

A snapshot on Egypt COVID-19 experience

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The coronavirus disease 2019 (COVID-19) pandemic has shocked the world in an unprecedented fashion. Since late December 2019, the World Health Organization (WHO) was alerted to several cases of pneumonia of unknown origin in Wuhan City of China. By the first week of January 2020, the Chinese authorities confirmed that they have identified the new COVID-19 virus. The infection surged in China and crept outside the country. Several sporadic epidemics started in Europe. Italy, Spain and the United Kingdom were heavily affected and bared a huge mortality toll. In February 2020, all countries in the World, one after the other, started reporting COVID-19 infections and deaths. The global wide spread, made the WHO declare the COVID-19 to be a pandemic.

Egypt, as all countries in the world, is facing the COVID-19 threat. The first case in the country was reported on February 15, 2020 [1] and the spread of the infection is still going on. During the very first days of the epidemic, few cases were detected daily with very few deaths. However, the situation is changing and the epidemic is on an incessant growth. This blog aims to understand the current COVID-19 epidemic in Egypt based on the reported statistics in an attempt to answer the ready question “what should Egypt do to reduce the burden of the COVID-19?” keeping in mind that the threat has not ended and there are speculations that a second wave will come.

As per the WHO Situation Report of August 1, 2020 [2], Egypt has detected 94,078 COVID-19 positive cases. Till that date, the number of new detected cases is on an incessant rise (Figure 1). Based on the total number of detected cases from March 1 to Aug 1, the attack rate is 0.1%. Till August 1, Egypt is showing clusters of infected cases, however, with the recent epidemic growth, the country may be moving towards community transmission.

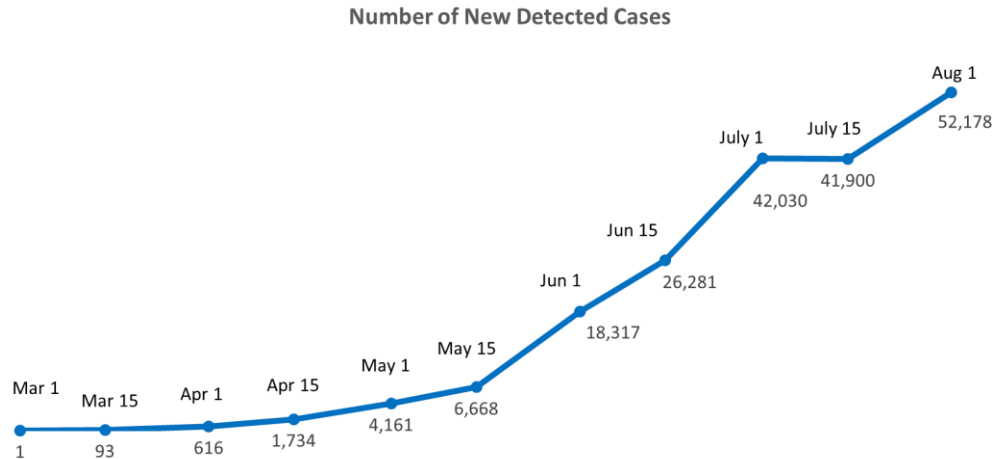


Figure 1: Covid-19 new detected cases in Egypt, March 1 to August 1 2020

Source: WHO Coronavirus disease 2019 (COVID-19) Situation Reports available at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

The seriousness of the disease in the country is reflected by the total of 4,805 cases who died from March 1 to August 1, 2020. Still the number of new deaths is increasing. The case-fatality rate (CFR) based on the reported cases and deaths is 5.1%.

