

A Review of Covid-19: August to October 2020

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Abstract— On October 31, 2020, there were more than 46M recorded cases, with approximately 11.7M active cases of Covid-19 worldwide. At the same time, the recorded deaths due to the pandemic were 1.195M. These represented an increase of recorded cases from July 31, 2020 by 2.63 and corresponding factors of 1.76 and 1.96 for active cases and deaths, respectively. These unprecedented events continue to heighten uncertainty and anxiety about a possible medical solution and when that will be available. This work builds on a simple descriptive approach for a better understanding of the global pandemic experience.

Index Terms— pandemic experience, recorded deaths, unprecedented, active cases.

I. INTRODUCTION

The widespread challenges that arise from the current Covid-19 pandemic are unlike any other worldwide disaster in memory. Even as the experience has been manageable in some territories, this has not been without country-level risks. There have been unmanageable impacts in other territories that forced the abnormal closure of business activities, rules implementation to curb individual actions, and changed workplace arrangements and how individuals perform work.

The raw data source for developing this study was the daily public updates on the internet by Worldometer COVID-19 Data. The aim of this work, which builds on an earlier paper by Narine (2020), is to examine and analyze the Covid-19 experience in select countries worldwide. The data is presented in simple formats to allow for straightforward interpretation and understanding by the reader.

II. DATA REVIEW

Table 1 shows 32 countries where data, from February to October 2020, was analyzed and used for this study: chosen based on worldwide location, spread, and pandemic impact.

For Table 1:

Data for Argentina, Colombia, France, and Peru were from October 18 to October 31, 2020.

For Australia, as an example, entries of Day-to-Day increases of Covid-19 cases were registered for 249 days out of a maximum possible 261 days from mid-February to October 31, 2020. There were 80 Day-to-Day entries where each entry was > 99 and with seven (7) of these being > 0.5k.

Table 1

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No. Day-to-Day increases (February – October)

Overall	Total Cases Recorded February - October 2020					
	# Occurrences (Daily New)					
	>0	>49	>99	>0.5k	>1k	>5k
USA	232	232	232	232	229	225
Brazil	220	220	220	215	213	185
India	217	217	217	213	199	167
Russia	229	227	221	214	208	174
South Africa	218	216	205	177	153	47
Spain	241	241	239	196	176	104
Italy	253	253	249	164	131	32
Dominican Republic	229	222	213	101	33	
Haiti	182	55	30			
Trinidad and Tobago	138	45	14			
French Guiana	176	62	30			
Suriname	159	42	8			
Sweden	243	234	224	96	25	
New Zealand	140	15	2			
Australia	249	103	80	7		
Pakistan	230	229	224	175	87	9
Egypt	238	216	208	70	41	
UK	242	237	234	225	170	47
Canada	237	233	229	149	102	
Aruba	126	40	6			
Cuba	228	50	0			
Guyana	170	25	4			
Venezuela	202	161	146	85	21	
Bahamas	138	56	21			
Bangladesh	210	207	204	188	171	
Jamaica	210	67	34			
Mexico	226	222	219	197	189	83
Nigeria	227	194	181	42		
Argentina	14	14	14	14	14	14
Colombia	14	14	14	14	14	14
France	14	14	14	14	14	14
Peru	14	14	14	14	14	14

From Table 2:

The U.S.A. was the first country to record an instance of 100k or more Day-to-Day new cases. This entry occurred on October 30, 2020. The U.S.A. was the only country to register >90k cases in October and that coincides with the last days build-up to elections for President (scheduled for the first week in November). Further investigation is necessary to confirm this association. Since the increased levels occurred during the last week of October, this pattern may continue into November.

Brazil began the August -October period as the country with the second-highest number of COVID-19 cases, but India assumed that position in September. There was a gradual lessening in the number of Day-to-Day cases from an August average of > 40k/day to > 20k/day in October.

On September 11, India eclipsed the July 24 peak of > 79k Day-to-Day new cases in the U.S.A. The new peak level increased to > 97k. There were 26 instances of > 80k reported Day-to-Day increases in September. On 12 of those days, the increase was >90k.

research interest is in electric industry performance improvement and accident prevention.

