

Implications of Changing Number of COVID-19 Non-Infected Persons in A Population

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1. Abstract

COVID-19 epidemic spread all over the world, with vigil on infection rate and infected persons. This brings out issues of shrinking numbers of not affected population coupled with the notion of herd immunity acquired through infection. Thus, this research focuses on decreasing number of people not-affected by COVID-19 through analyzing an international database, on a monthly basis calculating absolute number and monthly changes for 21 Arab countries and 21 other American, European and Asian countries. The less populated Gulf Cooperation Council countries; 15 other Arab countries; and 21 other countries have shown not only different patterns of decrease in non-infected persons but also trends of decrease. Arab countries have their own disciplines, even though diverse, which could be explored to implement strategies in a very sensitive manner. On the other hand, American, European, and Asian countries have different types of people and different ways of coordination, thus only country specific policies and actions are beneficial. Overall, few countries uphold the values of protecting people from infection, Saudi Arabia stand on the top of the list, others are losing control. Greater efforts of demographic analyses shall strengthen strategies to protect people from being infected ensuring healthy life expectancy.

2. Introduction

Demographics play an important role in epidemics not only in identification, treatment and follow up of infected persons but also in protecting non-infected people [1,2]: so far, all efforts in connection with COVID-19 are on infections and infected persons. Arguments have been started to justify increasing infections in certain populations that let this epidemic spread to a mass so that there develops herd immunity. This argument may be refuted with the statistics of global infections. Many of the populations over the globe protected their population, to a large extent, from being infected. One of the initial inferences of environmental conditions, including atmospheric temperature, influencing spread of this disease in a country has been refuted by taking examples of hot and humid Asian countries, colder Russia and Brazil, hotter Middle East and North African countries having reports of increasing spread of COVID-19 [3]. On the other hand, there are arguments that poorer infrastructural development in the global North and South [4] has resisted against the epidemic is also refuted. Rapid increase in cases in India is also confusing for the environmental and developmental arguments. The less spread infrastructure increases the challenges handling other medical specialities and emergencies due to higher volume of COVID-19

cases, which might crease loss of lives at other speciality sectors [5]. Thus, environmental management and subsidies to livelihood programs along with fostering developmental progress are inevitable at this context of COVID-19 management [6]. Apparently, the differentials infection traced through population characteristics bear the social causes and determinants of health under the prevailing developmental scene bringing importance to demographic and population health: a recognition of this factor might leverage health outcomes of COVID-19 in various populations [7,8]. Reducing local transmission to protect non-infected persons through effective and timely deployment of outbreak control measures has been warranted in Singapore too [9,10]. Explains the relevance of a tight robust efficient preparedness system with vigilant observation, modification, communication, and transparency in preventing infections [11,12]. Also stressed, from Saudi Arabian experience, the strategies including testing and surveillance implemented and sustained to fight the pandemic. An analysis to count the non-affected persons and its monthly changes done as part of an international comparison across the globe are thought provoking bringing the issues of protecting population from widened infections. This analysis accounts number of infected persons, total number of persons and the difference as non-infected persons. As this analysis considers Arab region including Arabian Gulf, and selected other countries from America, Europe, and Asia delineate various degrees of infection in terms of absolute numbers and trends, this analysis will showcase the decline of non-infected as proxy of infection intensity. While the entire world shows concern over the population affected by COVID-19, this analysis focuses on the other part of the population by stressing the importance of their protection.

3. Methodology

This research is based on country-wise data published by World of Meters (www.worldometers.info) on COVID-19 infections and total population: both, at a particular at a specific day and at a point specific time for the whole world and various countries. Out of them, all the 21 Arab countries including Gulf Cooperation Countries and 21 other major COVID-19 affected countries were selected. The population non-infected by COVID-19 was calculated by subtracting the number of infected persons from the total population. Thereafter, the change in non-infected persons were calculated by $\text{Change} = P(\text{non-infected})^t - P(\text{non-infected})^1$. This analysis was done for four months in 2021 namely, April, May, June, and July. Data collected on 28/29 of every month, referring to 27/28 of the month. Data analyses were performed on MS Excel.

