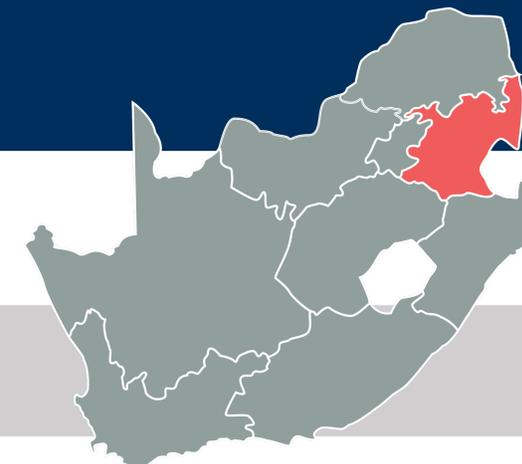




Identifying high risk populations for targeted testing and rapid treatment response from a COVID-19 screening and testing cohort in South Africa: an observational data analysis

L Stewart-Isherwood¹, P Swanepoel¹, N van der Merwe¹, M Ncube¹, A Krugel¹, I Smart¹, W Herbst¹, B Mdlovu², T Malone¹
¹ BroadReach Group; ² Department of Health, Mpumalanga Province, South Africa



Mpumalanga provincial support

Background

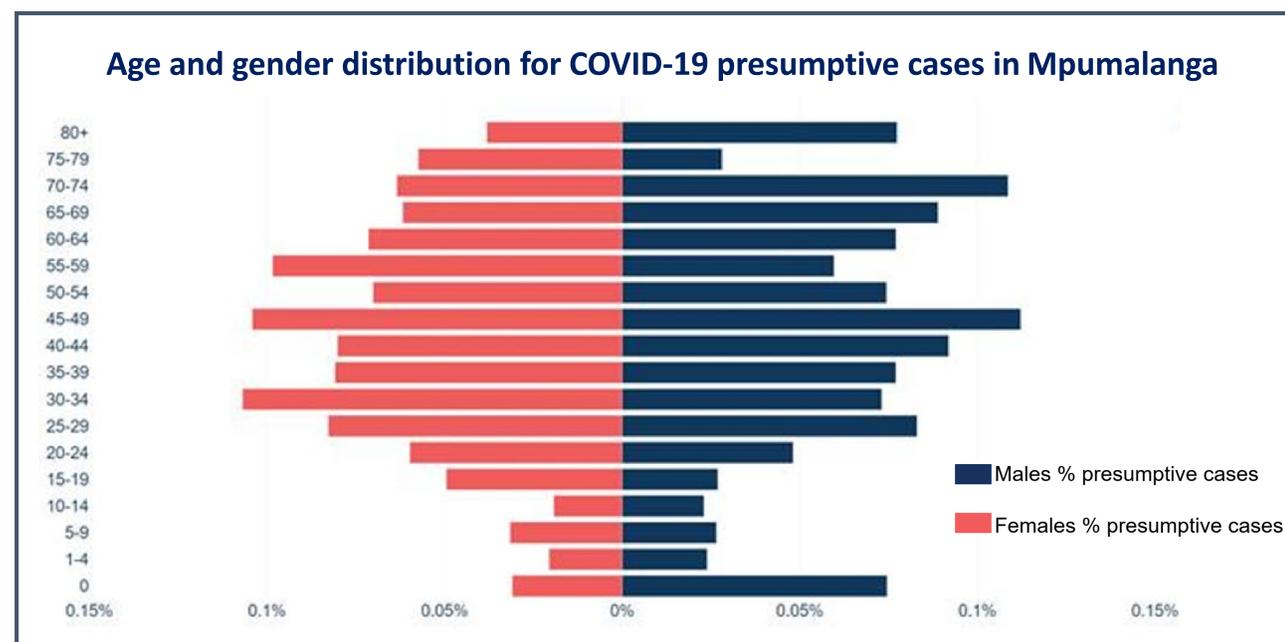
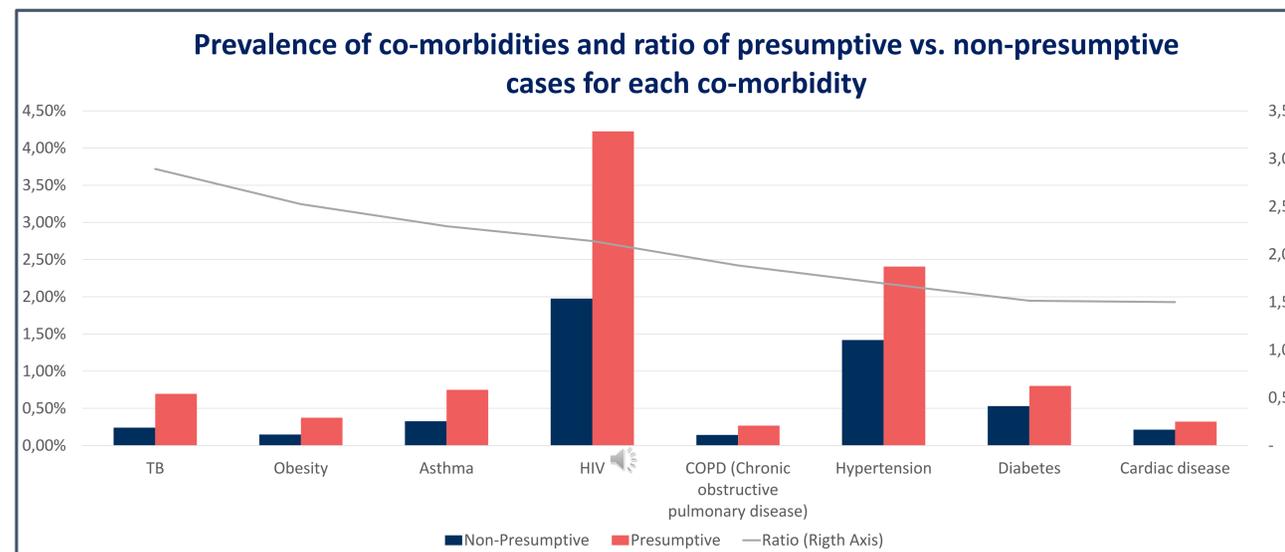
Globally, health systems have demonstrated limited testing and treatment capacity to manage critically ill patients in the current COVID-19 pandemic. Older people and people with uncontrolled pre-existing conditions are at high risk of adverse outcomes (1). Early identification of high-risk populations with targeted testing and rapid treatment response could contribute to curbing the burden on the health system. A cohort of data from Mpumalanga Province was analyzed to observe the frequency of co-morbidities and age distribution during the national screening and testing campaign in South Africa.

