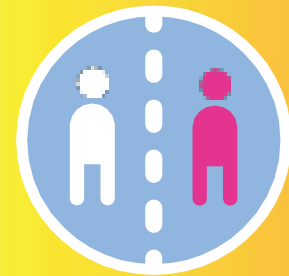


Use the mask



wash your
hands



Keep the safety
distance

Ergonomics and human factors year zero – patient safety during and with COVID

Tommaso Belland, PhD - Eur.Erg.

tommaso.bellandi@uslnordovest.toscana.it

Director of Patient Safety - Northwest Trust – Regional Health Service of Tuscany

President, Italian Society of Ergonomics and Human Factors - SIE



**Società Italiana di Ergonomia
e Fattori Umani**

REGIONE
TOSCANA



Azienda
USL
Toscana
nord ovest

Servizio Sanitario della Toscana

What is HFE?

Human factors and ergonomics (HFE) is **the science of interactions** between humans and other elements of a systems; researcher and practitioners in HFE contribute to the analysis and design of physical, cognitive and organizational interactions in order **to improve people safety and well being, as well as the overall systems' performance.**

iea.cc

Member Login Contact Us Privacy Policy

IEA International Ergonomics Association

Home Member Societies & Networks About News Meetings Awards Partnerships

September 17 is World Patient Safety Day: HF/E Case Studies

In recognition of the WHO World Patient Safety Day, IEA issued a call for case studies on human factors/ergonomics Principles illustrating the impact of HF/E in patient...

ise.org.in

INTERNATIONAL ERGONOMICS ASSOCIATION IEA60 ACED

Indian Society of Ergonomics

Home About Us History Newsletter Membership HWWE Directory Links Contact

Study and design of human interactions

Physical Interactions

Health-care facilities, furnitures and devices design
Noise and lighting assessment and improvement
Slips, trips and falls prevention
Hospital layout and wayfinding



Cognitive Interactions

Decision making and Human errors analysis
Interfaces usability assessment
and user centred design
Reporting and learning systems



Organizational Interactions

Team training and teamwork assessment
Analysis and redesign of patient clinical pathways
Assessment of safety culture
Design and implementation of systems
for patient safety management



HFE methods

Study of work as it is Vs work as it is imagined

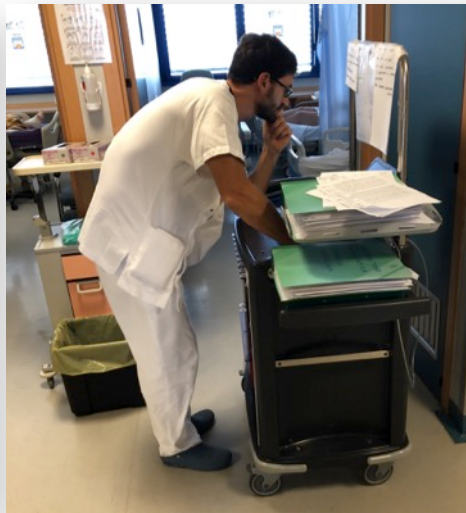
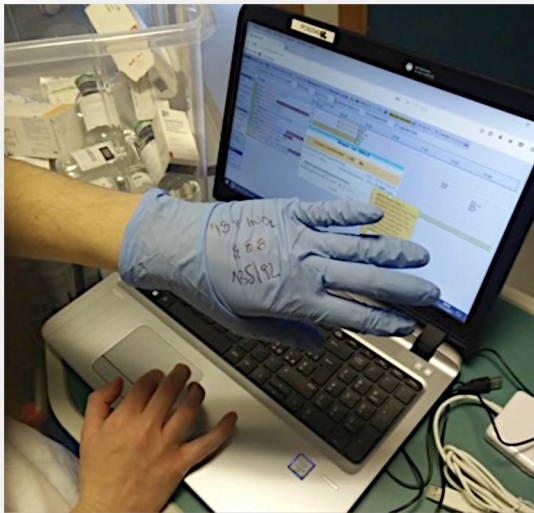
Field observations