4. Results and Discussions

A calculation of monthly differences in population not infected by COVID-19 across various countries (Arabian Gulf, other

Arab, and non-Arab) shows distinguishing characteristics. Few countries show positive differences while others show negative ones. As pointed out by [13], this epidemic that affected countries around the globe became a sever health and socio-economic problem caught hold of people of different denominations. Thus, a major effort could be to protect population from infections by popularizing methods of prevention as stated by [14]. This will reduce burden of the epidemic, to a large extend [15]. For all the periods considered, Saudi Arabia from the Arabian Gulf shows a positive change. A change of 12,727 during April-May resulted from subtracting 34,843,042 non-infected persons of April from 34,855,769 of May. During the same period there was an increase in total population, reportedly from 35,257,261 in April to 35,301,732 in May to 35,349,169 in June and 35,393,638 in July. This figure has been declining month-wise reaching a figure of 6,901 during June-July (34,864,629 in June and 34,871,530 in July). The other five countries, UAE, Oman, Qatar, Bahrain, and Kuwait had a negative change showing intense infections in comparison with population. For example, UAE had a total of non-infected persons of 9,473,664 in April which declined to 9,434,833 in May, 9,379,518 in June and 9,342,036 in July as against their corresponding population of 9,988,255; 9,998,048; 10,008,494; and 10,018,287. These show rapid spread, despite all control measures. Still, rays of hope that this gap reduced slightly during June-July; more so in Bahrain. In comparison to May-June, the situation improved in June-July, in the Arabian Gulf. Apart from UAE, Kuwait and Oman are also found to be worse hit. In Kuwait, the numbers declined from 4,052,555 to 4,023,217 to 3,979,807 to 3,942,641 accounting for a 109,914 infected persons in a period of four months. Corresponding figures for Oman are 5,021,027; 5,009,321; 4,970,197; and 4,949,641 giving rise to 71,386. These figures are interpreted with consideration of increase in population (30,032 in UAE; 32,751 in Oman; 15,884 in Kuwait). Of these three countries, the situation of Kuwait might be more serious while comparing with the population size. Except Qatar, all other countries have reported an increase in population (refer Table 2). This region, as a whole, experienced a decrease in the percentage of non-infected persons in the tune of 97.02 to 96.68 to 96.27 to 96.00 month-wise (Figure. 1). Even though, the decrease is slow, comparatively, it gives an alarm to the health system. A comparatively high drop observed in Bahrain followed by Kuwait and Oman. Both Saudi Arabia and Qatar maintained a stable percent. In this group of six countries of around 60 million people, more than half live in Saudi Arabia, followed by UAE, Oman, and Kuwait whereas Qatar and Bahrain have lesser number of people: similar is the total area of these countries. Such a characteristic raises issues of non-affected persons to show the number of persons protected in a country through various strategies of isolation, quarantining, and immunity. Their numbers are decreasing despite

increases in total population as shown in the percentage distribution. As Medford and Trias-Llimos, (2020), put it greater insights are to be gained through demographics including age patterns of population affected and protected, so as to reflect the mitigation strategies adopted.

Of the other Arab countries, Iraq (-67,137; -66,631; -184,320), Tunisia (-26,536; -57,876; -159,900), and Libya (-558; -143; -43,024) are found to be hit by the COVID-19, based on this calculation of non-infected persons. These statistics show the threats of COVID-19 in these three Arab countries demanding immediate attention and intervention. Both Lebanon and Jordan have fast declining non-infected persons during these periods whereas Morocco shows a different situation with a reverse trend during June-July demanding close attention and strategic interventions. Other countries like Syria, Yemen, Algeria, Mauritania, Comoros, Djibouti, Egypt, Somalia, and Sudan stand with strong coping strategies, that is, retaining a constant number of non-infected persons. These countries have reported a high increase in population that influencing this trend. Arab countries as a whole, including Arabian Gulf had a reduction of non-infected persons from 432,223,141 to 432,384,844 to 432,544,437 to 432,416,737 accounting for Table population not infected by COVID-19 from April to July, 2021, 193,596 persons. These figures account for the increase in population from 437,708,678 to 438,363,014 to 439,060,964 to 439,715,300 accounting for an increase of 2,006,622. Still, the situation in Arab countries, all 21 countries together, show an unfavorably negative situation especially during June-July. Hopefully, country specific culturally sensitive remedial measures are expected to be implemented to cope with the situation in the coming months of third wave of COVID-19. These countries had no influx of infections in the first phase (during 2020) but later expanding spread slowly and widening at a faster rate, giving stressful experiences to the healthcare sectors. Everywhere demographics receive importance, especially in post epidemic programs and policies [10], where those unaffected are counted as well fit individuals. It is here, the role of infrastructure and resource allocation in medical and health care capacity, demographics, and socioeconomic characteristics are important considerations, as explained by [11]. In addition, with the sustainable development goals, the Arab region needs to develop resilience against pandemic, migration, and climate change in order to protect their population from infections [12]. Moreover, COVID-19 infections and mortality in the Arab region are lesser in intensity [13]. Among these countries Saudi Arabia stand as a model of COVID-19 control, protecting a major share of population from being infected, although there was a slightly higher reported case fatality. This analysis includes some of the major affected countries from Europe, America and Asia. Of all these countries, except Singapore, all other