In October, the reported daily increase in Russian cases was >10k on 28 different instances; This was the highest levels reported in the 261 days where data was collected. The peak levels occurred at the end of October.

Peak levels for new cases in South Africa occurred before August, even as the number of cases continued to rise during the review period ending in October.

In Spain, the daily increase in cases was >20k for the first time in October and occurred on three occasions. These were the highest levels reported for this country during this pandemic.

For Italy, in the last week of October, the daily increase in cases was >30k in two different instances. This data represented the highest levels reported for this country since February, when data collection began.

The daily increase in UK cases was >20k on 11 days from October 20, 2020. That was the highest level reported for this country.

From October 18, the daily increase in France cases was > 50k on one occasion and more than 40K on five other days: The highest levels reported there.

Table 2.

Monthly Day-to-Day Entries for August – September-October 2020

	Total Cases Recorded		261 days in 2020							
	Overall (up tp October 31, 2020)		# Occurrences (Daily New)							
	>10k	>20k	>30k	>40k	>50k	>60k	>70k	>80k	>90k	>100k
USA	223	210	150	110	67	39	16	5	2	1
Aug	31	31	31	27	12	2				
Sep	30	30	28	16	3					
Oct	31	31	31	30	23	15	9	5	2	1
Brazil	171	133	87	48	13	2	1			
Aug	31	29	22	19	6					
Sep	30	21	20	6						
Oct	28	22	7							
India	146	123	109	102	88	67	44	27	12	
Aug	31	31	31	31	31	22	6			
Sep	30	30	30	30	30	30	29	26	12	
Oct	31	31	31	30	23	15	9	1		
Russia	40									
Aug	0									
Sep	0									
Oct	28									
South Afri	22									
Aug	1									
Sep	0									
Oct	0									
Spain	32	3								
Sep	14									
Oct	16	3								
Italy	15	6	2							
Oct	15	6	2							
UK	27	11								
Oct	27	11								
Data from Oct 18 to Oct 31										
Argentina	12									
Colombia	3									
France	14	13	9	6	1					

From Table 3:

In the Dominican Republic, there were consistent increases over 500/day registered from August to October. Venezuela was the only other territory where this experience was similar. These remained as the two countries with the most reported Covid-19 cases in the Caribbean. For each of Haiti and French

Guiana, there were 30 instances of 100/day or more at the end of October. These were true for the Dominican Republic and Venezuela for each day in the three months from August to October. Overall, the Dominican Republic and Venezuela had 213 and 146 instances >99/day, respectively, since February. In August and September, Day-to-Day new cases of >1k occurred 21 times in Venezuela, the only Caribbean territory to record this level.

There were governmental elections in August in Trinidad and Tobago (T&T) and Jamaica. The recorded Day-to-Day increases in each of these territories were significantly higher in these three months than before. In Suriname, a similar election was in May, and in September, there were 25 occasions where report increases were 50 or more per day. Daily increases tapered in October for Suriname and T&T, to a lesser extent. In Jamaica, however, the growth pattern for October was still significant but less than in September.

There were 12 instances for the Bahamas >99 new cases per day in October compared to nine (9) times for the two previous months.

Table 3.

Caribbean Region Monthly Day-to-Day Entries

	Total Cases Recorded		261 days in 2020			
	Overall (up tp October 31, 2020)		# Occurrences (Daily New)			
	>0	>49	>99	>0.5k	>1k	>5k
Dominican Republic	229	222	213	101	33	
Aug	31	31	31	23	9	
Sep	30	30	30	17	2	
Oct	31	31	31	15		
Haiti	182	55	30			
Trinidad and Tobago	138	45	14			
Aug	30	16	2			
Sep	30	21	12			
Oct	31	8				
French Guiana	176	62	30			
Suriname	159	42	8			
Aug	31	25	8			
Sep	30	7				
Aruba	126	40	6			
Cuba	228	50				
Guyana	170	25	4			
Aug	27	4				
Sep	29	13	3			
Oct	30	8	1			
Vanezuela	202	161	146	85	21	
Aug	31	31	31	31	9	
Sep	30	30	30	30	12	
Oct	31	31	31	31		
Bahamas	138	56	21			
Aug	29	13	4			
Sep	25	17	5			
Oct	27	23	12			
Jamaica	210	67	34			
Aug	31	11	5			
Sep	30	30	23			
Oct	31	25	6			

From Table 4:

In Sweden, there were 24 instances of Day-to-Day increases, in October, of >0.5k with more than 1k on 10 of these days. In

August or September there were only five (5) days with >0.5k occurrences.