Audiovisual documentation

Individual and group interviews

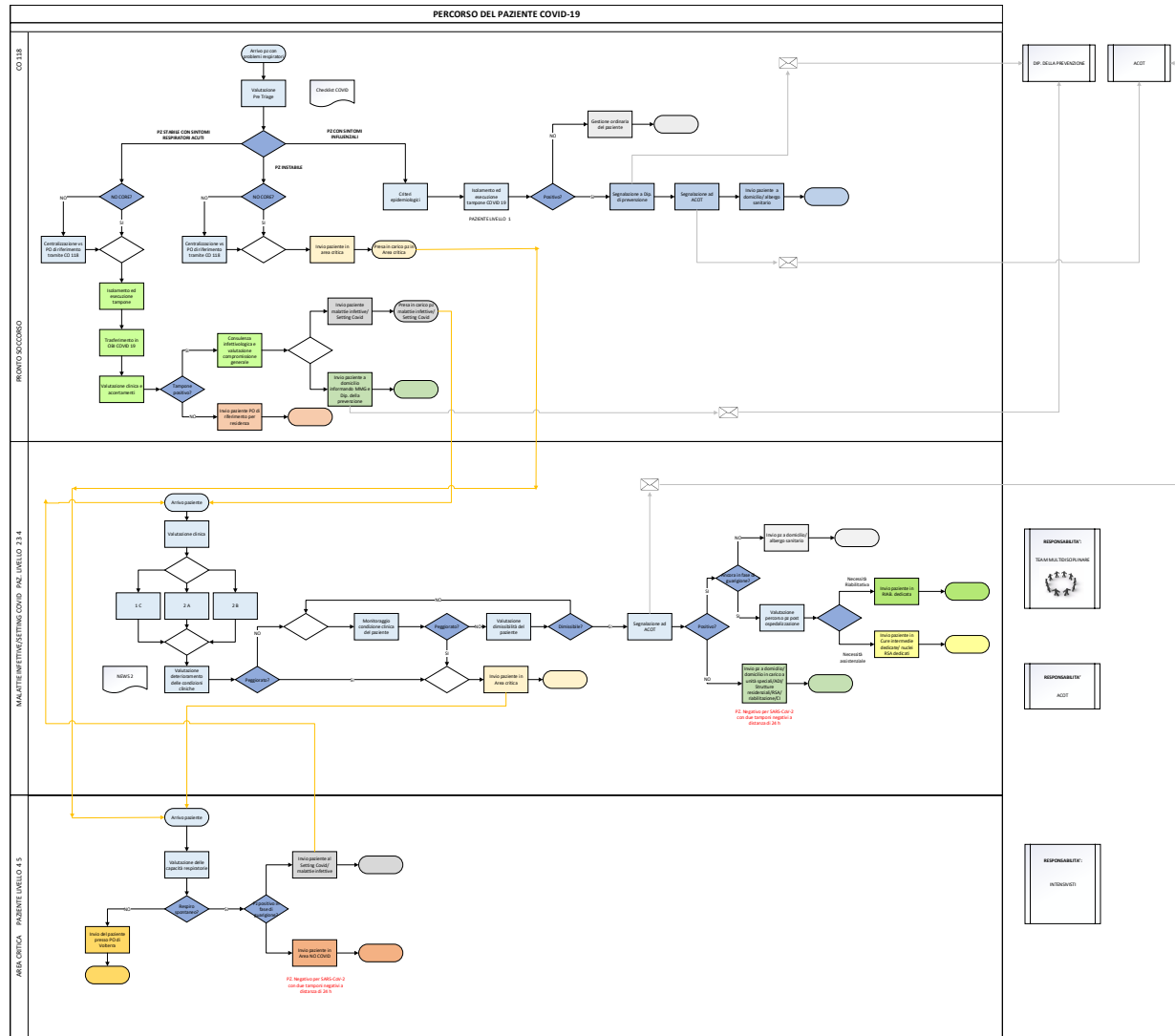
Objective and subjective tests

Process data analysis



HFE methods

System oriented Vs tasks segmentation



HFE methods

Participatory design Vs delegation to the experts

Recognition of home medications

Terapia ingresso

Lista terapie domiciliari

Confezioni di farmaci in uso

→ paracetamolo nov: 500 mg cpr. /die (ore 15)
Confermato in STU.

