment during the COVID-19 pandemic

Tommaso Cacco[1,2*], Marco Fragale[1,2*], Claudio Sampieri[1,2*], Eolo Castello[1], Carlo Risso[5], Maria Teresa Piras[5], Paolo Durando[3,4], Alfredo Montecucco[3,4], Gian Luca Pariscenti[5], Giorgio Peretti[1,2]

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Multivariable weighted Cox hazard models of the association between 2020/21 influenza vaccination and SARS-CoV-2 first positive test ($N = 2561$).

Variable	Level	Model 1		Model 2[1]	
		npHR (95% CI)	*p*-value	npHR (95% CI)	*p*-value
Influenza vaccine	No	Ref	–	Ref	–
	Yes	0.37 (0.22–0.62)	<0.001	0.17 (0.09–0.34)	<0.001
Sex	Male	Ref	–	Ref	–
	Female	0.79 (0.55–1.16)	0.23	0.76 (0.52–1.11)	0.15
Age, years	1-year increase	1.00 (0.99–1.01)	0.91	0.99 (0.98–1.00)	0.17
Nationality	Italian	Ref	–	Ref	–
	Immigrant	1.38 (0.69–2.75)	0.37	1.39 (0.70–2.74)	0.34
SARS-CoV-2 testing frequency	1-unit increase	0.98 (0.93–1.04)	0.48	1.09 (1.02–1.16)	0.013

Vaccine 40 (2022) 1755–1760

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Effect of the 2020/21 season influenza vaccine on SARS-CoV-2 infection in a cohort of Italian healthcare workers

Alexander Domnich[a,*], Andrea Orsi[a,b,c], Laura Sticchi[a,b], Donatella Panatto[b,c], Guglielmo Dini[b,d], Allegra Ferrari[b], Matilde Ogliastro[b], Simona Boccotti[b], Vanessa De Pace[a], Valentina Ricucci[a], Bianca Bruzzone[a], Paolo Durando[b,c,d], Giancarlo Icardi[a,b,c]

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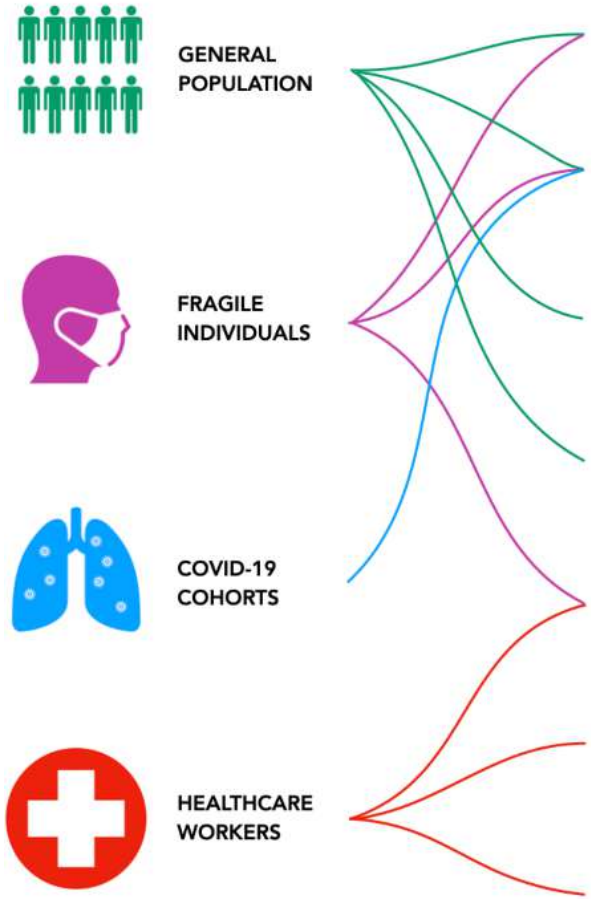
I NETWORK NELLA RICERCA IN MEDICINA DEL LAVORO:
UNA PRATICA OBBLIGATA PER LA CRESCITA COMPLESSIVA DELLA NOSTRA DISCIPLINA

Progetti di ricerca internazionali: ORCHESTRA

https://orchestra-cohort.eu/

Connecting International Cohorts

to increase common and effective response to SARS-CoV2 Pandemic



Identify different treatment approaches according to patient characteristics.

