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Audit & Feedback dei percorsi per le cronicità all'epoca del CoViD-19

Il ruolo delle malattie croniche: sintesi della letteratura

Alfredo Zuppiroli - ARS Toscana



Regione Toscana





RAPID COMMUNICATION

Mortality impacts of the coronavirus disease (COVID-19) outbreak by sex and age: rapid mortality surveillance system, Italy, 1 February to 18 April 2020

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FIGURE 1

Weekly trend in mean daily observed and expected mortality in northern^a and central-southern^b cities during the COVID-19 outbreak, Italy, November 2019–April 2020

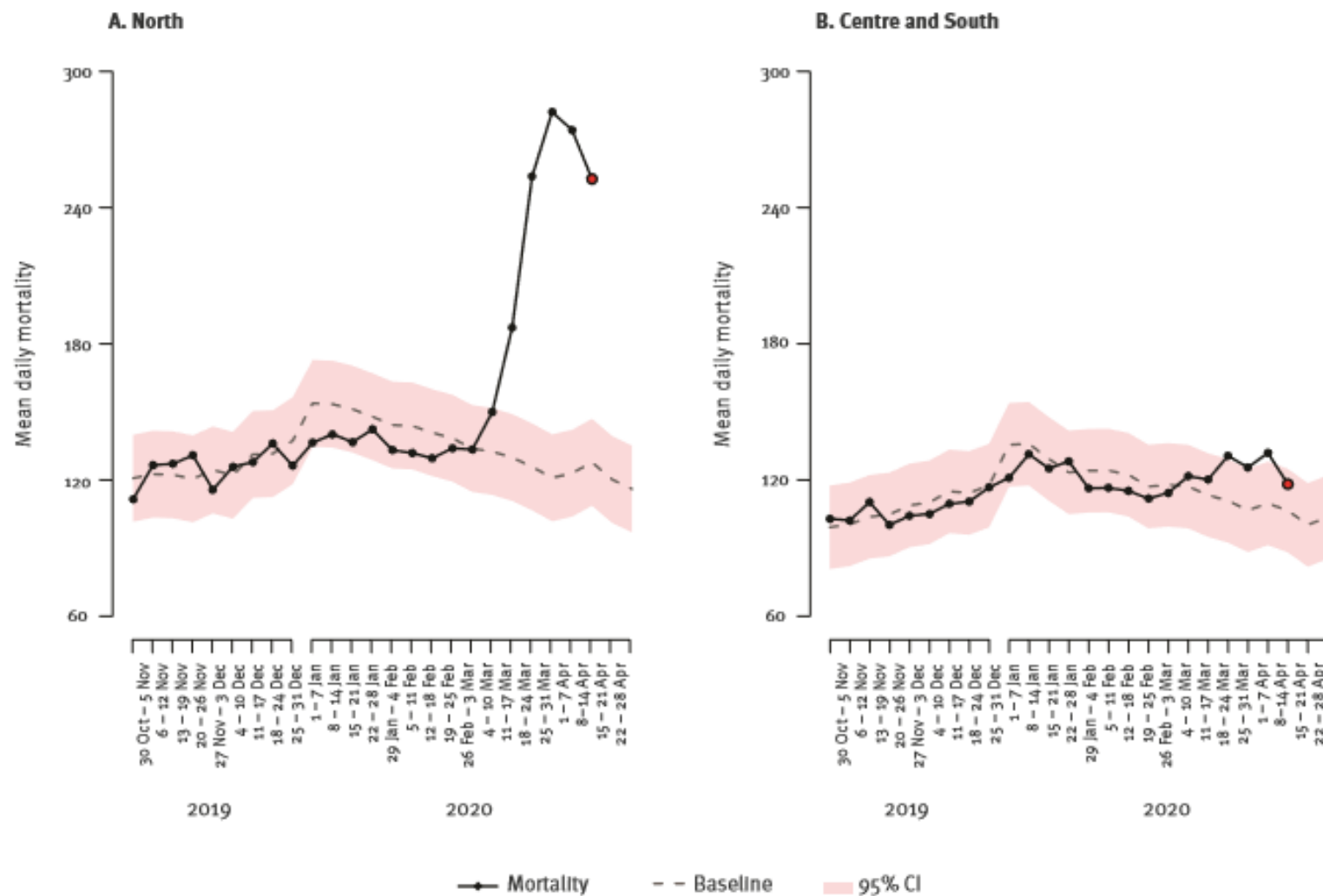
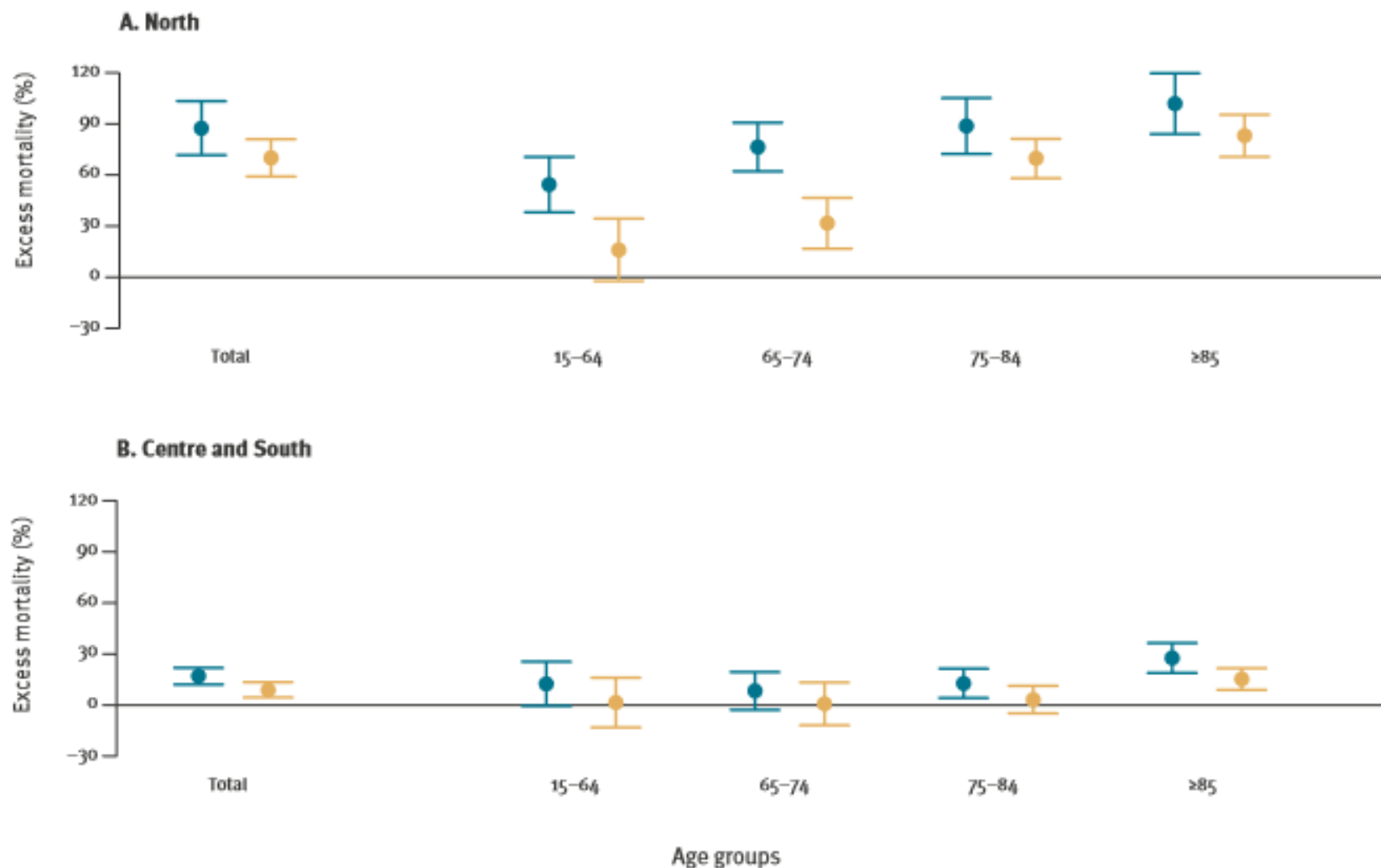


