**To:** 5.1.2e [5.1.2e @rivm.nl]
**From:** 5.1.2e
**Sent:** Fri 10/16/2020 7:41:16 AM
**Subject:** FW: ProMED Digest, Vol 100, Issue 35
**Received:** Fri 10/16/2020 7:41:18 AM

-----Original Message-----
From: 5.1.2e <5.1.2e @rivm.nl>
Sent: donderdag 15 oktober 2020 20:50
To: 5.1.2e <5.1.2e @rivm.nl>
Subject: FW: ProMED Digest, Vol 100, Issue 35

Wrsch al 100x door iedereen naar je doorgestuurd Sabine, maar je weet maar nooit... groetjes Corien

-----Original Message-----
From: 5.1.2e @promedmail.org <5.1.2e @promedmail.org> On Behalf Of 5.1.2e @promedmail.org
Sent: woensdag 14 oktober 2020 15:50
To: 5.1.2e @promedmail.org
Subject: ProMED Digest, Vol 100, Issue 35

Today's Topics:

1. PRO/AH/EDR> COVID-19 update (438): reinfection, mortality rates, WHO, global (5.1.2e @promedmail.org)

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Message: 1
Date: Wed, 14 Oct 2020 13:46:03 +0000
From: 5.1.2e @promedmail.org
Subject: PRO/AH/EDR> COVID-19 update (438): reinfection, mortality rates, WHO, global
To: 5.1.2e @promedmail.org, 5.1.2e @promedmail.org, 5.1.2e @promedmail.org
Message-ID: <5.1.2e @email.amazonses.com>

Content-Type: text/plain; charset=UTF-8

CORONAVIRUS DISEASE 2019 UPDATE (438): REINFECTION, MORTALITY RATES, WHO, GLOBAL
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A ProMED-mail post
<http://www.promedmail.org>
ProMED-mail is a program of the
International Society for Infectious Diseases <http://www.isid.org>

In this update:
[1] Reinfection: USA (Nevada)
[2] Explaining low mortality rates: India, Africa [3] WHO updates (as of 13 Oct 2020) [4] Global update: Worldometer accessed 13 Oct 2020 22:06 EDT (GMT-4)

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[1] Reinfection: USA (Nevada)
[A]
Date: Mon 12 Oct 2020 1:04 AM EST
Source: Washington Post [abridged, edited] <https://www.washingtonpost.com/nation/2020/10/12/coronavirus-covid-live-updates-us/#link-RQ3QD2D3KBENNL222XA5OU3S6Q>

A 25-year-old man from Reno, Nevada, had the 1st known US case of coronavirus reinfection, according to a report published Monday [12 Oct 2020] in the journal Lancet Infectious Diseases. Pathogens from 2 genetically distinct strains had infected him weeks apart.

Confirmed 2nd infections represent a sliver of the estimated 37 million coronavirus cases worldwide. A twice-infected Hong Kong patient was the 1st such case, followed by several others in Belgium and the Netherlands. Research awaiting peer review describes reinfected patients in Ecuador, India, and elsewhere.

The report about the Reno man is the peer-reviewed version of a study The Washington Post covered as a preprint paper in August [ProMED-mail
COVID-19 update (380): excess mortality, 2nd infect, pediatric shedding, WHO http://promedmail.org/post/20200829.7727737]. The man tested positive in April [2020] after complaining of a sore throat, cough, and other minor ailments. He was isolated at home and recovered. In early and late May [2020], he tested negative. But in June [2020], he fell sick and was hospitalized with low oxygen levels.
He received a 2nd positive PCR test for coronavirus 48 days after the 1st.

"This is not generalizable right now, because it is one case," said study author Mark W Pandori, who directs the Nevada State Public Health Laboratory and is a professor at the University of Nevada at Reno. Yet, he added, "we can't assume that once we've had this, we're invulnerable to the disease." The Reno man's case stands out among confirmed reinfections, Pandori and his colleagues said, because he was sicker the 2nd time round. That runs counter to the expectation that an immune system, once exposed, is primed to more easily defeat the virus if it encounters it again.

But physician Adam Lauring, who studies viruses at the University of Michigan and was not involved in the paper, said he was not convinced the 2nd infection was worse. "There's not enough information in the article to really judge the difference in severity," he said. He said there have been too few confirmed reinfections to speculate about their prevalence or their impact on the effectiveness of a future vaccine.

Is reinfection "the exception or the rule?" Lauring asked. "I don't think we know that yet. What we do know is this does happen with other viruses." He said he is hopeful these cases are indeed rare because they are so infrequently reported and "SARS CoV2 has been the most intensively studied virus per unit time, ever."