Evaluate different types of Long COVID according to symptoms, protective factors and risk factors.

Measure the impact of environment, socioeconomic status, lifestyle and confinement measures on the development of COVID-19 disease.

Investigate epigenetic, immunological and microbiological aspects involved in SARS-CoV-2 infection.

Monitor the response to COVID vaccination of fragile populations and health workers.

Check the effectiveness of personal protective equipment in relation to local availability, compliance and screening programmes.

Measure the incidence of infections in high-risk populations such as healthcare workers.

ORCHESTRA is a three-year international research project aimed at tackling the coronavirus pandemic, **led by the University of Verona** and involving **26 partners** (extending to a wider network of 37 partners) from 15 countries: Argentina, Belgium, Brazil, Congo, France, Gabon, Germany, India, Italy, Luxemburg, Netherlands, Romania, Slovakia, Spain, Venezuela.

The project is funded by the European Union's Horizon 2020 research and innovation programme under the ERAvsCORONA Action Plan which was developed jointly by Commission services and national authorities.

Journal of Epidemiology and Global Health (2023) 13:577–588
https://doi.org/10.1007/s44197-023-00139-8

RESEARCH ARTICLE

Incidence and Determinants of Symptomatic and Asymptomatic SARS-CoV-2 Breakthrough Infections After Booster Dose in a Large European Multicentric Cohort of Health Workers-ORCHESTRA Project

Stefano Porru[1,2] · Maria Grazia Lourdes Monaco[2] · Gianluca Spiteri[2] · Angela Carta[1,2] · Gulser Caliskan[3] · Concepción Violán[4,5] · Pere Torán-Monserrat[4,5] · Luigi Vimercati[6] · Silvio Tafuri[6] · Paolo Boffetta[7] · Francesco Saverio Violante[7] · Emma Sala[8] · Emanuele Sansone[9] · Fabriziomaria Gobba[10] · Loretta Casolari[11] · Andreas Wieser[12,13,14,15] · Christian Janke[12] · Adonina Tardon[16] · Marta Maria Rodriguez-Suarez[17] · Filippo Liviero[18,19] · Maria Luisa Scapellato[18,19] · Marco dell'Omo[20] · Nicola Murgia[21] · Dana Mates[22] · Violeta Claudia Calota[22] · Jozef Strhársky[23] · Mariana Mrázová[24] · Enrico Pira[25] · Alessandro Godono[25] · Greta Camilla Magnano[26] · Corrado Negro[26] · Giuseppe Verlato[3] · Orchestra WP5 Working Group

Received: 15 May 2023 / Accepted: 5 July 2023 / Published online: 22 July 2023

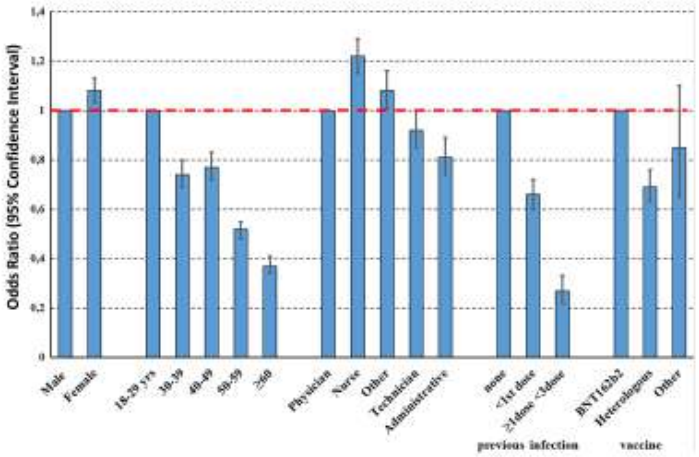


Fig. 1 Determinants of BI after the booster dose, investigated by a two-level logistic regression model, where level-1 units (HW) were nested into level-2 units (participating centres)