FIGURE 2

Excess mortality by sex and age groups (all ages, 15–64, 65–74, 75–84, ≥ 85 years) in northern^a vs central and southern^b cities, COVID-19 outbreak, Italy, starting date^c–18 April 2020



Clinical Characteristics of Coronavirus Disease 2019 in China

W. Guan, Z. Ni, Yu Hu, W. Liang, C. Ou, J. He, L. Liu, H. Shan, C. Lei, D.S.C. Hui, B. Du, L. Li, G. Zeng, K.-Y. Yuen, R. Chen, C. Tang, T. Wang, P. Chen, J. Xiang, S. Li, Jin-lin Wang, Z. Liang, Y. Peng, L. Wei, Y. Liu, Ya-hua Hu, P. Peng, Jian-ming Wang, J. Liu, Z. Chen, G. Li, Z. Zheng, S. Qiu, J. Luo, C. Ye, S. Zhu, and N. Zhong, for the China Medical Treatment Expert Group for Covid-19*

Table 1. Clinical Characteristics of the Study Patients, According to Disease Severity and the Presence or Absence of the Primary Composite End Point.*

Characteristic	All Patients (N=1099)	Disease Severity		Presence of Primary Composite End Point†	
		Nonsevere (N=926)	Severe (N=173)	Yes (N=67)	No (N=1032)
Age					
Median (IQR) — yr	47.0 (35.0–58.0)	45.0 (34.0–57.0)	52.0 (40.0–65.0)	63.0 (53.0–71.0)	46.0 (35.0–57.0)
Coexisting disorder — no. (%)					
Any	261 (23.7)	194 (21.0)	67 (38.7)	39 (58.2)	222 (21.5)
Chronic obstructive pulmonary disease	12 (1.1)	6 (0.6)	6 (3.5)	7 (10.4)	5 (0.5)
Diabetes	81 (7.4)	53 (5.7)	28 (16.2)	18 (26.9)	63 (6.1)
Hypertension	165 (15.0)	124 (13.4)	41 (23.7)	24 (35.8)	141 (13.7)
Coronary heart disease	27 (2.5)	17 (1.8)	10 (5.8)	6 (9.0)	21 (2.0)
Cerebrovascular disease	15 (1.4)	11 (1.2)	4 (2.3)	4 (6.0)	11 (1.1)
Hepatitis B infection¶	23 (2.1)	22 (2.4)	1 (0.6)	1 (1.5)	22 (2.1)
Cancer	10 (0.9)	7 (0.8)	3 (1.7)	1 (1.5)	9 (0.9)
Chronic renal disease	8 (0.7)	5 (0.5)	3 (1.7)	2 (3.0)	6 (0.6)
Immunodeficiency	2 (0.2)	2 (0.2)	0	0	2 (0.2)

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Review

Risk factors of critical & mortal COVID-19 cases: A systematic literature review and meta-analysis

Zhaohai Zheng, M.D.^{a,b,1}, Fang Peng, B.D.^{a,1}, Buyun Xu, M.D.^a, Jingjing Zhao, M.D.^{a,b}, Huahua Liu, M.D.^c, Jiahao Peng, M.D.^d, Qingsong Li, B.D.^e, Chongfu Jiang, B.D.^e, Yan Zhou, M.D.^a, Shuqing Liu, M.D.^{a,f}, Chunji Ye, M.D.^a, Peng Zhang, M.D.^a, Yangbo Xing, M.D.^a, Hangyuan Guo, M.D., Ph.D.^a, Weiliang Tang, M.D.^{a,*}

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	OR
Sesso maschile	1,76
Età >65 anni	6,06
Fumo	2,51
Ipertensione	2,72
Diabete	3,68
Malattia cardiovascolare	5,19
Malattia respiratoria	5,15

Sex difference and smoking predisposition in patients with COVID-19

The outbreak of novel coronavirus disease 2019 (COVID-19) is quickly turning into a pandemic. Although the disease is now better contained in China, 32702 cases remain as of March 2, 2020. 10 566 cases and 166 deaths outside of China had been reported as of March 3 (WHO situation report 43), which is a large increase from the 2918 cases and 44 deaths

of 1099 patients with COVID-19 from 552 hospitals in 30 provinces in China, 58% of the patients were men. Taken together, these data seem to indicate that there might be a sex predisposition to COVID-19, with men more prone to being affected.