Table 4.

Monthly Day-to-Day Entries (Other Countries)

Total Cases Recorded	261 days in 2020					
	Overall (up to October 31, 2020)			# Occurrences (Daily New)		
	>0	>49	>99	>0.5k	>1k	>5k
Sweden	243	234	224	96	25	
Aug	31	29	26			
Sep	30	30	29	5		
Oct	30	30	30	24	10	
New Zealand	140	15	2			
Australia	249	103	80	7		
Aug	31	31	29	2		
Sep	30	9	2			
Oct	31					
Pakistan	230	229	224	175	87	9
Aug	31	31	31	20		
Sep	30	30	30	20		
Oct	31	31	31	28	1	
Egypt	238	216	208	70	41	
Aug	31	31	30			
Sep	30	30	30			
Oct	31	31	30			
Canada	237	233	229	149	102	
Aug	31	31	31	6	1	
Sep	30	30	30	25	14	
Oct	31	31	31	31	30	
Bangladesh	210	207	204	188	171	
Aug	31	31	31	31	30	
Sep	30	30	30	30	30	
Oct	31	31	31	31	31	
Mexico	226	222	219	197	189	83
Aug	31	31	31	31	31	22
Sep	30	30	30	30	30	11
Oct	31	31	31	31	31	16
Nigeria	227	194	181	42		
Aug	31	31	31	2		
Sep	30	30	27			
Oct	31	29	25			
Peru	14	14	14	14	14	

From Table 4 (continued):

New Zealand continues to report single digit increases in Day-to-Day cases. This experience is excellent compared to other countries but still disconcerting because it is not a Zero-Case scenario. That scenario may come with a medical solution when it becomes available.

The number of Day-to-Day increases > 49 new cases is reducing in Australia, and none occurred in October.

In Pakistan, COVID-19 is a significant concern even as there was only one instance where the Day-to-Day increase >1k in October. There was a consistent record level of >0.5k for the August to October period with an exacerbation trend in October.

A consistent increase of more than 100 Day-to-Day new cases continues to occur in Egypt. In Bangladesh, there was an increase of > 1k for each day beginning in August to October 31, except only one day.

For Canada, a significant increase in October, with 30 Day-to-Day increase > 1k, makes this a major concern as the actual daily increase was >0.4K/day in August, >0.9k/day in September, and >2.44k/day in October.

There were 49 instances in Mexico with daily increases over 5k with the minimum report of >1k for the August to October period.

In Nigeria, there were 83 instances of >99 Day-to-Day new cases. For Peru, data were from October 18 to October 31 only.

Table 5.

Increase in Total Cases (Referenced on July 31)

	31-Jul	31-Aug	30-Sep	31-Oct
	Increase in Total Cases			
USA	1	1.32	1.58	2.00
Brazil	1	1.47	1.81	2.08
India	1	2.17	3.72	4.82
Russia	1	1.18	1.40	1.93
South Africa	1	1.27	1.37	1.47
Spain	1	1.62	2.52	3.94
Italy	1	1.09	1.27	2.74
Dominican Republic	1	1.36	1.61	1.82
Haiti	1	1.11	1.18	1.22
Trinidad and Tobago	1	10.41	26.81	33.68
French Guiana	1	1.17	1.28	1.35
Suriname	1	2.44	2.96	3.15
Sweden	1	1.05	1.16	1.54
New Zealand	1	1.11	1.18	1.25
Australia	1	1.52	1.60	1.63
Pakistan	1	1.06	1.12	1.20
Egypt	1	1.05	1.10	1.14
UK	1	1.11	1.51	3.34
Canada	1	1.11	1.36	2.02
Aruba	1	16.58	32.75	37.30
Cuba	1	1.55	2.15	2.64
Guyana	1	3.16	7.01	10.08
Venezuela	1	2.52	4.04	4.95
Bahamas	1	3.86	7.01	11.70
Bangladesh	1	1.32	1.53	1.72
Jamaica	1	2.73	7.50	10.53
Mexico	1	1.43	1.77	2.21
Nigeria	1	1.25	1.36	1.46
Argentina	1	2.18	3.93	6.10
Colombia	1	2.08	2.81	3.64
France	1	1.50	3.00	7.28
Peru	1	1.57	1.96	2.18

