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| 1 | RAPID POLICY BRIEF NUMBER: 013-01 |
| 2 | RESEARCH DOMAIN: COVID-19 and COPD |
| 3 | TITLE: Effects of COPD on COVID-19 |
| 4 | DATE OF PUBLICATION: 02/03/2021 |
| 5 | BACKGROUND <p>Coronavirus disease 2019 (COVID-19) was first identified in Wuhan, China, in December 2019. By 31 January 2021, over 101 million people had been infected with SARS-CoV-2, the virus that causes COVID-19, and over 2.2 million people had died[1]. Chronic obstructive pulmonary disease (COPD) is characterized by small airways disease (obstructive bronchiolitis), parenchymal destruction (emphysema) and mucociliary dysfunction, which result in airflow limitation. Some of the symptoms of COPD are similar to those of COVID-19. With COPD also affecting the lungs, there is bound to be some effects on the pathogenesis of COVID-19. The evidence presented here originates from a systematic review of literature on the association of COPD (as defined by the authors) and COVID-19 cases or deaths.</p> |
| 6 | SEARCH STRATEGY / RESEARCH METHODS <p>PubMed and WHO COVID-19 databases were searched between 10 January and 25 January 2020 using a combination of the following search terms: COVID, COVID-19, SARS-CoV-2, chronic obstructive pulmonary disease and COPD. In addition, we searched reference lists of potentially eligible studies and related reviews obtained from the two databases. We included studies of any design published in English between 01 December 2019 and 25 January 2021, which reported data on COVID-19 in people with COPD, as defined by the authors.</p> <p>The search yielded 387 studies in PubMed, 316 in the WHO COVID-19 database, and 38 from reference lists. After screening and removal of duplicates, 85 studies met the inclusion criteria. We provide a descriptive analysis of the findings.</p> |
| 7 | SUMMARY OF GLOBALLY PUBLISHED LITERATURE RELATED TO THE SUBJECT <p>A total of 85 studies were eligible for inclusion in this narrative summary. Of the 85 studies, there was one case series[2] and 5 case reports[3-7]. The rest of the studies were either prospective or retrospective observational studies. Fourteen studies, including 2 case reports, directly described the effects of COPD or treatment for chronic lung disease including COPD, on the outcomes of COVID-19 [5, 6, 8-19]. The rest of the studies evaluated COPD as a risk factor or comorbidity [20-86].</p> <p>The 5 case reports describing COVID-19 on people with COPD mostly reported favourable outcomes despite a wide range of disease severity in the different cases.</p> |

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| | <p>Of the 12 studies that directly evaluated the effect of COPD on COVID-19, 5 reported somehow favourable outcomes including low prevalence of COPD and or reduced risk associated with severity and hospitalisation or death from COVID-19 in patients who had COPD [8-10, 15, 16].</p> <p>The rest of the studies reported that COPD was either associated with or a risk factor for severe COVID-19 or death from COVID-19. These findings were supported by results from 8 systematic reviews or meta-analyses [87-94]</p> <p>One study comparing different treatments for COPD and outcomes of COVID-19 reported that inhaled corticosteroids had an increased risk of death compared with long-acting beta agonist plus long-acting muscarinic antagonist (LABA-LAMA) as combination therapy [17]. Other studies however reported positive effects of inhaled or systemic corticosteroids treatment for COPD or other chronic lung diseases on COVID-19 outcomes, including reduced risk of severe disease or death [5, 9, 10, 13, 14, 16].</p> |
| 8 | <p>SUMMARY OF AFRICA-SPECIFIC LITERATURE ON THE SUBJECT</p> <p>Of the studies identified, only one was specifically conducted in Africa (South Africa)[25]. Though this study did not mention COPD specifically, it described a high prevalence of chronic pulmonary disease (CPD) among patients who died of COVID-19 compared to those who either survived COVID-19 or not diagnosed with COVID-19. The prevalence of CPD was similar among people who were hospitalised but either died or survived COVID-19.</p> |
| 9 | <p>POLICY FINDINGS</p> <ul style="list-style-type: none"> 🚩 Evidence shows that COPD is a major risk factor for severe COVID-19 🚩 Most studies have shown that COPD is associated with mortality from COVID-19 🚩 Current treatment for COPD may reduce the risk of severe COVID-19 and mortality from COVID-19 <p>In conclusion, Patients with COPD are associated with severe COVID-19 disease spectrum and a higher likelihood of mortality. Effective COPD treatment, comprising inhaled corticosteroids (ICS), and a combination of long-acting beta agonist and long-acting muscarinic antagonist (LABA-LAMA) is associated with less severe COVID-19 disease and mortality.</p> |
| 10 | <p>ONGOING RESEARCH IN THE AFRICAN REGION</p> <p>Non identified</p> |
| 11 | <p>AFRO RECOMMENDATIONS FOR FURTHER RESEARCH</p> <p>Further evidence from Africa on the effect of COPD on COVID-19 outcomes is needed. However, there is less likelihood that the evidence will be substantially different from the global evidence that suggests COPD is a risk factor for severe COVID-19 and death from COVID-19.</p> |

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