countries report negative monthly changes in number of non-infected persons. World, as a whole, has a change of -18,861,791 non-infected persons during April-May (7,718,131,776 in April and 7,699,269,985 in May) referring a decreasing number despite the population increase of 1,388,750 (7,867,498,206 in April and 7,868,886,956 in May). It shows a faster rate of infection in the population. Similarly, during May-June, there were a change of -5,549,179 in the non-infected persons (7,699,269,985 in May and 7,693,720,806 June) where the population increased by 7,021,114 (7,868,886,956 in May 7,875,908,070 in June). This shows a lesser change in May-June as compared to that of April-May. During June-July there were a further increase in the figures, in tune of -7,840,623, showing a faster spread of disease (7,693,720,806 June and 7,685,880,183 in July) when the population increase of 6,620,929 was noted (7,875,908,070 in June and 7,882,528,999 in July). For further explanations, cases of six countries, such as USA, Poland, Italy, Brazil, Malaysia, and India are highlighted here. USA has been severely hit by COVID-19 epidemic, from its beginning with the fast declining number of non-affected persons: their numbers reduced from 299,668,479 in April to 298,754,526 in May to 298,412,121 in June to 297,595,067 in July. This happened against a population increase from, 332,595,570 in April to 332,754,370 in May to 332,923,757 in June. This lead to higher differences during April-May and June-July as compared to that during May-June. In Poland, the number of non-affected persons reduced from 35,044,483 in April to 34,939,483 in May to 34,925,834 in June to 34,919,673 in July as against a decrease in population. In this country, the decline of non-affected persons indicating wide spread was reported during April-May, which was controlled thereafter. Italy, a country with a fast and wide spread infection has also experienced similar reductions in non-infected persons but a decrease in population size. Here, there is a different trend that May-June was less threatening than April-May but June-July shows increased spread of COVID-19. Malaysia getting affected, recently, has a fast reduction in the non-affected persons, recently, showing a trend of 32,307,031; 32,198,247; 32,036,461; 31,748,241 month-wise while their population increased constantly. On the contrary, India with a one billion plus population has serious reduction in the non-affected persons during April-May whereas a lowered reductions reported thereafter. In most of the countries discussed, there were doubling of infections at varying rates with, both individual and community transmissions. Thus, the international community has the responsibility of ensuring appropriate resources to address needs and conditions of population affected as well as not affected by the epidemic, even for vaccination programs [14]. Countries having an edge in COVID-19 management are found to have employed all system elements in their fight against infection [15].