Lista medicinali redatta dal paziente

→ aspirina c: 400/240 mg cpr. eff. /die (ore 13)
In STU : Aspirina c*10cpr eff 400+240mg 800/480 mg cpr. eff. /die (ore 14).

→ lanoxin: non riferisce quanto e quando lo prende
In STU : Lanoxin*30cpr 0,125mg 0,125 mg cpr. /die (ore 8).

integratori armolipid plus

Modificato

Aggiungi alla STU come terapia di tipo:

Motivo modifica dosaggio e frequenza ris

- Non infusionale
- Infusionale
- Nutrizione parenterale
- Aerosolterapia
- Dicumarolica
- Transdermica
- Nutrizione enterale

Ok Annulla

Reconciliation in prescription order

Ergonomics year zero during COVID: workers' exhaustion



https://milano.repubblica.it/cronaca/2020/03/09/news/coronavirus_foto_infermiera_stremata_dorme_lavoro_cremona-250745946/

Ergonomics year zero during COVID: patients' isolation



<https://www.sigg.it>

REGIONE
TOSCANA



SST
Azienda
USL
Toscana
nord ovest
Servizio Sanitario della Toscana

Ergonomics year zero during COVID: workers wounded



https://www.repubblica.it/le-storie/2020/03/10/news/coronavirus_infermiera_grosseto_alessia_bonari_segni_mascherina_instagram-250873566/

REGIONE
TOSCANA



Ergonomics year zero: standards in conflict



Personal pics. Read more on <http://www.societadiergonomia.it/wp-content/uploads/2014/07/rivista-n.20-1.pdf>

REGIONE
TOSCANA



Living with COVID: handcrafted face masks



Personal pics. Read more on <http://www.societadiergonomia.it/wp-content/uploads/2014/07/rivista-n.20-1.pdf>

REGIONE
TOSCANA



Living with COVID: clinical interactions with PPE



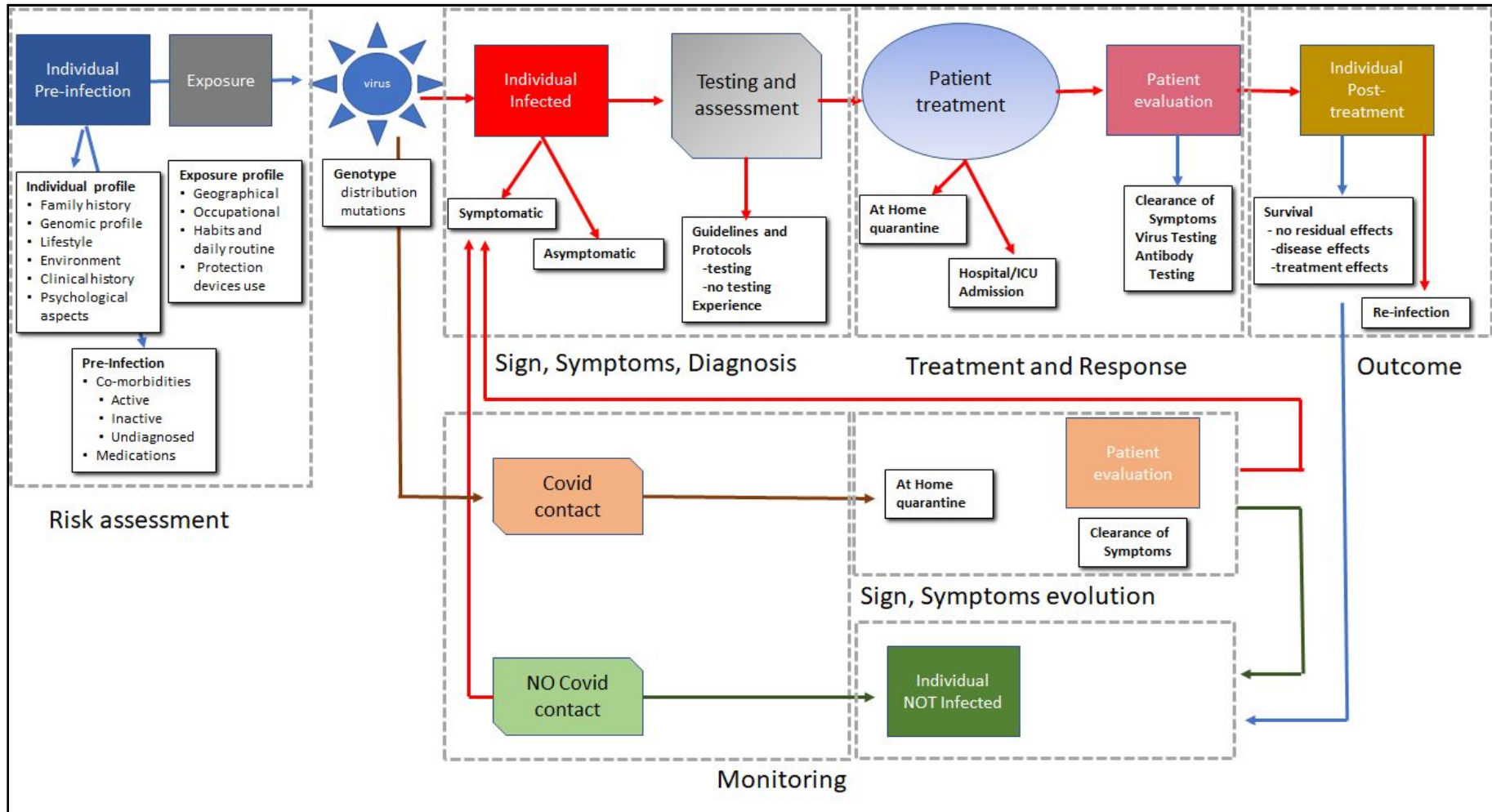
<https://sport.sky.it/calcio/2020/04/08/maschere-decathlon-coronavirus-foto#04>