From Table 5:

The number of Covid-19 cases on July 31 for each territory is divided by itself and referenced to 1 per unit. The increase in cases reported for August, September, and October for each territory represents an increase over July 31. Aruba and Trinidad and Tobago recorded massive increases compared to their experience in July. That brings into focus the availability of adequate facilities and medical staffing levels in these territories to handle and contain the spread.

In the U.S.A., the number of Covid-19 cases doubled over the same period from more than 4M to over 9M. The U.S.A. remains the country with the most cases worldwide (since/before April 2020).

Italy, Spain, the UK, Mexico, Canada, Colombia, Peru, and France all experienced a doubling (at minimum) of the number of COVID-19 Cases since July.

In the Caribbean region, Jamaica, Suriname, Guyana, Venezuela, and the Bahamas were equally unfortunate.

The experience in Suriname, Trinidad and Tobago, and Jamaica were strikingly similar. Each of these territories had governmental elections in 2020 (Jamaica and Trinidad in

August, Suriname in May). Early indications are that the U.S.A. experience is no different. If this is true, the Covid-19 pandemic can worsen to levels that will exceed those experienced before October 31. Another issue for the U.S.A. will be the Thanksgiving Holidays when crowds and proximity distances can become unmanageable.

Table 6.

Increase in Deaths (Referenced on July 31)

	31-Jul	31-Aug	30-Sep	31-Oct
Increase in Total Deaths				
USA	1	1.20	1.35	1.51
Brazil	1	1.31	1.56	1.73
India	1	1.79	2.70	3.34
Russia	1	1.23	1.48	2.00
South Africa	1	1.77	2.09	2.41
Spain	1	1.02	1.12	1.27
Italy	1	1.01	1.02	1.10
Dominican Republic	1	1.47	1.81	1.94
Haiti	1	1.25	1.42	1.44
Trinidad and Tobago	1	2.75	9.50	13.50
French Guiana	1	1.37	1.53	1.63
Suriname	1	2.73	4.00	4.27
Sweden	1	1.01	1.02	1.03
New Zealand	1	1.00	1.14	1.14
Australia	1	3.31	4.50	4.60
Pakistan	1	1.06	1.09	1.14
Egypt	1	1.13	1.23	1.30
UK	1	1.00	1.02	1.13
Canada	1	1.02	1.04	1.13
Aruba	1	3.33	9.00	12.67
Cuba	1	1.08	1.40	1.47
Guyana	1	1.95	4.00	6.20
Venezuela	1	2.35	3.83	4.87
Bahamas	1	3.57	6.79	10.29
Bangladesh	1	1.38	1.69	1.90
Jamaica	1	2.10	10.70	20.60
Mexico	1	1.39	1.68	1.98
Nigeria	1	1.15	1.27	1.30
Argentina	1	1.86	2.38	3.64
Colombia	1	1.95	2.57	3.10
France	1	1.01	1.06	1.22
Peru	1	1.24	1.39	1.48

From Table 6:

India, South Africa, Russia, Australia, Argentina, and Colombia all experienced a doubling (at minimum) of deaths due to COVID-19 in the three months ending on October 31, compared to the deaths recorded on July 31.

Even though none of the UK, Italy, and Spain factored in this measurement, the actual deaths on October 31 amounted to more than 40k, 40k, and 38k, respectively. These are actual indications of the devastating experiences and effects worldwide due to the pandemic.

In Trinidad and Tobago, Aruba, Jamaica, Suriname, Guyana, Venezuela, and the Bahamas, the number of deaths was more than doubled at the end of October when compared to July 31.