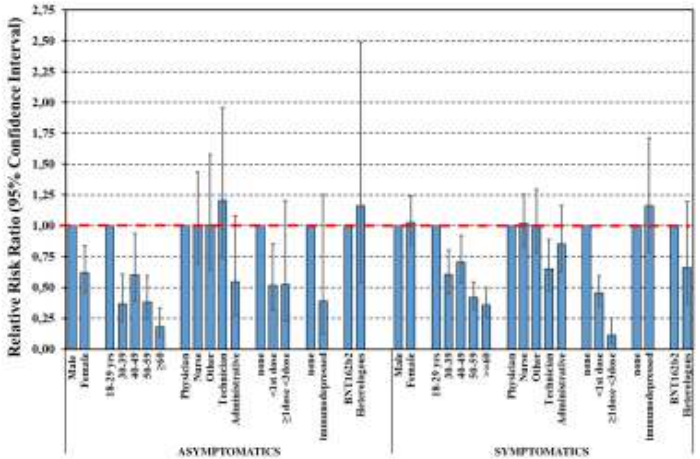


Fig. 2 Determinants of BI investigated by a two-level multinomial logistic regression model (outcome where 0 = no infection, 1 = asymptomatic infection, 2 = symptomatic infection), where level-1 units (health worker) were nested into level-2 units (participating centres)

Springer

Previous infection protected against asymptomatic infection [Relative Risk Ratio (RRR) of recent infection vs no infection 0.53, 95% CI 0.23–1.20] and even more against symptomatic infections [RRR 0.11, 95% CI 0.05–0.25]. Symptomatic infections increased from 70.5% in HW receiving the booster dose since < 64 days to 86.2% when time elapsed was > 130 days.

The risk of breakthrough infections (BI) after booster is significantly reduced by previous infection, heterologous vaccination, and older ages. **Immunosuppression is relevant for increased BI incidence**. Time elapsed from booster affects BI severity, confirming the public health usefulness of booster.

La Medicina del Lavoro

Reviews, Commentaries, Perspectives

Med Lav 2022; 113 (2): e2022014
DOI: 10.23749/mdl.v113i2.12724

Duration of SARS-CoV-2 shedding and infectivity in the working age population: a systematic review and meta-analysis

Alborz Rahmani [1,2], Guglielmo Dini [1,2], Veruscka Leso [3], Alfredo Montecucco [2], Bruno Kusznir Vitturi [1], Ivo Iavicoli [3], Paolo Durando [1,2]

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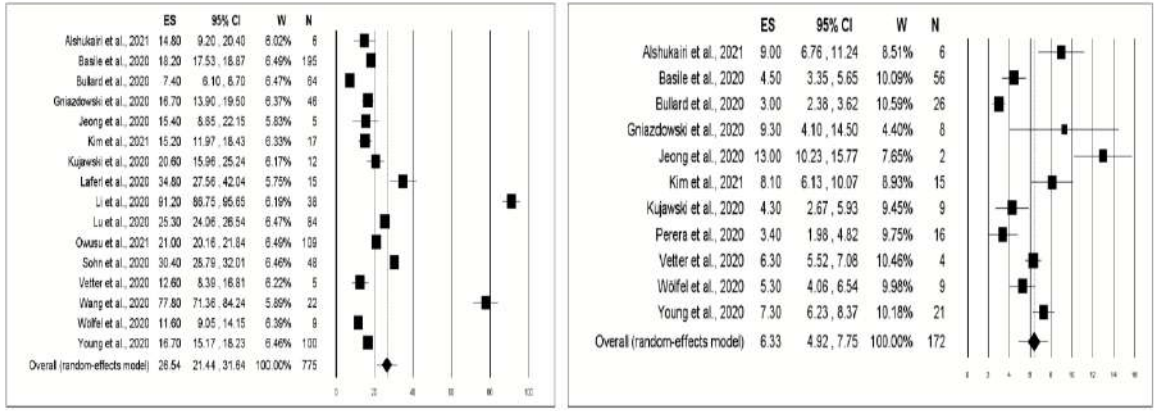


Figure 2. Pooled mean duration in days of viral RNA shedding (A) and viable virus detection (B) among immunocompetent individuals

Table 2. Maximum duration of viral shedding and infectivity in studies with immunocompetent population. When available, details of patients are reported.

