

# **Quality care of Elderly with pre-existing cardiovascular Comorbidities and COVID-19**

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# Research Question

What are the best public health interventions to ensure quality care of elderly patients with pre-existing cardiovascular comorbidities and Covid-19?

# Sub Questions

- How can preventative measures change elderly health?
- How many prescriptions could be given that would not pose a risk to those with covid?
- What percentage of patients with underlying health complications have passed due to both cardiovascular disease and Covid?

# Method

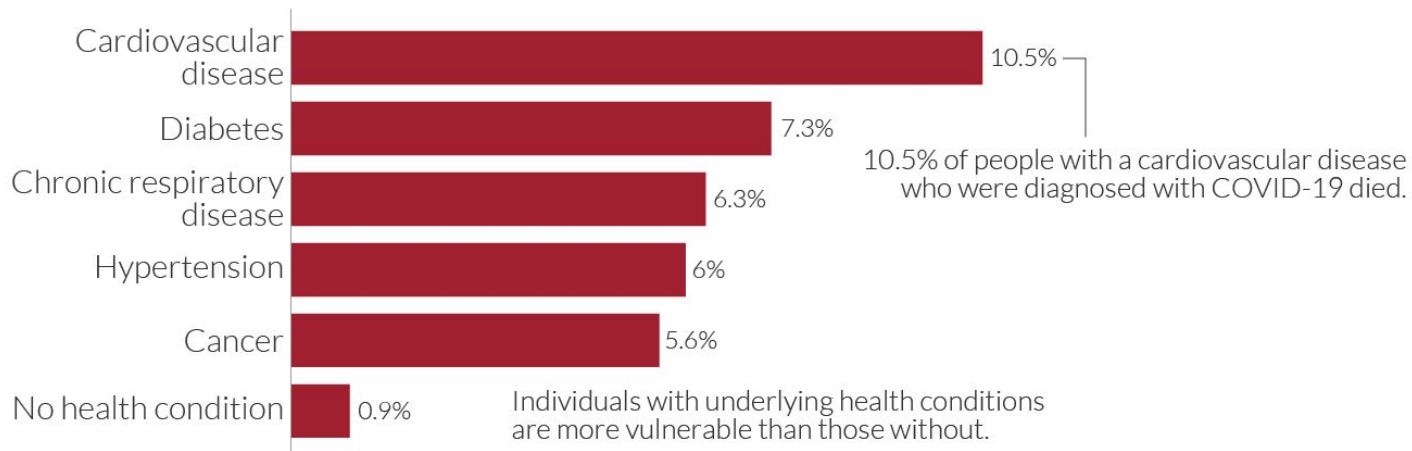
- Through searching twelve online databases, fifty articles and medical journals were identified, annotated, and critiqued using the appraisal checklist by the four researchers.
- Databases: Pubmed, Google Scholar, PLoS ONE, AHA Journals, EH Journal, Science Direct, MDPI, NCBI
- Works published between March 2020 and March 2021 discussed the effects of COVID-19 on patients that have lung complications and later contract heart problems. Articles found discuss pre-existing cardiovascular disease can be harmful to covid patients based on race, gender, and age

# Results

## Coronavirus: early-stage case fatality rates by underlying health condition in China

Our World  
in Data

Case fatality rate (CFR) is calculated by dividing the total number of deaths from a disease by the number of confirmed cases. Data is based on early-stage analysis of the COVID-19 outbreak in China in the period up to February 11, 2020.