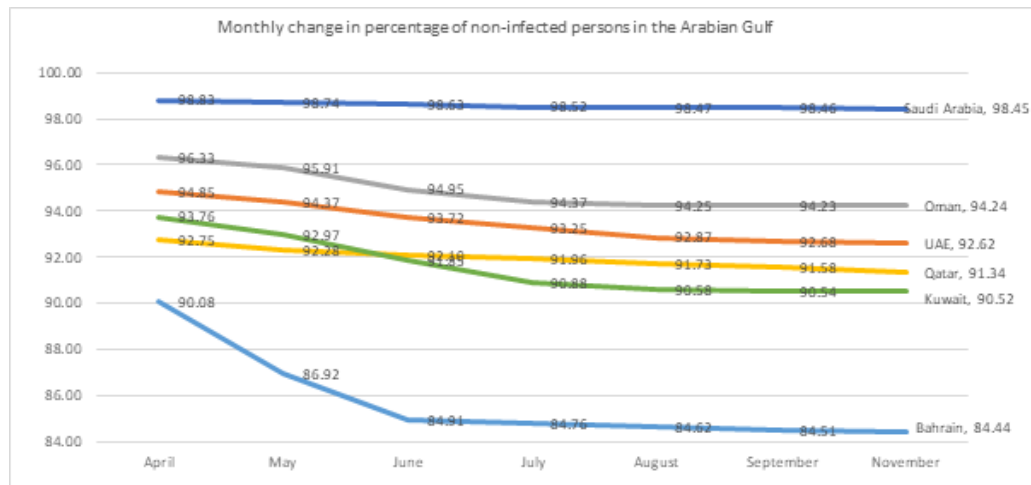


Figure 1: Except Qatar, all other countries have reported an increase in population (refer Table 2). This region, as a whole, experienced a decrease in the percentage of non-infected persons in the tune of 97.02 to 96.68 to 96.27 to 96.00 month-wise.

a. Absolute numbers

Countries	Absolute numbers						
	April	May	June	July	August	September	November
Saudi Arabia	34,843,042	34,855,769	34,864,629	34,871,530	34,895,795	34,937,077	35,026,273
UAE	9,473,664	9,434,833	9,379,518	9,342,036	9,313,012	9,303,019	9,316,519
Oman	5,021,027	5,009,321	4,970,194	4,949,641	4,954,182	4,963,218	4,984,442
Qatar	2,604,206	2,591,122	2,585,995	2,582,058	2,575,618	2,571,417	2,564,673
Bahrain	1,576,027	1,524,983	1,494,174	1,495,681	1,497,319	1,499,564	1,506,932
Kuwait	4,052,555	4,023,217	3,979,807	3,942,641	3,934,109	3,937,118	3,946,089
GCC Total	57,570,521	57,439,245	57,274,317	57,183,587	57,170,035	57,211,413	57,344,928
Iraq	39,913,640	39,846,503	39,779,872	39,595,552	39,394,362	39,340,662	39,410,522
Jordan	9,579,788	9,560,400	9,552,899	9,543,202	9,525,807	9,507,655	9,402,293
Lebanon	6,277,516	6,258,196	6,250,606	6,234,264	6,190,759	6,165,124	6,114,324
Syria	17,824,752	17,857,723	17,893,924	17,928,384	17,962,888	17,992,051	18,049,635
Yemen	30,355,598	30,409,090	30,466,443	30,520,294	30,575,337	30,628,068	30,738,604
Algeria	44,376,641	44,435,049	44,493,457	44,530,155	44,569,771	44,626,555	44,753,591
Libya	6,771,508	6,770,950	6,770,807	6,727,783	6,675,378	6,648,938	6,631,088
Mauritania	4,730,871	4,739,893	4,749,283	4,755,349	4,757,240	4,764,561	4,782,046
Morocco	36,758,870	36,786,571	36,813,038	36,780,908	36,566,297	36,521,980	36,576,038
Tunisia	11,616,362	11,589,826	11,531,950	11,372,050	11,303,157	11,266,136	11,275,287
Comoros	880,887	882,359	883,949	885,358	886,893	888,348	891,123
Djibouti	988,823	989,410	990,588	991,720	992,857	993,256	994,694
Egypt	103,686,329	103,810,884	103,957,530	104,112,618	104,272,829	104,416,591	104,689,654
Somalia	16,240,160	16,275,913	16,314,543	16,350,638	16,386,451	16,420,166	16,492,531