REGIONE
TOSCANA



SST
Azienda
USL
Toscana
nord ovest
Servizio Sanitario della Toscana

Living with COVID: anticipating risk of infections



<https://www.datalearnlab.it/Dress/>

Living with COVID: enterprise risk management



Living with COVID: leisure

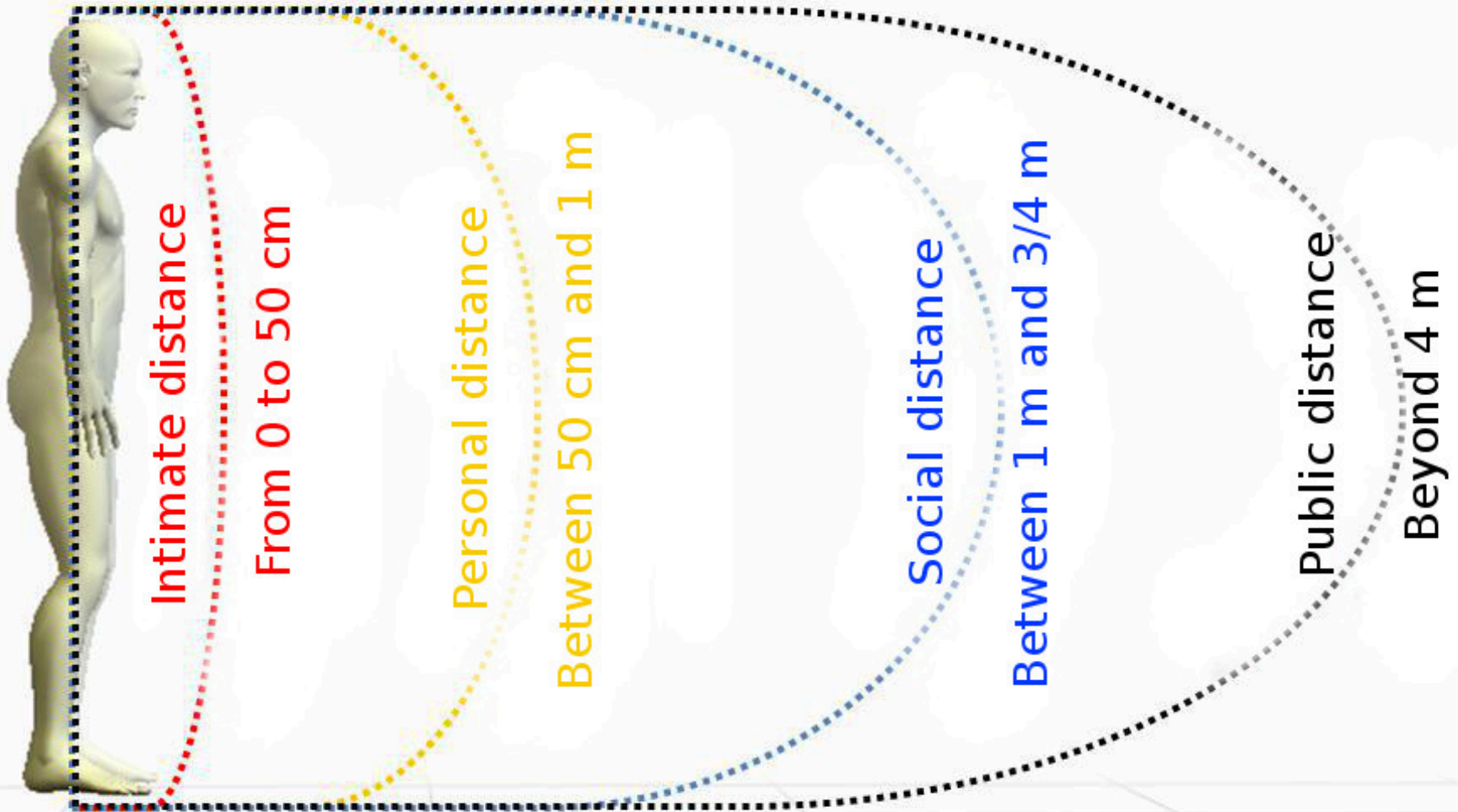


https://www.corriere.it/cronache/20_giugno_20/coronavirus-folla-spiaggia-senza-distanza-senza-mascherine-a853fc60-b32f-11ea-8839-7948b9cad8fb.shtml

REGIONE
TOSCANA