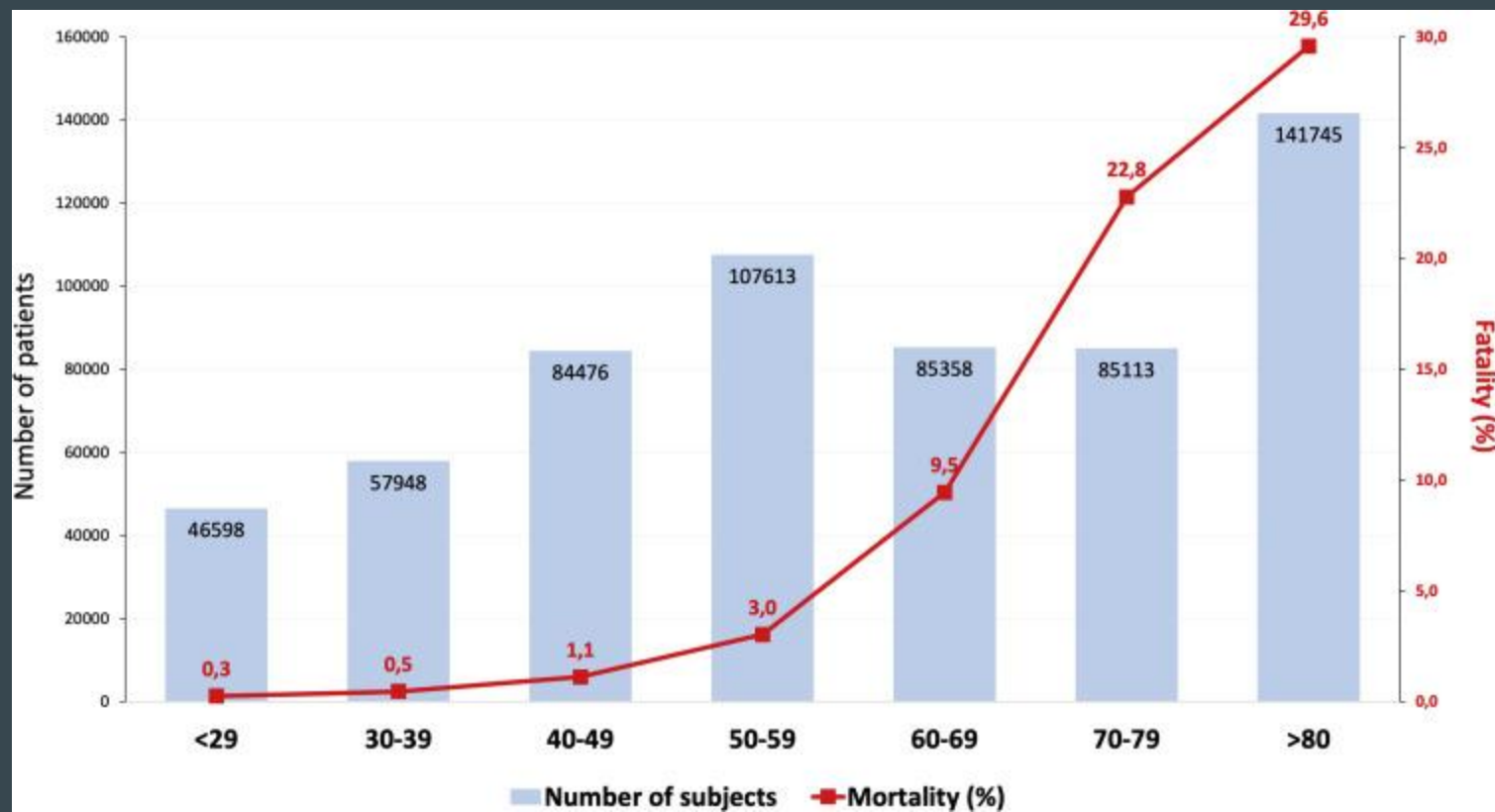


Data source: Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. *Vital surveillances: the epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19)—China, 2020*. China CDC Weekly.

OurWorldinData.org – Research and data to make progress against the world's largest problems.

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(Ritchie, R. 2020)



(Bonanad, Blas, Santabalina, Sanchis. 2020)

# Discussion

- ACE Inhibitors used by those with cardiovascular disease are linked to improving the outcome for patients that have cardiovascular injuries due to infectious agents.
- During extensive research scientists believe extracorporeal membrane oxygenation (ECMO), Plasmapheresis, and proinflammatory interleukins would be an effective treatment for patients.
- Those placed on ventilators had a higher risk of inflammation around heart and organs.
- Inflammatory effects first take place in the lungs and then cause arrhythmias to occur in the heart.
- The ethnic group most affected by cardiovascular and covid-19 comorbidities are African Americans.

(Skalik, 2020) (McCullough, 2020)

# Conclusion

- Elderly with pre existing cardiovascular disease that contracted COVID-19 have shown greater mortality rates than younger patients.
- Ongoing research and tests on drug therapy such as antiplatelet agents and plasmapheresis are leading to improvement in patients long term health.
- Telehealth is a source of quality care that is being explored to prevent elderly patients from the risk of disease due to social distancing rules.