This sex predisposition might be associated with the much higher smoking rate in men than in women in China (288 million men vs 12.6 million women were smokers in 2018). Of note, one study (preprint)³ found that although ACE2 expression was not significantly different between Asian and white people, men and women,

no firm conclusions can be drawn. With more cases being examined from different ethnic and genetic backgrounds worldwide, ACE2 expression variation can be better analysed and compared to establish whether it contributes to susceptibility to COVID-19 across the different subgroups.

I declare no competing interests.

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This online publication has been corrected.

The corrected version first appeared at [thelancet.com/respiratory](https://www.thelancet.com/respiratory) on April 1, 2020

For the WHO COVID-19 report 43 see <https://www.who.int/docs/default-source/>

... expression of ACE2 (the receptor for severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) is more predominant in Asian men...

... much higher smoking rate in men than in women in China (288 million men vs 12.6 million women were smokers in 2018)

... smoking is related to higher expression of ACE2

...ma in Cina i pazienti Covid che fumano risultano solo il 12,5%, rispetto alla proporzione di fumatori nella popolazione generale...

Perché gli uomini sono più colpiti?



- Le differenze non sembrano causate da tassi d'infezione diversi
- Altre due malattie causate da coronavirus, la Sars e la Mers, si sono dimostrate più frequenti negli uomini
- Prevalenza di obesità, ipertensione, diabete, cancro, patologie respiratorie e cardiovascolari
- XX vs XY: Il cromosoma X contiene diversi geni della risposta immunitaria, soprattutto quello della proteina Tlr7, che individua i virus a singolo filamento di Rna, come il coronavirus
- Estrogeni e progesterone potenziano la risposta immunitaria
- Gli uomini curano meno l'igiene personale

Mortality impacts of the coronavirus disease (COVID-19) outbreak by sex and age: rapid mortality surveillance system, Italy, 1 February to 18 April 2020

Paola Michelozzi¹, Francesca de' Donato¹, Matteo Scortichini¹, Manuela De Sario¹, Fiammetta Noccioli¹, Pasquale Rossi¹, Marina Davoli²

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Populations with a chronic exposure to high levels of air pollution, such as in the north of Italy, may have a greater predisposition to develop respiratory symptoms, which may make them more susceptible to COVID-19.

However, evidence on the direct and indirect role of air pollution is to date limited and the causal pathways and the differential risk attributable to this in different geographical areas need to be further investigated.

Does comorbidity increase the risk of patients with COVID-19: evidence from meta-analysis

Bolin Wang¹, Ruobao Li², Zhong Lu³, Yan Huang³

Published: April 8, 2020

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Hypertension, diabetes, COPD, cardiovascular disease, and cerebrovascular disease are major risk factors for patients with COVID-19

The meta-analysis revealed **no correlation** between increased risk of COVID-19 and **liver disease, malignancy, or renal disease**.

Knowledge of these risk factors can be a resource for clinicians in the early appropriate medical management of patients with COVID-19

ORIGINAL ARTICLE

Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19

Mandeep R. Mehra, M.D., Sapan S. Desai, M.D., Ph.D.,
SreyRam Kuy, M.D., M.H.S., Timothy D. Henry, M.D., and Amit N. Patel, M.D.

ABSTRACT

BACKGROUND

Coronavirus disease 2019 (Covid-19) may disproportionately affect people with cardiovascular disease. Concern has been aroused regarding a potential harmful effect of angiotensin-converting-enzyme (ACE) inhibitors and angiotensin-receptor blockers (ARBs) in this clinical context.