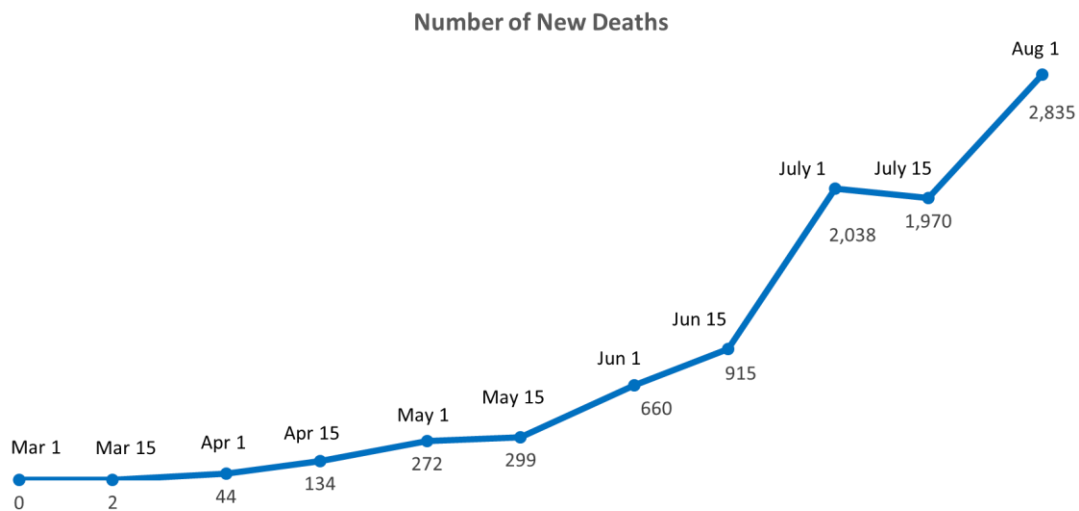


Figure 2: Covid-19 new deaths in Egypt March 1 to August 1, 2020

Source: WHO Coronavirus disease 2019 (COVID-19) Situation Reports available at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

From the very first day, the government was alert to the COVID-19 challenge and started implementing public health and social precautionary measures revisited every 15 days.

When the pandemic was declared in Egypt, the Ministry of Health and Population (MOHP) used a contact tracing approach for all confirmed cases, testing of suspicious cases, testing and quarantining Egyptians returning from abroad. Critical positive cases were admitted to quarantine hospitals for treatment, while mild to moderate cases were given treatment and asked to self-quarantine at home.

Public health media campaigns were initiated on television, radio and social media. They called upon people to stay home, wash hands regularly, avoid physical contact and self-isolate in case of suspicion of infection.

The whole of the government was responsive from the beginning. Schools were closed and classes were resumed virtually. Labor force was reduced with work from home strategy. Public services were stopped. There were limits on large public events and religious events were suspended. Restaurants, cafes and social clubs were closed, applying only delivery services. A curfew was set from 7pm to 6am with extra measures in the official holidays from 5pm to 6am with closure of all public transportation during the curfew time. Citizens were asked to stay at home and avoid going out except for need or emergencies. There was no complete lockdown at any time.

However, the true epidemic size and characteristics remain obscure. Given the national response, the official figures could be correct up to the level of the screened individuals. However, these figures do not reflect the real size of the COVID-19 epidemic in Egypt. To understand the magnitude of the epidemic given the paucity of information, a rough estimate of possible total true number of infections, based on the reported number of deaths, was calculated over the five months period. The results show that it is roughly estimated that Egypt has 1,638,070 infections on its territories (Table 1) if we assume complete COVID-19 mortality registration. On March 15, 2020, it was estimated that there were already 56,569 infected cases which highlights the fact that the COVID-19 threat has already started unperceived some months before the first reported case in mid-February. The roughly estimated attack rate is still on rise and is nearly double the observed attack rate. It is, also, estimated that the percentage of true cases detected in Egypt,

though improved, does not exceed 6.0% of the actually infected cases. This suggests that Egypt as all countries, is missing many infected cases. The epidemic in Egypt is not coming to end and is bigger than the observed with many much more people infected than the detected cases. Potential explanation for this under-reporting may be because people are suffering from mild conditions that they do not notice and thus do not seek healthcare. A second explanation, is that people may be suffering from moderate to severe conditions that still intentionally do not report from fear of the strict Ministry of Health Quarantine measures that they have never experienced. A third explanation, could be that people are incapable of applying the precautionary measures, cannot access the healthcare services and the health system's effort is not reaching them. Thus, cases do not appear in the reported figures as the reporting only counts people who seek healthcare who are mostly the critical conditions.