In the Caribbean Region, the Dominican Republic was the worst-hit territory with more than 120k cases and 19k deaths as of October 31.

In India, there were significant increases in the number of cases in August and September when the rising rate was more significant than even in the U.S.A.

In October, the Indian rise rate slowed while the U.S.A., Italy, Spain, Russia, France, Argentina, Colombia, and Peru resumed as the countries where the increases were seemingly unmanageable.

New Zealand remains the country to emulate. The number of cases as of October 31 was still less than 2k with single-digit daily increases. Even here, there was not total eradication.

Compared to Spain, the number of deaths from February to October in Italy was higher even though the number of cases was less by >500k.

Compared to Bangladesh, the number of deaths in Pakistan was almost 1k more, even though there were approximately 100k less reported cases. In each of Bangladesh and Pakistan, the reported number of cases was more than 100k than Canada, and deaths were less than 7k, while Canada's deaths were more than 10k.

The U.S.A. is the only country worldwide with deaths were more than 200k. India and Brazil were the other countries with deaths amounting to more than 100k.

The number of active infections in the U.S.A. was > 2M for the entire period from August to October.

India and France reported more than 1M active infections at different times. The incidence of active cases in France was increasing as of October 31. In India, active cases were more than 500k at the end of October, peaking in September.

From Table 7:

There are three different averages for each country listed in Table 3. The 15-D average derives from data calculated from October 17 to 31. The 10-D covers October 22 to 31, while the 5-D reflects data from October 27 to 31. For the U.S.A. The 5-D average is highest. That reflects an increase in the daily new cases of Covid-19 at the end of October. This pattern is consistent for Brazil, Colombia, Bangladesh, Spain, UK, Russia, Italy, and France.

Information for Canada, Mexico, and Pakistan are not as skewed even though germane. In India, the averages were negatively skewed even though the absolute values (Daily new cases) were surpassed only by the U.S.A.

Table 7.

Averages for periods ending on October 31

	Daily New Ave up to OCT 31		
	15-D (k)	10-D (k)	5-D (k)
USA	72.3	80.2	87.2
Brazil	22.3	23.5	24.8
India	50.1	47.8	47.4
Russia	16.6	17.1	17.4
South Africa	1.68	1.71	1.74
Spain	16.9	19.0	20.6
Italy	19.2	23.0	27.3
Dominican Republic	0.438	0.462	0.435
Haiti	0.0132	0.013	0.0062
Trinidad and Tobago	0.030	0.030	0.0314
French Guiana	0.025	0.027	0.030
Suriname	0.006	0.0053	0.0046
Sweden	1.41	1.68	1.67
New Zealand	0.0054	0.0049	0.0042
Australia	0.0146	0.0146	0.0126
Pakistan	0.741	0.825	0.878
Egypt	0.160	0.167	0.170
UK	21.5	22.2	23.4
Canada	2.69	2.86	2.86
Aruba	0.0149	0.0144	0.0182
Cuba	0.0513	0.0519	0.0584
Guyana	0.0327	0.0312	0.0272
Venezuela	0.417	0.398	0.393
Bahamas	0.092	0.083	0.061
Bangladesh	1.440	1.455	1.487
Jamaica	0.0641	0.0649	0.069
Mexico	5.59	5.81	5.53
Nigeria	0.111	0.119	0.148
Argentina	13.41	12.96	12.92
Colombia	8.70	9.25	9.83
France	34.92	35.38	36.14
Peru	2.65	2.57	2.40

Derived from Source Data: Worldometer COVID-19 Data

<https://www.worldometers.info/coronavirus/>

From Table 8:

Peak Active Covid-19 records of currently affected individuals for the U.S.A., Russia, Italy, and France on October 31 were higher than at any other time since the Covid-19 pandemic started. Peaks in Mexico, Argentina, and the Bahamas occurred on October 08, 23, and 23.

There were peaks >1M in September for India and October for France. Active Cases in the U.S.A. were >2.5M each day from August to October. Peaks occurred in Trinidad and Tobago and Jamaica in September, one month after governmental elections. In Suriname, the peak occurred in August; three months after governmental elections.