METHODS

Using an observational database from 169 hospitals in Asia, Europe, and North America, we evaluated the relationship of cardiovascular disease and drug therapy with in-hospital death among hospitalized patients with Covid-19 who were admitted between December 20, 2019, and March 15, 2020, and were recorded in the Surgical Outcomes Collaborative registry as having either died in the hospital or survived to discharge as of March 28, 2020.

From Brigham and Women's Hospital Heart and Vascular Center and Harvard Medical School, Boston (M.R.M.); Surgisphere, Chicago (S.S.D.); Baylor College of Medicine and Department of Veterans Affairs, Houston (S.K.); Christ Hospital, Cincinnati (T.D.H.); the Department of Biomedical Engineering, University of Utah, Salt Lake City (A.N.P.); and HCA Research Institute, Nashville (A.N.P.). Address reprint requests to Dr. Mehra at Brigham and Women's Hospital, 75 Francis St., Boston, MA 02115, or at mmehra@bwh.harvard.edu.

This article was published on May 1, 2020, at NEJM.org.

REGIUTE

Abstract
Introduction
Methods
Results
Conclusion

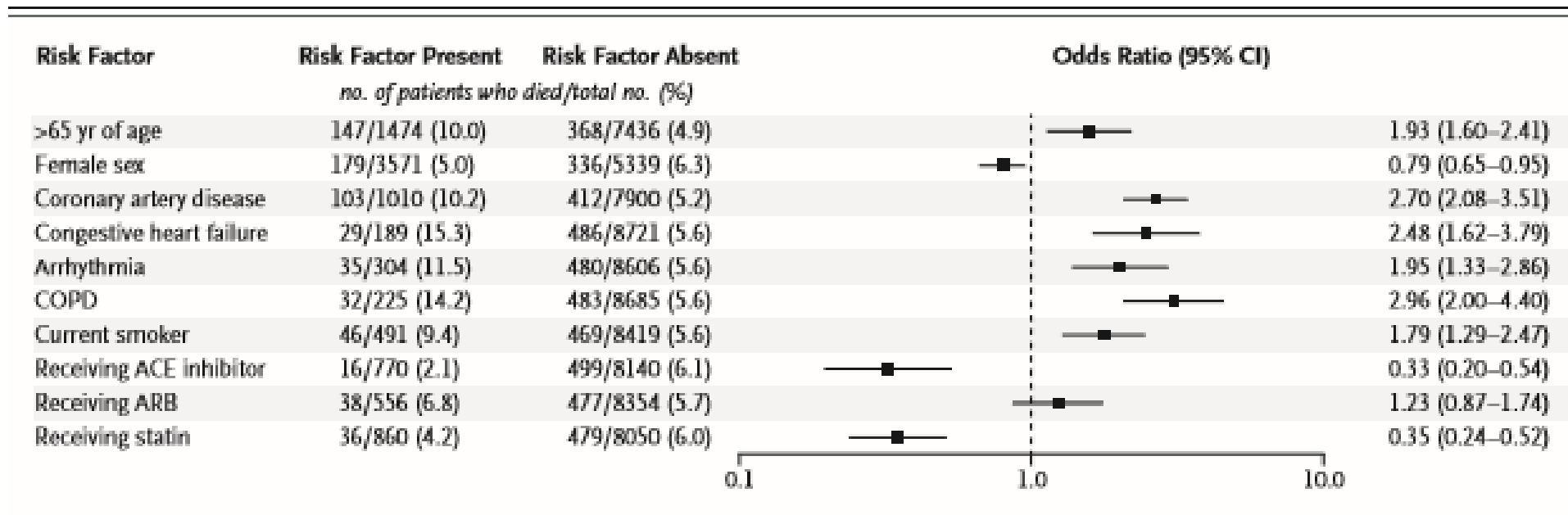


Figure 1. Independent Predictors of In-Hospital Death from Multivariable Logistic-Regression Analysis.

Basic Research in Cardiology (2020) 115:32
<https://doi.org/10.1007/s00395-020-0792-4>

ORIGINAL CONTRIBUTION



Perspective: cardiovascular disease and the Covid-19 pandemic

Tommaso Gori¹ · Jos Lelieveld² · Thomas Münzel¹

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Abstract

We summarize the cardiovascular risks associated with Covid-19 pandemic, discussing the risks for both infected and non-infected patients.

