

THE ECONOMIC BURDEN OF COVID-19 PREVENTION AND CASES MANAGEMENT IN EGYPT FROM GOVERNMENTAL PERSPECTIVE

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ABSTRACT

OBJECTIVES: With 2.96 trillion USD lost economic output globally in 2020 alone, COVID-19 is estimated as one of the major economical set-backs in the new era. This study aims to calculate the cost of COVID-19 management in Egypt for both prevention (represented in the vaccination program) and management including treatment protocols and indirect cost based on the figures published by the Egyptian ministry of health and population (MOHP).

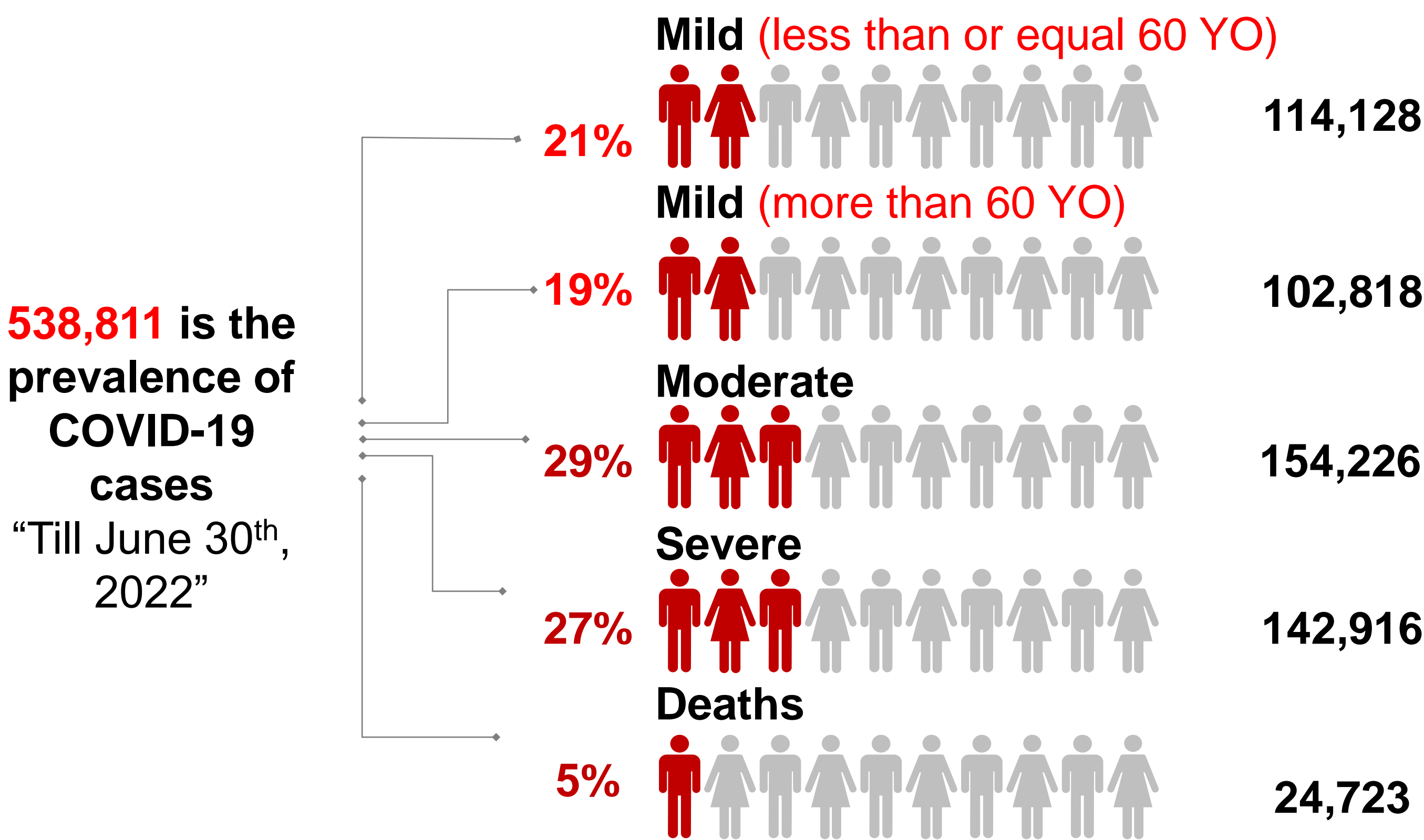
METHODS: A retrospective excel-based cost-analysis was designed to measure direct and indirect costs of the officially recorded cases and figures only. COVID-19 cases were segmented based on severity to mild with or without hospitalization, moderate, severe, and critical considering their recorded length of stay inside the hospitals. Direct Costs were collected from governmental perspective. Indirect costs included absenteeism and premature mortality following human capital method. Death costs counted for costs of COVID-19 body bags.