No active cases data were available for Spain, Sweden, and the UK.

Table 8.

Peak Active (up to October 31)

	Peak Active *1000				Pk Date
	Before Jul 31st	Aug	Sept	Oct	
USA	2222	2568	2575	3104	Oct 31st
Brazil	699	819	700	512	Aug 08th
India	565	785	1018	946	Sep 17th
Russia	245.58	188	197	375	Oct 31st
South Africa	174	159	72	53	Jul 20th
Spain					
Italy	108	26	51	351	Oct 31st
Dominican Republic	33	35	25	22	Aug 07th
Haiti	5.1	2.8	2.2	1.7	Jun 22nd
Trinidad and Tobago	0.10	1.20	2.56	1.90	Sep 17th
French Guiana	3.09	1.37	0.422	0.471	Jul 08th
Suriname	0.578	1.01	0.846	0.104	Aug 19th
Sweden					
New Zealand	0.929	0.137	0.132	0.075	Apr 06th
Australia	6.73	9.02	3.74	1.44	Aug 15th
Pakistan	108.6	25.2	9.13	12.1	Jul 02nd
Egypt	55.2	49.6	20.6	1.84	Jul 22nd
UK					
Canada	35.0	6.74	14.5	28.5	May 30th
Aruba	0.069	1.23	1.63	0.677	Sep 16th
Cuba	0.849	0.636	0.679	0.674	Apr 25th
Guyana	0.208	0.549	1.15	1.13	Sep 25th
Venezuela	7.99	12.2	11.8	9.27	Aug 09th
Bahamas	0.469	1.46	1.79	2.34	Oct 23rd
Bangladesh	99.4	115.8	103.8	82.7	Aug 18th
Jamaica	0.422	1.45	4.54	4.51	Sep 29th
Mexico	97.99	119.1	130.1	155.6	Oct 08th
Nigeria	22.7	22.7	11.4	7.77	Aug 01st
Argentina	99.02	123.3	136.1	174.3	Oct 23rd
Colombia	131.0	169.3	134.5	93.7	Aug 14th
France	76.15	163.9	434.8	1213.2	Oct 31st
Peru	104.3	167.3	156.5	55.14	Aug 23rd

III. DISCUSSION

The U.S.A. is the only country worldwide with Day-to-Day, Active, and Death cases over greater than 100k, 2M, and 200k, respectively. As well, each of these parameters was unsurpassed in any other country worldwide. In Suriname, Jamaica, and Trinidad and Tobago, in the period before governmental elections, there were definite increases in the impact of Covid-19. This trend is consistent with the experience in the U.S.A. The post-election experience in the U.S.A. may be like those in Suriname, Jamaica, and Trinidad and Tobago. If this were to occur, then the total number of cases, active cases, and deaths in the U.S.A. can reach levels 10 to 20 times the current peaks.

In the Bahamas, Mexico, and Argentina, peak active cases occurred in October, so they were other hot spots where the management of Covid-19 was challenging, and problems could exacerbate. The experiences in France, Spain, and the UK were no less troubling even if active cases data were not available for two of them.

The 15-D, 10-D, 5-D Averages, Day-to-Day Cases, and Total-Cases for each territory were significant red-flag factors

and increasing at the end of October. Major concern is that the total cases rate and death rate (Table 5 and 6) were increasing (by inter-value multiples) from July 31 to October 31. If this trend continues, then the number of total cases worldwide by the end of 2020 can approach 100M, and, at the same time, the deaths can double from >1M on October 31. The number of active cases can also rise to >20M from 11M at this time. These would create possible cases where, in certain countries, experts may not safely manage this pandemic.

IV. CONCLUSION

There are opportunities for controlling the spread of Covid-19, but the windows for this to happen are closing. If there is no arrest of spread, then the physical resources needed for medical treatment may not be available. That control must now factor on individual strength, attitudes, behavior, and sacrifice to augment country leadership focus and control. A medical solution is critical and must become available to all. The medicament's commercial availability must reach all regions and territories worldwide: the sooner that happens, the better. No alternative solution may work or might be otherwise possible.

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