Table 1: Rough estimates of true COVID-19 infected cases in Egypt, March 1 – August 1, 2020

	Total cumulative detected cases	Estimated total cumulative cases (Mid-point)	Estimated percentage of detected cases (Mid-point)	Observed Attack rate	Estimated attack rate (Mid-point)
15-Mar	93	56,569	0.2%	0.0001%	0.1%
1-Apr	710	59,838	1.2%	0.07%	0.1%
15-Apr	2,350	179,183	1.3%	0.0023%	0.2%
1-May	5,895	272,320	2.2%	0.01%	0.3%
15-May	10,829	319,013	3.4%	0.01%	0.3%
1-Jun	24,985	672,942	3.7%	0.02%	0.7%
15-Jun	44,598	855,037	5.2%	0.04%	0.8%
1-July	68,311	1,375,647	5.6%	0.07%	1.3%
15-July	83,930	1,497,692	5.7%	0.08%	1.5%
1-Aug	94,078	1,638,070	5.6%	0.09%	1.6%

It is also roughly estimated that there is an under-reporting of COVID-19 deaths which are roughly estimated to be 5,386 deaths (Table 2). The deaths in the first few months were completely missed, which still confirms that the COVID-19 threat has started in Egypt in 2019. However, it seems that the health system is improving its response with a decline in the CFR ranging from 5% to 6% whether observed or estimated. But still, the health system response is not capable of saving the lives of many people.

Table 2: Rough estimates of true COVID-19 deaths in Egypt, March 1 – August 1, 2020

	Total observed deaths	Estimated total deaths in all identified cases	Observed case fatality rate	Adjusted case fatality rate (current deaths/cases 14 days ago)
15-Mar	2	186	2.2%	200.0%
1-Apr	46	351	6.5%	49.5%
15-Apr	178	589	7.6%	25.1%
1-May	406	1,018	6.9%	17.3%
15-May	571	1,049	5.3%	9.7%
1-Jun	959	2,213	3.8%	8.9%
15-Jun	1,575	2,811	3.5%	6.3%
1-July	2,953	4,523	4.3%	6.6%
15-July	4,008	4,924	4.8%	5.9%
1-Aug	4,805	5,386	5.1%	5.7%

Egypt could be correct in its public health approach. A country with a persistent sustained low investment in health over the past decades cannot support mass COVID-19 screening or hospitalization of all cases. The current measures may be reasonable to avoid exhausting the already overburdened healthcare system but are insufficient to face the COVID-19 threat.

Furthermore, the government could be correct in its partial down lock and considering resuming business to avoid the negative impact on Egypt economy. Egypt is the second overpopulated country in the EMR, with a population of around 102 million [3]. The country has passed hard economic fluctuations since 2011. The economy in Egypt was just recovering and the country cannot support further economic crises notably that the other countries that has applied complete lockdown just bared the economic burden but the COVID-19 threat did not stop.

In conclusion, the answer to the above question is very difficult, notably, that the government is reopening business gradually since June 28. Since the first COVID-19 case, Egypt has made unprecedented efforts. The government has come together in solidarity fostering solutions to reduce infection especially for the most at risk, and provide social protection to the most vulnerable. The people made unprecedented efforts, sacrifices to devastating consequences of the epidemic. However, the epidemic is still there and the national efforts are insufficient. The available information does not permit neither to understand the epidemic nor to identify those at risk nor to respond to the needs of the most vulnerable. To strengthen Egypt's efforts in reducing the burden of the COVID-19, there are three key measures for the future. First the country should

strengthen the production, sharing and use of data to make sure that the COVID-19 threat is properly understood and guide the national response in reducing the epidemic toll. There is a need that Egypt changes the paradigm from data for reporting to data for planning and look to health as the most sensitive indicator for national progress to achieve the countries vision. Second, appreciate that investment in health and healthcare keep people safe and economy strong. Because the health of the people is the wealth of the nations, there is a need for building adaptive, responsive and resilient health system capable of providing the full range of healthcare and prepared to face emerging health challenges as the COVID-19. Third, there is a need for renewed political commitment, with the whole of government more and profound policy integration to provide social protection, secure food and ensure economic development and be resilient in facing future economic, social and environmental challenges.

References

- [1] WHO. Coronavirus disease 2019 (COVID-19) Situation Report – 26. Available at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
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