RESULTS: As per published figures, 514,088 cases and 24,723 deaths were reported, and 90,374,411 vaccine doses were administered till 30th June 2022. The total cost of COVID-19 management in Egypt was estimated to be EGP 33,825,160,968 (USD 1,802,652,990) for both prevention by vaccination, and treatment. The direct medical cost for treatment protocol by medications only was EGP 25,247,679,122 for all disease severities. Indirect costs were EGP 5,087,499,542 with (38%) due to absenteeism and (62%) due to pre-mature death. The prevention arm accounts for EGP 15,714,022,424 for vaccine purchase, storage, supply chain and administration.

CONCLUSIONS: COVID-19 imposed a huge burden on the Egyptian healthcare system, and these costs only counted for publicly recorded cases. The real costs of the management are expected to be much higher if counting the cases recorded out of the MOHP system either due to self-management or receiving treatment in other than MOHP hospitals.

INTRODUCTION

COVID-19 is one of the pandemic crises that hit the world at the end of the 2019, its prevalence reaches 622,389,418 confirmed cases by October 2022¹. It is estimated as one of the major economical set-backs in the new era, there's lost economic output globally by 2.96 trillion USD in 2020 alone.



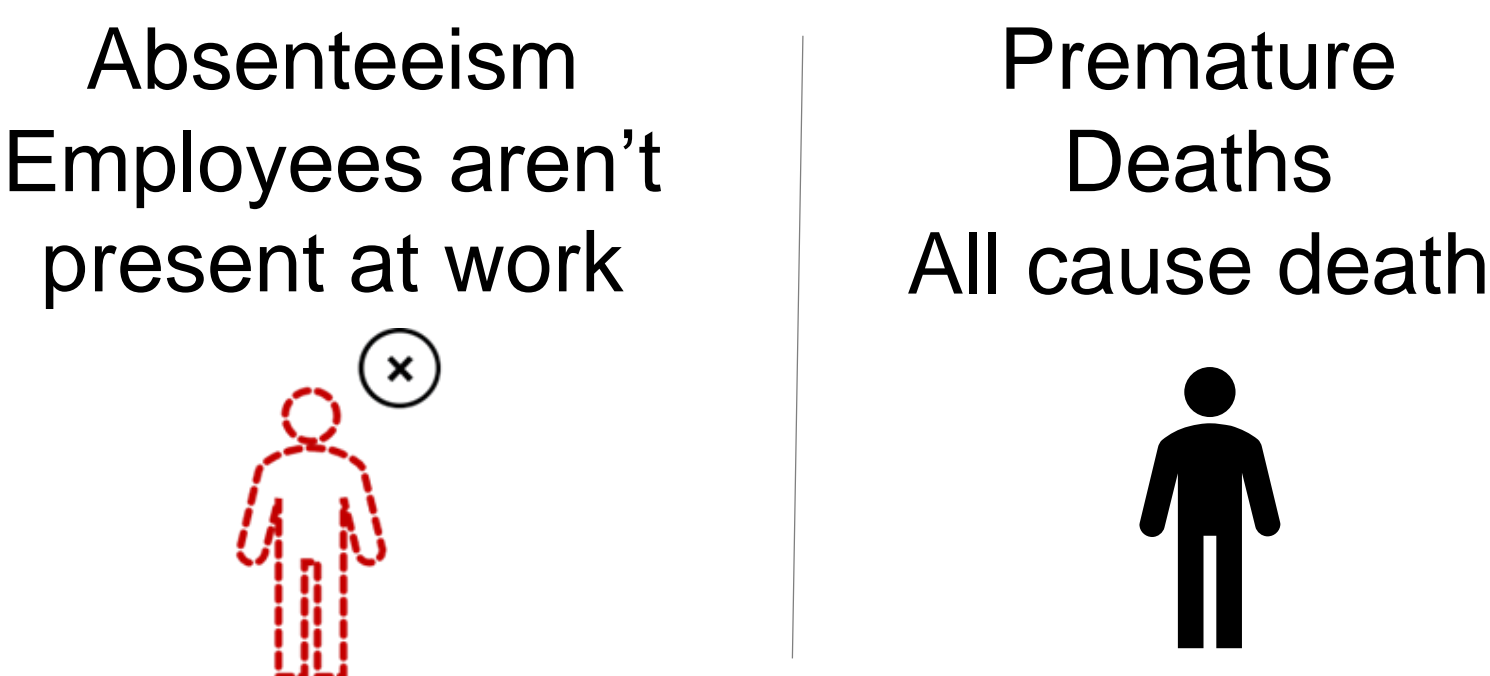
OBJECTIVES

This study aims to calculate the cost of COVID-19 management in Egypt for both prevention (represented in the vaccination program) and management including treatment protocols and indirect cost based on the figures published by the Egyptian ministry of health and population (MOHP).

METHODOLOGY

An Excel sheet-based cost analysis model was created to assess the costs incurred by COVID 2019 officially recorded patients with various severities, mild, moderate, severe, and mild patients over the age of 60 who required hospitalizations. In essence, the study multiplied the prevalent population size of each stage by the associated management costs.