Study	Maximum duration of viral shedding (days since symptom onset)	Maximum duration of infectivity (days since symptom onset)
Alshukairi AN et al., 2021	24	11
Basile K et al., 2020	29	18
Bullard J et al., 2020	21	8
Gniazdowski V et al., 2020	51 in severe case (45 in mild case)	22 in severe case, still symptomatic (16 in mild case)
Jeong HW et al., 2020	30 in severe case	15 in severe case
Kim JY et al., 2021	33 in severe case (28 in mild case)	17 in severe case (12 in mild case)
Kujawski SA et al., 2020	36	9
Laferl H et al., 2020*	58	none (first sample was at minimum 19 days after symptom onset)
Li Q et al., 2020*	105	none (two subjects excluded due to age)
Lu J et al., 2020*	46	none (first sample was at minimum 16 days after symptom onset)
Owusu D et al., 2021	38	none (first sample was at minimum 12 days after symptom onset)
Perera RAPM et al., 2020	67	8
Sohn Y et al., 2020*	NA	none (first sample was at minimum 20 days from symptom onset)
Vetter P et al., 2020	19	7
Wang X et al., 2020*	112	none (first sample was at minimum 50 days from symptom onset)
Wölfel R et al., 2020	28	8
Young BE et al., 2020	48	14

The mean duration of SARS-CoV-2 infectivity was 6.3 days (95%CI 4.9-7.8) in immunocompetent individuals.

The maximum duration of infectivity among immunocompetent subjects was reported after 18 days from symptom onset.

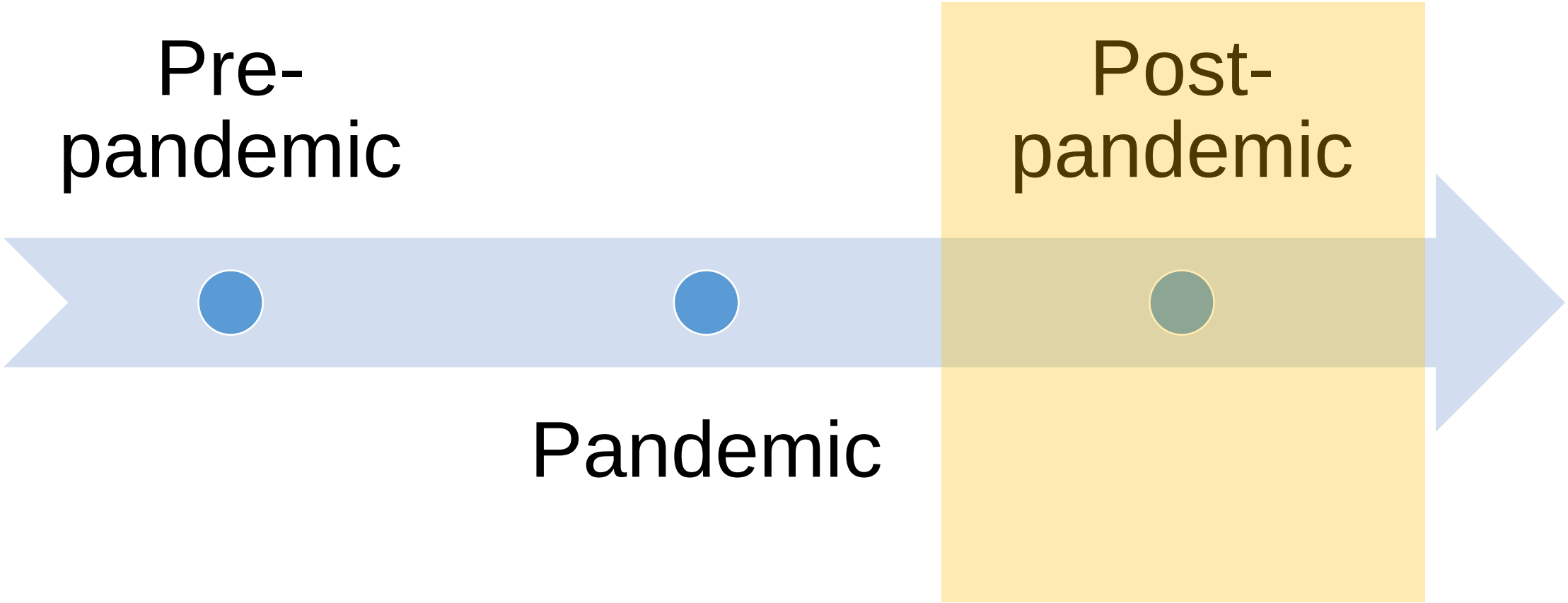
Summary of Guidance for Minimizing the Impact of COVID-19 on Individual Persons, Communities, and Health Care Systems — United States, August 2022