Description

Community Healthcare Workers in the Mpumalanga Province of South Africa conducted community screenings to identify people with presumptive COVID-19 infection in the province. The screening tool used was designed to identify co-morbidities that included HIV, TB, Chronic Obstructive Pulmonary Disorder (COPD), obesity, cardiac disease, asthma, diabetes and hypertension. An analysis was then conducted to observe the co-morbidity frequency within the cohort of 1.6m screenings. Age and gender distribution were also analyzed.

Reference

(1) World Health Organisation. COVID-19 and NCDs: Conceptual framework for the WHO NCD/WIN Technical Working Group. 6 April 2020. [wg-covid19-and-ncds---conceptual-framework---final-\(for-web\)](https://www.who.int/publications/i/item/wg-covid19-and-ncds---conceptual-framework---final-(for-web)). Accessed: 12 May 2020.



Lessons Learned

We observed that the two most prevalent co-morbidities within the cohort were HIV and hypertension. However, comparing presumptive versus non-presumptive cases in each co-morbidity as a percentage; TB and obesity had the highest prevalence within presumptive cases. More females were screened than males. The presumptive gender and age pyramid distribution shows that the highest number of presumptive were among males and people 30 years and older for both males and females with an increased presumptive proportion in males 0 - 4 years as well.

Conclusion

A high prevalence of TB, obesity, asthma and HIV in people with suspected COVID-19 infection underscores the importance of continuously monitoring this population to ensure treatment adherence. However, the observational data further indicated that the highest risk populations remains with TB, obesity and elderly populations. This information can better inform Departments of Health to proactively activate targeted testing and treatment triaging within their province.

Acknowledgements: PEPFAR-USAID, Mpumalanga Department of Health, Healthcare workers