Living with COVID: awareness of proxemics



Living with COVID: education



<https://www.lastampa.it/topnews/edizioni-locali/torino/2020/09/14/news/il-ritorno-a-scuola-alla-ricerca-della-normalita-tra-misurazioni-delle-febbre-e-cattedre-vacanti-1.39304650>

REGIONE
TOSCANA



Living with COVID: families and community education

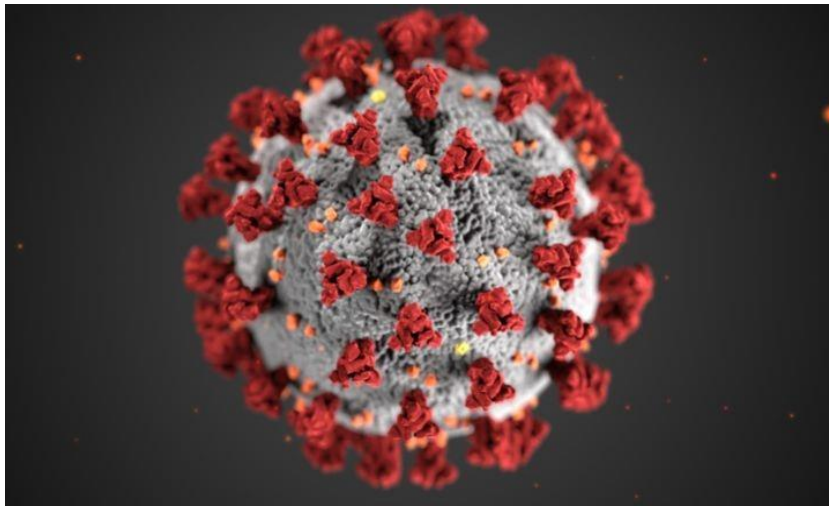
Smithsonian Science for Global Goals



SCIENCE
for Global Goals

COVID-19!

How Can I Protect Myself and Others?