Keywords Covid-19 · Cardiovascular disease · Pollution



Fig. 1 Direct and indirect implications of Covid-19 for cardiovascular care



Perspective: cardiovascular disease and the Covid-19 pandemic

Tommaso Gori¹ · Jos Leleveld² · Thomas Münzel¹

Received: 30 March 2020 / Accepted: 6 April 2020
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Abstract
We summarize the cardiovascular risks associated with Covid-19 pandemic, discussing the risks for both infected and non-infected patients.

For patients with Covid-19 infection

Increased mortality in patients with prior cardiovascular disease

Pericyte injury (particularly in heart failure)

Cardiovascular side effects of therapies

Interaction with therapies (currently hypothetical): ACE inhibitors, ARBs

For patients without Covid-19 infection

Implications for cardiovascular disease

Postponement of elective procedures

Pre- and in-hospital delays

Withdrawal of important therapies

Reduced access to medical care for fear of contagion

Shortened diagnostic protocols due to hospital congestion

Risk of diagnostic errors (e.g. underdiagnosis of Covid-19 in patients with known heart failure)

Implications for society, reflecting on cardiovascular disease

Reduction in emissions during shutdown

Increase in emissions after shutdown

Reduced spread of other infective diseases

Social isolation, depression

Hot Topic

What Does the COVID-19 Pandemic Mean for Rheumatology Patients?

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Preliminarily, articles seem to suggest that patients with rheumatic diseases may not have more infections from SARS-CoV-2 and similar outcomes to age and gender matched patients, but fear of rheumatic medications increasing their risk, drug shortages, and work exposure all are concerns for patients.

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Patients with mental health disorders in the COVID-19 epidemic

More than 60 000 infections have been confirmed worldwide in the coronavirus disease 2019 (COVID-19) epidemic, with most of these cases in China. Global attention has largely been focused on the infected patients and the frontline responders, with some marginalised populations in society having been overlooked. Here, we write to express our concerns with regards to the effect of the epidemic on people with mental health disorders. Ignorance of the differential impact of the epidemic on these patients will not only hinder any aims to prevent further spread of COVID-19, but will also augment already existing health inequalities.

In China, 173 million people are living with mental health disorders,¹ and neglect and stigma regarding these conditions still prevail in society.² When epidemics arise, people with mental health disorders are generally more susceptible to infections for several reasons. First, mental health disorders can increase the risk of infections, including pneumonia.³ One report released on Feb 9, 2020, discussing a cluster of 50 cases of COVID-19 among inpatients in one

to COVID-19 will make the treatment more challenging and potentially less effective.⁵ Third, the COVID-19 epidemic has caused a parallel epidemic of fear, anxiety, and depression. People with mental health conditions could be more substantially influenced by the emotional responses brought on by the COVID-19 epidemic, resulting in relapses or worsening of an already existing mental health condition because of high susceptibility to stress compared with the general population. Finally, many people with mental health disorders attend regular outpatient visits for evaluations and prescriptions. However, nationwide regulations on travel and quarantine have resulted in these regular visits becoming more difficult and impractical to attend.

Few voices of this large but vulnerable population of people with mental health disorders have been heard during this epidemic. Epidemics never affect all populations equally and inequalities can always drive the spread of infections. As mental health and public health professionals, we call for adequate and necessary attention to people with mental health disorders in the COVID-19 epidemic.

We declare no competing interests.

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- 4 China Newsweek. Collective infections of coronavirus among 50 patients and 30 health workers in one psychiatric hospital in Wuhan, Shanghai (Oct. 2020). <https://www.jfdaily.com/news/detail?id=208584> (accessed Feb 17, 2020); in Chinese).
- 5 Sarantis N. Comorbidity of mental and physical diseases: a main challenge for medicine of the 21st century. *Shanghai Arch Psychiatry* 2013; 25: 68-69.



When epidemics arise, people with mental health disorders are generally more susceptible to infections for several reasons.

First, mental health disorders can **increase the risk** of infections (cognitive impairment, little awareness of risk, and diminished efforts regarding personal protection in patients, as well as confined conditions in psychiatric wards).