Sudan	44,650,875	44,732,832	44,821,231	44,904,875	44,991,260	45,074,883	45,244,936
Arab Total	432,223,141	432,384,844	432,544,437	432,416,737	432,221,321	432,466,387	433,391,294
USA	299,668,479	298,754,526	298,412,121	297,595,067	8,820,252	8,808,695	8,556,930
Hungary	8,867,459	8,835,045	8,827,987	8,824,665	6,436,715	6,388,203	6,185,434
Bulgaria	6,504,232	6,483,259	6,474,885	6,467,973	10,470,041	10,415,521	9,958,966
Belgium	10,654,950	10,582,511	10,556,179	10,524,657	55,834,644	55,689,609	55,328,854
Italy	56,407,180	56,175,464	56,115,235	56,035,693	61,600,101	60,625,789	58,240,869
UK	63,769,098	63,734,376	63,483,936	62,497,257	193,577,300	193,063,170	192,604,223
Poland	35,044,483	34,939,483	34,925,834	34,919,673	293,623,416	289,462,574	284,634,047
Portugal	9,337,250	9,322,809	9,291,778	9,204,364	34,910,613	34,891,600	34,280,433
Spain	43,273,532	43,107,970	42,980,082	42,378,601	9,129,128	9,092,692	9,012,146
France	59,857,875	59,768,364	59,646,054	59,374,340	41,943,923	41,825,571	41,649,256
Romania	18,082,423	18,044,660	18,029,674	18,017,170	58,711,729	58,456,764	57,856,741
Sweden	9,197,685	9,087,619	9,072,692	9,067,946	17,993,184	17,878,847	17,280,038
Switzerland	8,052,581	8,019,608	8,014,498	8,006,386	9,048,652	9,026,045	8,989,018
Russia	141,206,482	140,955,812	140,523,530	139,806,351	139,143,324	138,568,828	136,452,168
Brazil	199,352,359	197,580,398	195,606,062	194,380,608	7,957,019	7,896,474	7,761,373
Turkey	80,371,995	79,936,374	79,821,915	79,650,102	79,057,847	78,395,054	76,869,335
Iran	82,434,867	82,085,320	81,875,079	81,351,275	80,338,896	79,774,472	79,395,690
China	1,439,233,166	1,439,232,738	1,439,232,023	1,439,231,014	1,439,228,990	1,439,227,726	1,439,225,104
Malaysia	32,307,031	32,198,247	32,036,461	31,748,241	31,159,329	30,669,635	30,325,259
Singapore	5,827,013	5,829,902	5,833,307	5,835,037	5,836,347	5,817,745	5,652,685
India	1,373,135,000	1,364,687,141	1,363,104,136	1,363,004,723	1,362,985,406	1,363,097,656	1,364,506,470
World Total	7,718,131,776	7,699,269,985	7,693,720,806	7,685,880,183	7,672,852,967	7,663,174,296	7,648,156,343

