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Letter to the Editor

Impact of COVID-19 preventive measures on other infectious and non-infectious respiratory diseases in Pakistan



Dear Editor,

We read with immense interest the article entitled “The impact of COVID-19 preventive measures on airborne/droplet-transmitted infectious diseases in Taiwan” by Shey-Ying Chen et al.¹ Which reported the decline in other respiratory diseases in Taiwan and here we would like to present the unintended decline in communicable and non-communicable respiratory illnesses in Pakistan.

COVID-19 pandemic is now becomes a worldwide public health disaster and as of January 22, 2021, there are more than 98 million confirmed coronavirus cases including over 2 million deaths have been reported across the globe.²

In Pakistan as of 22 January 2021, the toll of confirmed SARS-CoV-2 cases reached 528,891 including 11,204 deaths after its first laboratory confirmation on 26 February 2020.²

The collateral damage due to co-infection of COVID-19 with other respiratory pathogens and collateral benefits due to the implementation of COVID-19 preventative measures has been reported in the recent studies.^{3,4}

The present study was conducted to investigate the positive impact of COVID-19 preventative measures on other infectious and non-infectious respiratory diseases in Pakistan. The data source utilized for the present study is based on the surveillance records available at National Institute of Health (NIH) Islamabad, which is the national public health institute supporting disease surveillance and epidemiology programs across the country. For the non-infectious respiratory diseases the data was obtained from the chest care clinic Islamabad. For comparative analysis we extracted the number of cases reported between January to December 2019 and 2020. Twelve infectious diseases including Tuberculosis (TB), Measles, Rubella, Influenza, Respiratory Syncytial Virus (RSV), Pertussis, Diphtheria, Epstein bar virus (EBV), Pneumonia, Haemophilus influenzae, Varicella zoster virus (VZV) and Mumps are notifiable diseases in Pakistan, for which the case investigation and reporting is mandatory for all public and private hospitals.

Overall the number of 12 infectious and 5 non-infectious respiratory diseases declined from 1,92,026 in 2019 to 91,576 in 2020, with the reduction of 52.3% (Table 1). Comparatively more than 80% decline in 8 infectious diseases including, Rubella, RSV, Pertussis, Diphtheria, EBV, Pneumonia, Haemophilus influenzae Mumps and 5 non-infectious respiratory diseases such as Bronchiolitis, Asthma, Cystic fibrosis, Bronchitis and Bronchiectasis was observed in Pakistan. According to the data of chest care clinic Islamabad, for non-infectious respiratory diseases no any critical case is re-

Table 1

Number of cases of infectious and noninfectious respiratory diseases reported during January to December in 2019 and 2020.

Diseases	2019	2020	% Change
Communicable			
TB	178767	87358	-51.1
Measles	6536	3253	-50.2
Rubella	1488	132	-91.1
Influenza	417	87	-79.1
RSV	320	21	-93.4
Pertussis	624	35	-94.3
Diphtheria	832	157	-81.1
EBV	73	11	-84.9
Pneumonia	1302	248	-80.9
Haemophilus Influenzae	209	37	-82.2
VZV	523	114	-78.2
Mumps	258	39	-84.9
Non-Communicable			
Bronchiolitis	97	7	-92.8
Asthma	413	59	-85.7
Cystic Fibrosis	41	3	-92.7
Bronchitis	79	13	-83.5
Bronchiectasis	47	2	-95.7
Total	192026	91576	-52.3

TB: Tuberculosis, RSV: Respiratory syncytial virus, EBV: Epstein bar virus, VZV: Varicella zoster virus

ported during 2020 as compare to the multiple critical cases were reported during 2019.

The similar trends of unintended decline in other respiratory infectious diseases has already been reported from other countries such as Taiwan, Singapore, and China.⁵⁻¹⁰

Results of our study showed that the nationwide use of face mask, regular hand washing, use of sanitizers, social distancing, closure of Malls, schools, colleges, universities, bane on public gathering, massive temperature check, lockdown, extensive testing and quarantine, dramatically reduce the risk of other respiratory diseases. The use of mask is proved to be helpful not only for infectious but also for the prevention of non-infectious respiratory diseases.

The government and health authorities should continue to motivate the general public to actively participate in COVID-19 control measures, which will be more helpful to contain COVID-19 and additionally reduce the overall burden of other communicable diseases.

During the COVID-19 pandemic the unintended decline in other infectious diseases definitely provide more capacity to deal with COVID-19 containment. The under-reporting of other infectious diseases during the COVID-19 pandemic need further evaluation.

Authors contributions

MSR, AI, MMA, MU, MS and SSZZ conceived and designed the study. MSR, MU, MMA were responsible for data collection and analysis. MSR, MU and MMA wrote the manuscript draft.

Declaration of Competing Interest

All author declared that there is no conflict of interest

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