Second, once infected people with mental disorders can be exposed to **more barriers** in accessing timely health services, because of discrimination associated with mental ill-health

Third, the COVID-19 epidemic has caused a **parallel epidemic** of fear, anxiety, and depression.

Finally, many people with mental health disorders **attend regular outpatient visits** for evaluations and prescriptions. However, nationwide regulations on travel and quarantine have resulted in these regular visits becoming more difficult and impractical to attend”.

VIEWPOINT

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Editorial

COVID-19 and Racial/Ethnic Disparities

The novel SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) has led to a global pandemic manifested as coronavirus disease 2019 (COVID-19), with its most severe presentation being acute respiratory distress syndrome leading to severe complications and death. Select underlying medical comorbidities, older age, diabetes, obesity, and male sex have been identified as biological vulnerabilities for more severe COVID-19 outcomes.¹ Geographic locations that reported data by race/ethnicity indicate that African American individuals and, to a lesser extent, Latino individuals bear a disproportionate burden of COVID-19-related outcomes. The pandemic has shone a spotlight on health disparities and created an opportunity to address the causes underlying these inequities.²

The most pervasive disparities are observed among African American and Latino individuals, and where data exist, American Indian, Alaska Native, and Pacific Islander populations. Preliminary prevalence

The pandemic presents a window of opportunity for achieving greater equity in the health care of all vulnerable populations.

precedents, mortality from influenza and pneumonia as causes of death for persons aged 65 years or older are lower among African American and Latino individuals compared with white persons.^{5,6} In contrast, historically, pulmonary tuberculosis disproportionately affects persons of lower socioeconomic status, but there is no convincing evidence that rates of tuberculosis reactivation are influenced by socioeconomic status.

Understanding the reasons for the initial reports of excess mortality and economic disruption related to COVID-19 among health disparity populations may allow the scientific, public health, and clinical community to efficiently implement interventions to mitigate these outcomes, particularly if substantial disease emerges in the fall of 2020 or beyond.

The most common explanations for disproportionate burden involve 2 issues. First, racial/ethnic minority populations have a disproportionate burden of underlying comorbidities. This is true for diabetes, cardiovascular disease, asthma, HIV, morbid obesity, liver disease, and kidney disease, but not for chronic lower respiratory disease or COPD. Second, racial/ethnic minorities and poor people in urban settings live in more crowded conditions both by neighborhood and household assessments and are more likely to be

In **Chicago**, rates of COVID-19 **cases** per 100000 (as of May 6, 2020) are greatest among Latino (**1000**), African American/black (**925**), “other” racial groups (865), Compared with white (**389**) residents.

New York City (as of May 7, 2020) reported greater age-adjusted COVID-19 **mortality** among Latino persons (**187** per 100000) and African American individuals (**184** per 100000), compared with white (**93** per 100000) residents

The underlying causes of health disparities are complex and include **social and structural determinants of health, racism and discrimination, economic and educational disadvantages, healthcare access and quality, individual behavior, and biology.**

- **Disproportionate burden of underlying comorbidities**
- **Urban settings: more crowded conditions**
- **More likely to be employed in public-facing occupations (eg, services and transportation)**

Social distancing is a privilege !

COVID-19 and Health Equity—A New Kind of “Herd Immunity”

David R. Williams, PhD, MPH; Lisa A. Cooper, MD, MPH

The striking racial/ethnic disparities reported for COVID-19 **infection, testing, and disease** burden are a clear reminder that failure to protect the most vulnerable members of society not only harms them but also increases the risk of spread of the virus, with devastating health and economic consequences for all.

COVID-19 disparities **are not the fault** of those who are experiencing them, but rather **reflect social policies and systems** that create health disparities in good times and inflate them in a crisis.

The US must develop a **new kind of “herd immunity,”** whereby resistance to the spread of poor health in the population occurs when a sufficiently high proportion of individuals, across all racial, ethnic, and social class groups, are protected from and thus “immune” to negative social determinants.



Audit & Feedback dei percorsi per le cronicità all'epoca del CoViD-19

Grazie per l'attenzione !