a. Monthly differences.

Countries	Change					
	April-May	May-June	June-July	July-August	August-September	November-September
Saudi Arabia	12,727	8,860	6,901	24,265	41,282	89,196
UAE	-38,831	-55,315	-37,482	-29,024	-9,993	13,500
Oman	-11,706	-39,127	-20,553	4,541	9,036	21,224
Qatar	-13,084	-5,127	-3,937	-6,440	-4,201	-6,744
Bahrain	-51,044	-30,809	1,507	1,638	2,245	7,368
Kuwait	-29,338	-43,410	-37,166	-8,532	3,009	8,971
GCC Total	-131,276	-164,928	-90,730	-13,552	41,378	133,515
Iraq	-67,137	-66,631	-184,320	-201,190	-53,700	69,860
Jordan	-19,388	-7,501	-9,697	-17,395	-18,152	-105,362
Lebanon	-19,320	-7,590	-16,342	-43,505	-25,635	-50,800
Syria	32,971	36,201	34,460	34,504	29,163	57,584
Yemen	53,492	57,353	53,851	55,043	52,731	110,536
Algeria	58,408	58,408	36,698	39,616	56,784	127,036
Libya	-558	-143	-43,024	-52,405	-26,440	-17,850
Mauritania	9,022	9,390	6,066	1,891	7,321	17,485
Morocco	27,701	26,467	-32,130	-214,611	-44,317	54,058
Tunisia	-26,536	-57,876	-159,900	-68,893	-37,021	9,151
Comoros	1,472	1,590	1,409	1,535	1,455	2,775
Djibouti	587	1,178	1,132	1,137	399	1,438
Egypt	124,555	146,646	155,088	160,211	143,762	273,063
Somalia	35,753	38,630	36,095	35,813	33,715	72,365
Sudan	81,957	88,399	83,644	86,385	83,623	170,053
Arab Total	161,703	159,593	-127,700	-195,416	245,066	924,907
USA	-913,953	-342,405	-817,054	-4,413	-11,557	-251,765
Hungary	-32,414	-7,058	-3,322	-31,258	-48,512	-202,769
Bulgaria	-20,973	-8,374	-6,912	-54,616	-54,520	-456,555
Belgium	-72,439	-26,332	-31,522	-201,049	-145,035	-360,755
Italy	-231,716	-60,229	-79,542	-897,156	-974,312	-2,384,920
UK	-34,722	-250,440	-986,679	-803,308	-514,130	-458,947
Poland	-105,000	-13,649	-6,161	-3,971,651	-4,160,842	-4,828,527
Portugal	-14,441	31,031	-87,414	-9,060	-19,013	-611,167
Spain	-165,562	-127,888	-601,481	-75,236	-36,436	-80,546
France	-89,511	-122,310	-271,714	-434,678	-118,352	-176,315
Romania	-37,763	-14,986	-12,504	-662,611	-254,965	-600,023
Sweden	-110,066	-14,927	-4,746	-23,986	-114,337	-598,809
Switzerland	-32,973	-5,110	-8,112	-19,294	-22,607	-37,027
Russia	-250,670	-432,282	-717,179	-663,027	-574,496	-2,116,660
Brazil	-1,771,961	-1,974,336	-1,225,454	-49,367	-60,545	-135,101
Turkey	-435,621	-114,459	-171,813	-592,255	-662,793	-1,525,719
Iran	-349,547	-210,241	-523,804	-1,012,379	-564,424	-378,782
China	-428	-715	-1,009	-2,024	-1,264	-2,622
Malaysia	-108,784	-161,786	-288,220	-588,912	-489,694	-344,376
Singapore	2,889	3,405	1,730	1,310	-18,602	-165,060
India	-8,447,859	-1,583,005	-99,413	-19,317	112,250	1,408,814
World Total	-18,861,791	-5,549,179	-7,840,623	-13,027,216	-9,678,671	-15,017,953

Table 2: Population by months.

Countries	April	May	June	July	August	September	November	Remarks
Saudi Arabia	35,257,261	35,301,732	35,349,168	35,393,638	35,439,591	35,484,062	35,575,968	
UAE	9,988,255	9,998,048	10,008,494	10,018,287	10,028,406	10,038,199	10,058,437	
Oman	5,212,425	5,223,105	5,234,496	5,245,176	5,256,211	5,266,891	5,288,961	
Qatar	2,807,805	2,807,805	2,807,805	2,807,805	2,807,805	2,807,805	2,807,805	No increase
Bahrain	1,749,575	1,754,451	1,759,651	1,764,527	1,769,565	1,774,441	1,784,517	
Kuwait	4,322,236	4,327,416	4,332,940	4,338,120	4,343,472	4,348,651	4,359,355	
GCC Total	59,337,557	59,412,557	59,492,554	59,567,553	59,645,050	59,720,049	59,875,043	
Iraq	40,958,650	41,032,812	41,111,918	41,186,080	41,262,714	41,336,876	4,1490,144	
Jordan	10,286,143	10,294,439	10,303,288	10,311,584	10,320,157	10,328,453	10,345,598	
Lebanon	6,800,279	6,797,786	6,795,126	6,792,633	6,790,057	6,787,564	6,782,411	Decrease
Syria	17,847,141	17,882,088	17,919,366	17,954,314	17,990,427	18,025,374	18,097,600	
Yemen	30,361,818	30,415,786	30,473,352	30,527,321	30,583,088	30,637,056	30,748,591	
Algeria	44,497,985	44,562,975	44,632,297	44,697,286	44,764,442	44,829,432	44,963,743	
Libya	6,947,762	6,955,422	6,963,593	6,971,253	6,979,168	6,986,828	7,002,659	