SUSTAINABLE DEVELOPMENT GOALS

developed by



in collaboration with



<https://ssec.si.edu/covid-19>

Understand: Who are you coming into contact with? (15 minutes)

1. Make a list of everyone in your home. Add anyone else you have met or talked to in person in the past week. It does not matter where you met them or how old they are. Count them all. These people are your “primary contacts.” You can write this information down, or you can start to draw a contact tree like this picture:

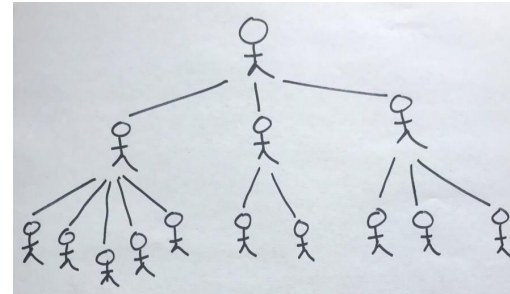


Figure 5.1 You are at the top of your contact tree. Your “primary contacts” are the middle row, and your “secondary contacts” are the bottom row.

2. You asked everyone in your home to make a list of the people that they have been in contact with. You can now add these people to the bottom row of your contact tree. They will go under the person that you both had contact with. These people are your “secondary contacts.”

- **Physical Safety:** You have learned about keeping physical distance between yourself and others, covering your nose and mouth, and washing your hands. As you communicate with people, make sure you use these strategies to protect yourself and others from COVID-19.
3. Review your tree. Does everyone have the same number of contacts? Do some people have more contacts than others?
 4. Are the people with lots of contacts doing things that are ethically or economically necessary to support your household or community such as going to work, going to the market, attending a religious ceremony, or caring for older people?
 5. Try this activity while watching people in a video or TV show, or while reading in a book. Create a contact tree for the characters in the story.
 6. Why is it important to track your contacts? Can this information help your community know who could get the virus? Can this information help healthcare workers understand the spread of COVID-19?

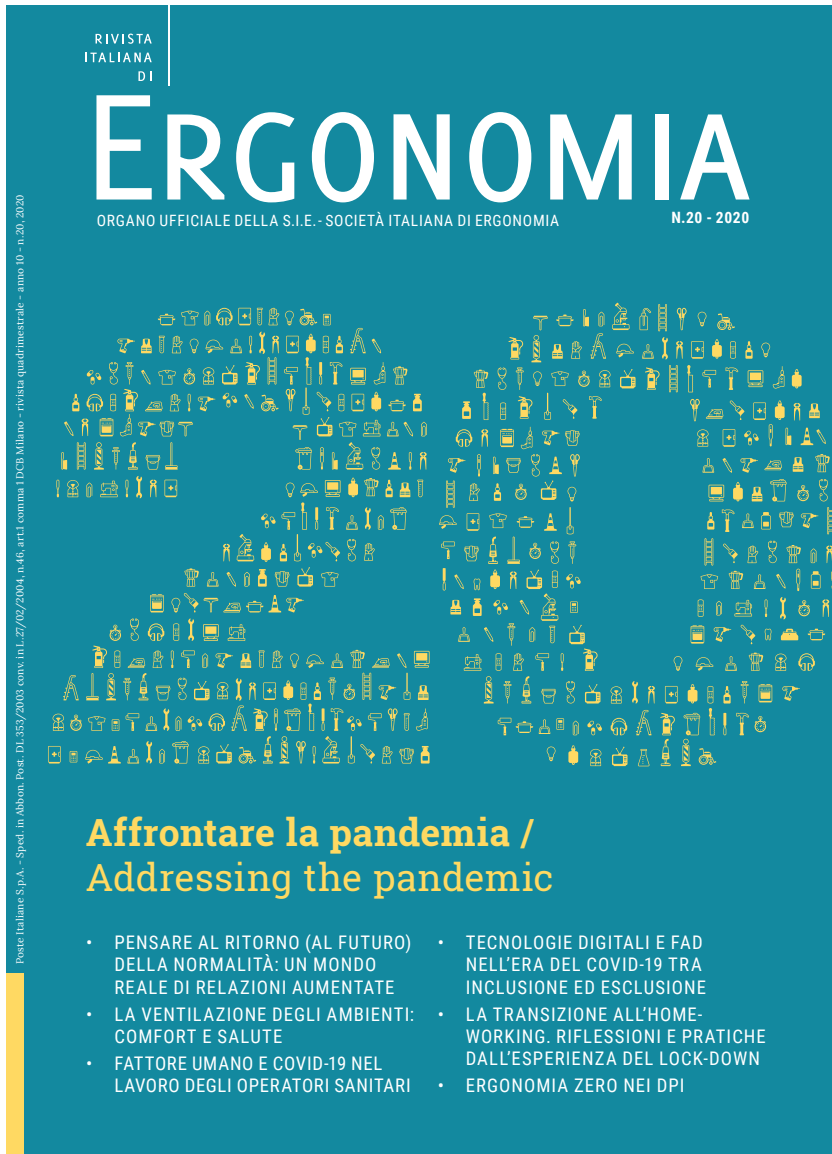
“People in close contact with someone who is infected with the virus are at higher risk of becoming infected themselves, and of potentially infecting others. Closely watching these contacts after exposure to an infected person will help the contacts to get care and treatment and prevent the further transmission of the virus. This monitoring process is called contact tracing.” - World Health Organization