Greta M. Massetti, PhD[1]; Brendan R. Jackson, MD[1]; John T. Brooks, MD[1]; Cria G. Perrine, PhD[1]; Erica Reott, MPH[1]; Aron J. Hall, DVM[1]; Debra Lubar, PhD[1]; Ian T. Williams, PhD[1]; Matthew D. Ritchey, DPT[1]; Pragna Patel, MD[1]; Leandris C. Liburd, PhD[1]; Barbara E. Mahon, MD[1]

Isolation. Symptomatic or infected persons should isolate promptly, and infected persons should remain in isolation for ≥5 days and wear a well-fitting and high-quality mask or respirator if they must be around others. Infected persons may end isolation after 5 days, only when they are without a fever for ≥24 hours without the use of medication and all other symptoms have improved, and they should continue to wear a mask or respirator around others at home and in public through day 10¶¶¶ (Figure) (*22,23*).

22. Rahmani A, Dini G, Leso V, et al. Duration of SARS-CoV-2 shedding and infectivity in the working age population: a systematic review and meta-analysis. Med Lav 2022;113:e2022014. PMID:35481581
23. Jefferson T, Spencer EA, Brassey J, Heneghan C. Viral cultures for coronavirus disease 2019 infectivity assessment: a systematic review. Clin Infect Dis 2021;73:e3884–99. PMID:33270107 https://doi.org/10.1093/cid/ciaa1764

I network di ricerca in Medicina del Lavoro



BRIC 2022

PROGETTO PRATI (Progetto di Ricerca Attiva delle Tecnopatie Infettive)

Attivazione di una rete in cui diverse strutture (Servizi territoriali delle ASL, Ospedali, Università, INAIL) collaborino alla sorveglianza epidemiologica delle malattie-infortunio causate dagli agenti biologici negli ambienti di lavoro, tramite lo sviluppo di un sistema di monitoraggio e di valutazione dei fattori di rischio presenti sul territorio

IL PROGETTO BRIC INAIL SUL RISCHIO BIOLOGICO IN AMBITO SANITARIO: ESEMPIO DI NETWORK DI RICERCA APPLICATA PER LA TUTELA DELLA SALUTE OCCUPAZIONALE

S. Mattioli[1], N. Murgia[1], S. Curti[2], M.N. Ballarin[3], C.T. Cecchino[4], G. De Palma[5], G. Dini[6], S. Dore[7], P. Durando[6], G. Mancini[8], M.R. Monaco[9], D. Talini[10], G. Campo[11], A. Papale[11], A. Leva[11]

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8 UOC PSAL, Azienda USL della Romagna, Ravenna
9 SPSAL, ASL2 Lanciano Vasto Chieti
10 CERIMP, UF PISLL Azienda USL Toscana Centro, Firenze
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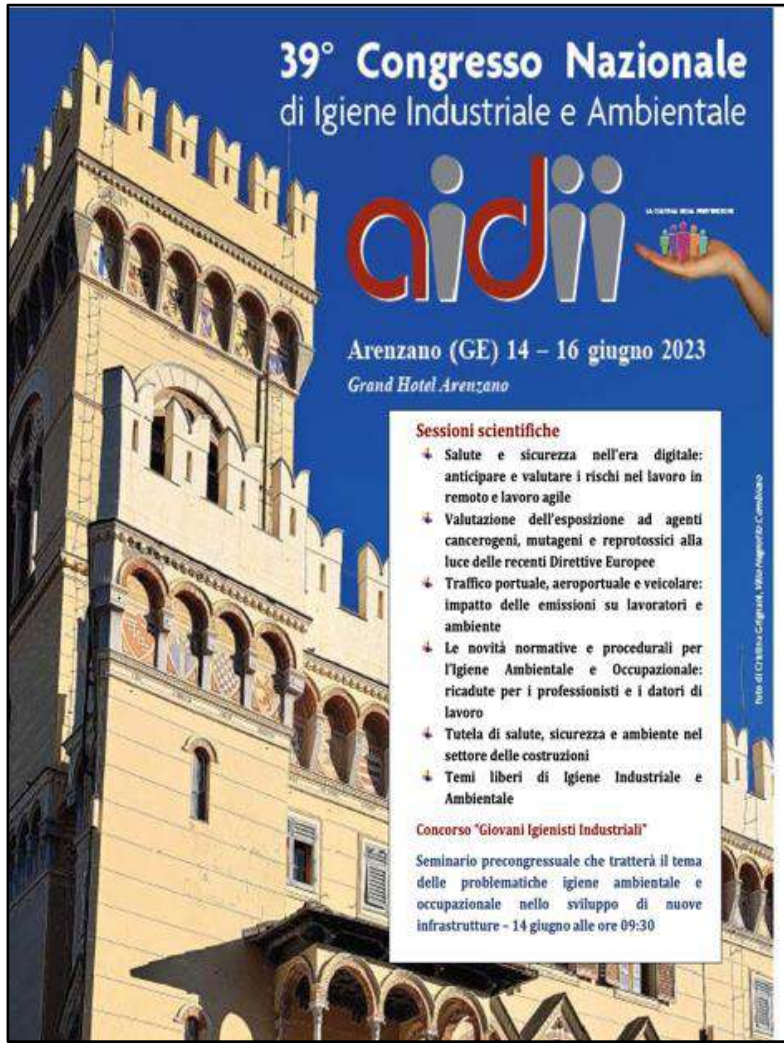
I NETWORK NELLA RICERCA IN MEDICINA DEL LAVORO:
UNA PRATICA OBBLIGATA PER LA CRESCITA COMPLESSIVA DELLA NOSTRA DISCIPLINA