The model then assessed the indirect medical costs incurred by COVID-19 patients in terms of productivity loss (Absenteeism) and Premature mortality



The cost of one labour day was calculated to be 197.5 EGP using GDP/Capita(2). And then adding the prevention arm cost represented by vaccination.

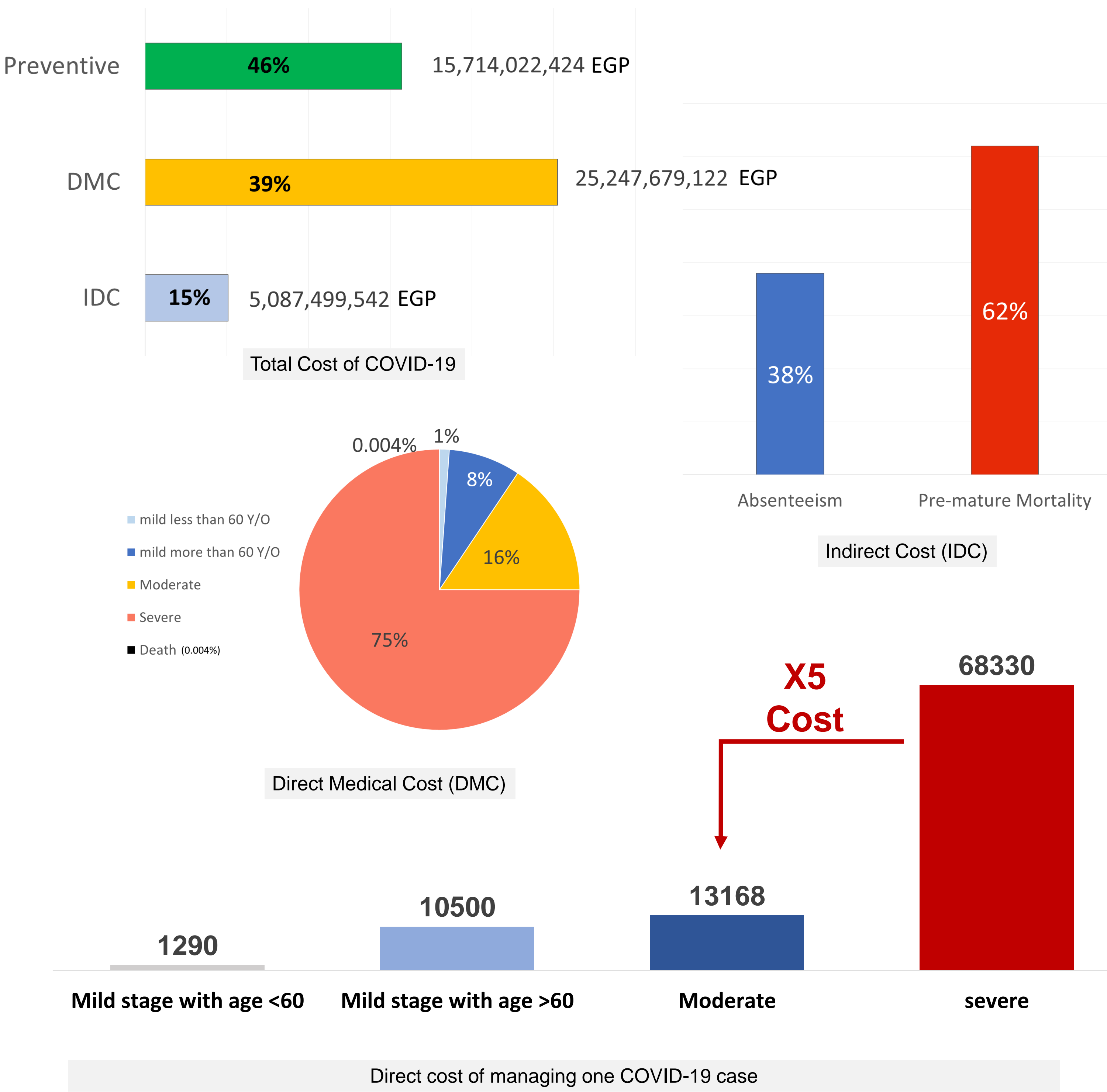
RESULTS

The total cost of COVID-19 management in Egypt

EGP 33,825,160,968 (USD 1,802,652,990)

for both prevention by vaccination, and treatment

The direct medical cost for treatment protocol by medications only was EGP 25,247,679,122 for all disease severities. Indirect costs were EGP 5,087,499,542 with (38%) due to absenteeism and (62%) due to pre-mature death. The prevention arm accounts for EGP 15,714,022,424 for vaccine purchase, storage, supply chain and administration (based on updated published data - Oct 2022)



CONCLUSION

The Egyptian healthcare system was heavily burdened by COVID-19, and these expenses only took into account instances that were officially reported. If instances that were documented outside of the MOHP system owing to self-management or seeking treatment in facilities other than MOHP hospitals are included, the actual costs of management are anticipated to be significantly higher.