Covid-19! How Can I Protect Myself and Others?

© 2020 Smithsonian Institution



Living with COVID: ergonomics gift from Italy



PENSARE AL RITORNO (AL FUTURO) DELLA NORMALITÀ: UN MONDO REALE DI RELAZIONI AUMENTATE <i>THINKING ABOUT THE RETURN (TO THE FUTURE) OF NORMALCY: A REAL WORLD OF AUGMENTED RELATIONSHIPS</i> Francesca Tosi	1
LA VENTILAZIONE DEGLI AMBIENTI: COMFORT E SALUTE <i>ROOM VENTILATION: COMFORT AND HEALTH</i> Francesca Romana d'Ambrosio, Michele Vio	20
FATTORE UMANO E COVID-19 NEL LAVORO DEGLI OPERATORI SANITARI <i>HUMAN FACTOR AND COVID-19 IN THE WORK OF HEALTHCARE PERSONNEL</i> Luigi Isaia Lecca, Lucrezia Ginevra Lulli, Giulio Taddei, Alessandra Pagni	47
TECNOLOGIE DIGITALI E FAD NELL'ERA DEL COVID-19 TRA INCLUSIONE ED ESCLUSIONE <i>DIGITAL TECHNOLOGIES AND DISTANCE LEARNING IN THE COVID-19 ERA BETWEEN INCLUSION AND EXCLUSION</i> Alessia Brischetto	65
LA TRANSIZIONE ALL'HOME-WORKING. RIFLESSIONI E PRATICHE DALL'ESPERIENZA DEL LOCK-DOWN <i>THE TRANSITION TO HOME-WORKING. REFLECTIONS AND PRACTICES FROM THE LOCK-DOWN EXPERIENCE</i> Francesco Deiana, Gabriella Duca, Antonella Frisiello, Silvia Gilotta, Cristina Piccirillo	95
ERGONOMIA ZERO NEI DISPOSITIVI DI PROTEZIONE INDIVIDUALE DURANTE LA PANDEMIA <i>ZERO ERGONOMICS OF PPE IN THE PANDEMIC</i> Tommaso Bellandi	122

Affrontare la pandemia / Addressing the pandemic

- PENSARE AL RITORNO (AL FUTURO) DELLA NORMALITÀ: UN MONDO REALE DI RELAZIONI AUMENTATE
- LA VENTILAZIONE DEGLI AMBIENTI: COMFORT E SALUTE
- FATTORE UMANO E COVID-19 NEL LAVORO DEGLI OPERATORI SANITARI
- TECNOLOGIE DIGITALI E FAD NELL'ERA DEL COVID-19 TRA INCLUSIONE ED ESCLUSIONE
- LA TRANSIZIONE ALL'HOME-WORKING. RIFLESSIONI E PRATICHE DALL'ESPERIENZA DEL LOCK-DOWN
- ERGONOMIA ZERO NEI DPI

Stay human: virtual hugs (are not enough)