Approccio integrativo tra competenze professionali complementari in tutte le dimensioni dei rischi professionali



Arenzano, 14 giugno 2023
Relazione introduttiva

Nuovo paradigma per la valutazione e gestione del rischio biologico in ambito occupazionale a seguito dell'esperienza pandemica da SARS-CoV-2

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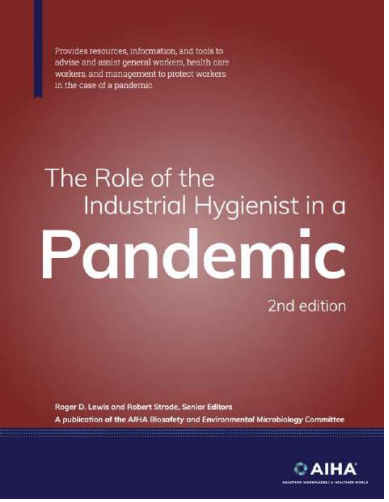


Roles and responsibilities

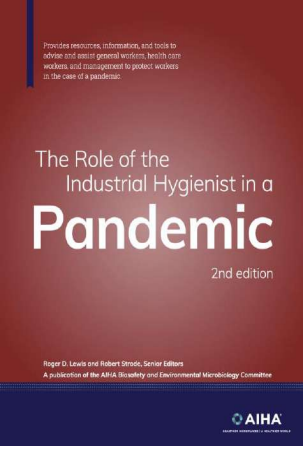
https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Role-of-the-Industrial-Hygienist-in-a-Pandemic-2nd-edition.pdf

This includes the following tasks:

- Understanding of aerosol science and respirable pathogens, (i.e., there is no bright line between droplet and airborne transmission of viruses);
- Sources of infection can be controlled through appropriate nose and mouth covers ("face coverings");
- Face coverings differ from actual respirators that protect highly exposed and vulnerable workers and those with whom they work;
- Need for innovative research in workplace sampling and control of airborne pathogens;
- Need for research and development in the area of occupational limits for biological agents in the workplace.

Lessons learned

- **Industrial hygienists can play a significant role by working with and educating engineers and public health and healthcare personnel**
- **Industrial hygienists can enhance understanding of the exposures and risks associated with pandemic agents, as well as explain how to control those exposures and risks**
- **Industrial hygienists should remember that in a pandemic, the "perfect should not be the enemy of the good"**



Occupational Exposure Banding (OEB)