Mauritania	4,749,185	4,759,237	4,769,959	4,780,011	4,790,398	4,800,450	4,821,224	
Morocco	37,268,842	37,304,693	37,342,933	37,378,784	37,415,829	37,451,679	37,525,770	
Tunisia	11,919,946	11,930,076	11,940,881	11,951,012	11,961,479	11,971,610	11,992,545	
Comoros	884,716	886,238	887,861	889,382	890,955	892,476	895,621	
Djibouti	999,754	1,000,933	1,002,189	1,003,367	1,004,585	1,005,763	1,008,198	
Egypt	103,910,846	104,069,291	104,238,300	104,396,746	104,560,473	104,718,918	105,046,372	
Somalia	16,254,075	16,290,560	16,329,476	16,365,961	16,403,661	16,440,146	16,515,547	
Sudan	44,683,979	44,768,121	44,857,871	44,942,013	45,028,959	45,113,100	45,286,992	
Arab Total	437,708,678	438,363,014	439,060,964	439,715,300	440,391,442	441,045,774	442,398,058	
USA	332,595,570	332,754,370	332,923,757	333,082,557	9,631,958	9,629,956	9,625,818	
Hungary	9,640,166	9,638,164	9,636,029	9,634,027	6,887,863	6,883,600	6,874,790	Decrease
Bulgaria	6,905,341	6,901,078	6,896,531	6,892,268	11,647,950	11,652,075	11,660,599	Decrease
Belgium	11,631,038	11,635,163	11,639,563	11,643,687	60,358,931	60,351,673	60,336,672	
Italy	60,388,692	60,381,433	60,373,691	60,366,432	68,298,328	68,327,498	68,387,784	Decrease
UK	68,178,729	68,207,899	68,239,014	68,268,185	214,305,905	214,429,565	214,685,129	
Poland	37,812,517	37,809,132	37,805,522	37,802,138	333,246,650	333,405,450	333,733,637	Decrease
Portugal	10,172,241	10,169,815	10,167,227	10,164,801	37,798,640	37,795,256	37,788,261	Decrease
Spain	46,769,666	46,771,146	46,772,724	46,774,203	10,162,293	10,159,867	10,154,853	
France	65,392,188	65,403,993	65,416,584	65,428,389	46,775,732	46,777,211	46,780,268	
Romania	19,131,962	19,121,500	19,110,341	19,099,880	65,440,587	65,452,392	65,476,789	Decrease
Sweden	10,150,939	10,156,092	10,161,588	10,166,741	19,089,069	19,078,608	19,056,987	
Russia	145,985,907	145,991,019	145,996,471	146,001,583	10,172,065	10,177,218	10,187,866	
Switzerland	8,706,538	8,711,719	8,717,244	8,722,424	146,006,865	146,011,977	146,022,541	
Brazil	213,798,900	213,922,560	214,054,464	214,178,124	8,727,777	8,732,957	8,743,663	
Turkey	85,082,577	85,156,923	85,236,225	85,310,571	85,387,396	85,461,742	85,615,390	
Iran	84,873,060	84,961,178	85,055,171	85,143,289	85,234,344	85,322,462	85,504,572	
China	1,439,323,776	1,439,323,776	1,439,323,776	1,439,323,776	1,439,323,776	1,439,323,776	1,439,323,776	Not changed
Malaysia	32,705,482	32,739,471	32,775,727	32,809,717	32,844,839	32,878,829	32,949,075	
Singapore	5,888,076	5,891,842	5,895,860	5,899,626	5,903,518	5,907,284	5,915,068	
India	1,391,123,637	1,392,234,846	1,393,420,136	1,394,531,345	1,395,679,594	1,396,790,804	1,399,087,302	
World Total	7,867,498,206	7,868,886,956	7,875,908,070	7,882,528,999	7,889,572,750	7,896,264,500	7,909,937,229	

5. Conclusions

In conclusion, this analysis brought out salient findings that distinguishes countries protecting people from infection, countries with moderate levels of infection reducing the proportion of non-infected persons and countries going through rapid reductions in the non-infected persons. Saudi Arabia (from Arabian Gulf); Syria, Yemen, Algeria, Mauritania, Morocco, Comoros, Djibouti, Egypt, Somalia, and Sudan (other Arab countries); and Singapore (other countries) are in the first group whereas Qatar (Arabian Gulf); Jordan, Labanon, and Libya (other Arab Countries); and Hungary, Bulgaria, Switzerland, and China (other countries) forms the second group. Countries not included in these two groups are in the rapidly reducing non-infected persons group. All efforts are necessary to be put in practice to save the population from spread of infection, as an emergency mitigation strategy.

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