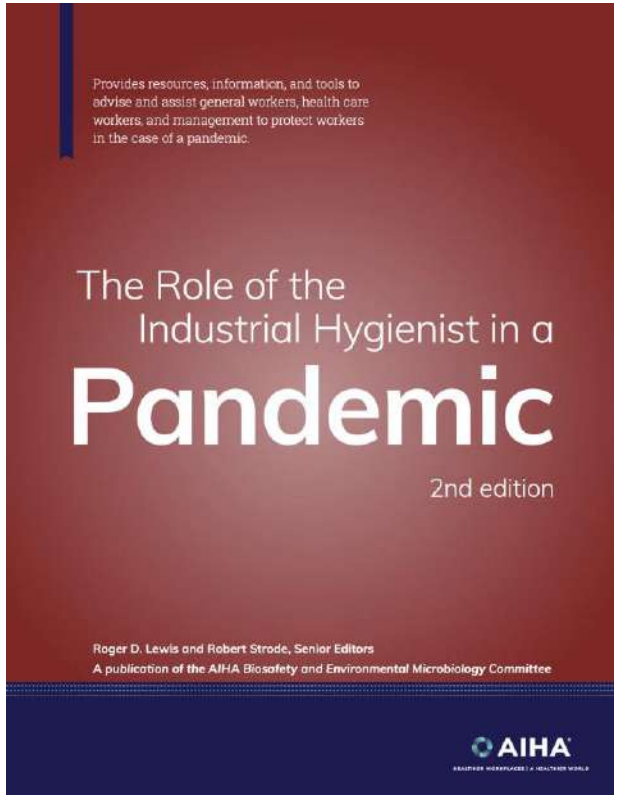
Occupational Exposure Banding (OEB), sometimes also called Exposure Banding (EB) or hazard banding, is a unique chemical assessment process developed by NIOSH and relies on **hazard-based data to identify the hazard potential** and establish an airborne concentration range for chemicals.

Potential for Future Use: OEBs for Infectious Agents

- **It may be possible in the future to utilize OEBs for classification of infectious diseases into exposure bands as additional knowledge regarding the agents' infectious characteristics and more complete toxicological data are published for these illnesses**.

- **OELs generally have not been published for biological hazards, as there are complex issues in determining an appropriate OEL**. Some of these issues include lack of appropriate sampling methods, lack of human dose-response information, impact of individual susceptibility, mode of transmission, source/reservoir identification, and lack of viable environmental/ aerosol concentration data for biological agents.

- The use of an OEB with a category concentration modification for environmental surface wipe and infectious aerosol concentrations could address some of these issues. This could be accomplished by allowing **the use of toxicological studies to place causative agents in more or less stringent categories according to infectious potential, virulence, and particle size distribution**.



Lessons learned

•**Although there are many similarities between chemical, physical, and biological exposure assessments, pandemic agents differ in that**:

1) they may be ill-defined in terms of the route of exposure and their stability and viability in the environment;
2) the dose required to cause infection may be consistent, but the health effects elicited may be highly variable depending on receptor factors such as age, gender, comorbidities, etc.;
3) they lack OELs to guide the industrial hygienist, even when quantitative sampling and analytical methods are available.

•**The predominant mode of transmission of a disease may not be what was originally postulated**. For most pandemics, airborne transmission should not be disregarded simply because droplet and/or contact transmission are known to occur and/or because the airborne transmission is difficult to verify.

•**The concepts of TEH and TWH may be highly applicable during a pandemic** because the hazard is likely to be present in the workplace, at home, and in social environments.

• **The use of occupational exposure banding for biological hazards is in its developmental stages**; however, this process **may lead to qualitative and semi-quantitative exposure metrics in the future**.

BOHS
The Chartered Society for Worker Health Protection
Website : http://www.bohs.org/
Email any enquires to: marketing@bohs.org

Occupation Risk Rating and Control Options According to Exposure Rank

Control Banding

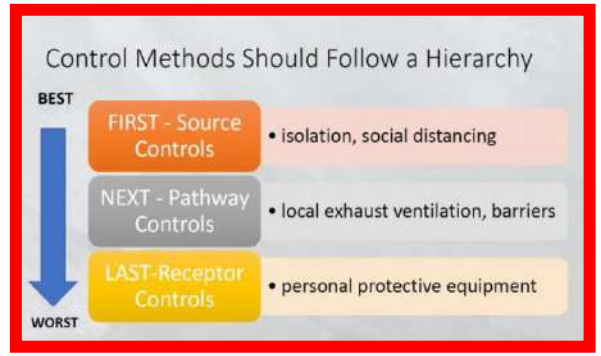
Exposure = Likelihood x Duration

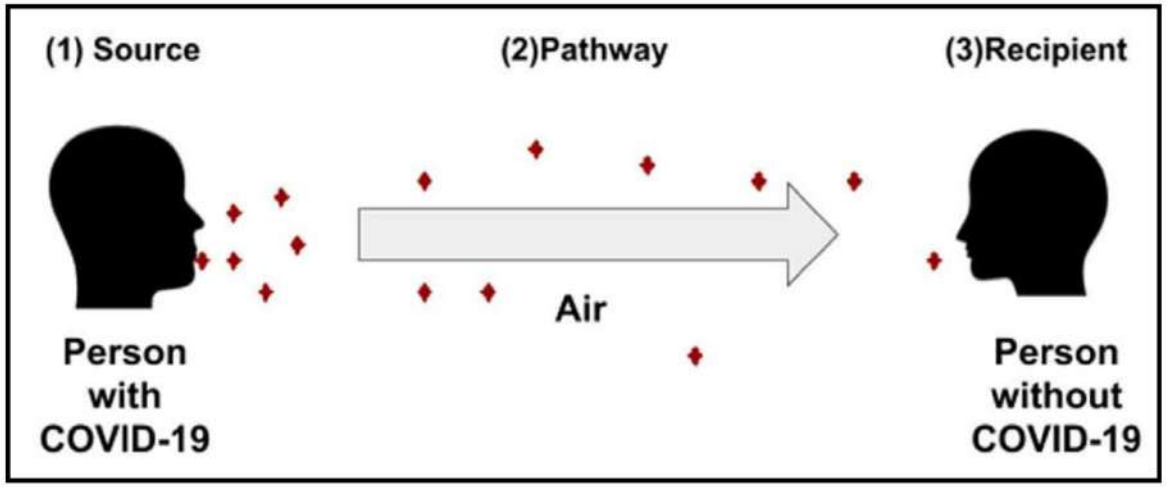
Likelihood	Daily Duration		
	D1 (0 to 3 hours)	D2 (3 to 6 hours)	D3 (> 6 hours)
L0 (No Exposure)	E0	E0	E0
L1 (Exposure Unlikely)	E1	E1	E1
L2 (Possible Exposure)	E2	E2	E3
L3 (Exposure is Likely)	E2	E3	E4

Likelihood is a surrogate for concentration, the assumption being that the more sources one comes into contact with during the workday, the greater the concentration to which one could be exposed.

Control Band

Exposure Rank	Control Band
E0	N
E1	A
E2	B
E3	C
E4	D





Source, Pathway, Receptor. Note: From "Protecting Essential Workers," Center for Infectious Disease Research and Policy (CIDRAP), 2021. (https://www.cidrap.umn.edu/covid-19/ preparedness-and-response/protecting-essential- workers).

	Control Band	Control Options
Aim to lower exposure level Goal: **Reduce exposure to E1 levels by selecting additional control strategies from the source and pathway categories and reducing reliance on PPE**	A	Source – Do these first
		Pathway – Maybe necessary
		Receptor – Not necessary
	B	Source – Do these first, may require multiple options
		Pathway – Do these next, and may require multiple options
		Receptor – Only if source & pathway controls aren't effective
	C	Source – Do these first, may require multiple options
		Pathway – Do these next, and may require multiple options
		Receptor – May be prudent
	D	Source – Do these first, may require multiple options
		Pathway – Do these next, and may require multiple options
		Receptor – Probably necessary

La Medicina del Lavoro

Reviews, Commentaries, Perspectives

Learning from the Experience of the COVID-19 Pandemic: A New Paradigm for Occupational Biohazard Assessment and Management

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... it must be stressed that **effective prevention of risk factors for workers' health further requires a multidisciplinary and integrated approach (i.e., between technologists and occupational physicians) during all phases and decision-making process implicated in work**. In this endeavour to provide sound scientific reasoning in all his activities, particularly in the identification of occupational disorders caused by biological hazards, the Occupational Physician should remember, as crystallised in Bradford Hill's nine Points of View, that **no single piece of evidence is sufficient, but that the different types of evidence should be combined** to support the case for causation, as real-world circumstances often differ from those presented in scientific studies. **Only through evidence-based practice approaches for assessing and characterising biological risk will improve, as data emerge and enhance our understanding of exposure and risk management, potentially in all occupational settings**.

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I NETWORK NELLA RICERCA IN MEDICINA DEL LAVORO:
UNA PRATICA OBBLIGATA PER LA CRESCITA COMPLESSIVA DELLA NOSTRA DISCIPLINA