[Byline: Ben Guarino]

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and
Mary Marshall
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and
Ryan McGinnis
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[B]
Date: Mon 12 Oct 2020
Source: The Lancet Infectious Diseases journal [edited] <https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30764-7/fulltext>

ref: Tillett RL, Sevinsky JR, Hartley PD, et al. Genomic evidence for reinfection with SARS-CoV-2: a case study. Lancet Infect Dis. Published: 12 Oct 2020; doi:
<https://doi.org/10.1016/S1473-3099(20)30764-7>

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Summary

Background
The degree of protective immunity conferred by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is currently unknown. As such, the possibility of reinfection with SARS-CoV-2 is not well understood. We describe an investigation of 2 instances of SARS-CoV-2 infection in the same individual.

Methods
A 25-year-old man who was a resident of Washoe County in the US state of Nevada presented to health authorities on 2 occasions with symptoms of viral infection, once at a community testing event in April 2020, and a 2nd time to primary care then hospital at the end of May [2020] and beginning of June 2020. Nasopharyngeal swabs were obtained from the patient at each presentation and twice during follow-up. Nucleic acid amplification testing was done to confirm SARS-CoV-2 infection.
We did next-generation sequencing of SARS-CoV-2 extracted from nasopharyngeal swabs. Sequence data were assessed by 2 different bioinformatic methodologies. A short tandem repeat marker was used for fragment analysis to confirm that samples from both infections came from the same individual.

Findings
The patient had 2 positive tests for SARS-CoV-2, the 1st on [18 Apr 2020], and the 2nd on [5 Jun 2020], separated by 2 negative tests

done during follow-up in May 2020. Genomic analysis of SARS-CoV-2 showed genetically significant differences between each variant associated with each instance of infection. The 2nd infection was symptomatically more severe than the 1st.

Interpretation
Genetic discordance of the 2 SARS-CoV-2 specimens was greater than could be accounted for by short-term in vivo evolution. These findings suggest that the patient was infected by SARS-CoV-2 on 2 separate occasions by a genetically distinct virus. Thus, previous exposure to
SARS-CoV-2 might not guarantee total immunity in all cases. All individuals, whether previously diagnosed with COVID-19 or not, should take identical precautions to avoid infection with SARS-CoV-2. The implications of reinfections could be relevant for vaccine development and application.

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[C]
Date: Mon 12 Oct 2020
Source: The Lancet Infectious Diseases journal [edited] <https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30783-0/fulltext>

ref: Iwasaki A. What reinfections mean for COVID-19. Comment. Lancet Infect Dis. Online First. Published: 12 Oct 2020; doi: <https://doi.org/10.1016/S1473-3099(20)30783-0>.
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One of the key questions in predicting the course of the COVID-19 pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is how well and how long the immune responses protect the host from reinfection. For some viruses, the 1st infection can provide lifelong immunity; for seasonal coronaviruses, protective immunity is short-lived.

In The Lancet Infectious Diseases, Richard L Tillett and colleagues describe the 1st confirmed case of SARS-CoV-2 reinfection in the USA [see [B] above]. A 25-year-old man from the US state of Nevada, who had no known immune disorders, had PCR-confirmed SARS-CoV-2 infection in April 2020 (cycle threshold [Ct] value 35.24; specimen A). He recovered in quarantine, testing negative by RT-PCR at 2 consecutive time points thereafter. However, 48 days after the initial test, the patient tested positive again by RT-PCR (Ct value 35.31; specimen B).
Viral genome sequencing showed that both specimens A and B belonged to clade 20C, a predominant clade seen in northern Nevada. However, the genome sequences of isolates from the 1st infection (specimen A) and reinfection (specimen B) differed significantly, making the chance of the virus being from the same infection small. What is worrisome is that SARS-CoV-2 reinfection resulted in worse disease than did the 1st infection, requiring oxygen support and hospitalisation. The patient had positive antibodies after the reinfection, but whether he had pre-existing antibodies after the 1st infection is unknown (table -- [see the full comment at the source URL above for table with the cases that have been reported as reinfections]).

This case report adds to rapidly growing evidence of COVID-19 reinfection, in which viral genomic sequences were used to confirm infections by distinct isolates of SARS-CoV-2. What do reinfection cases mean for public health and vaccination endeavors to stop the COVID-19 pandemic?

Do reinfections occur because of scant antibody response after 1st infection? Of the 4 reinfection cases reported to date, none of the individuals had known immune deficiencies. Currently, only 2 individuals had serological data from the 1st infection and one had pre-existing antibody (IgM) against SARS-CoV-2. Because of the wide range of serological testing platforms used across the globe, it is impossible to compare results from one assay to another. For example, antibody reactivity to nucleocapsid protein indicates previous exposure to SARS-CoV-2 but not whether antibodies that can block infection (anti-spike) are present. Also, antibody levels are highly dependent on the timing after exposure. The key goal for the future is to ascertain the level and specificity of antibody to spike protein at the time of reinfection, to determine immune correlate of protection.

Does immunity protect an individual from disease on reinfection? The answer is, not necessarily, because patients from Nevada and Ecuador had worse disease outcomes at reinfection than at 1st infection. It is important to keep in mind that the reinfection cases, in general, are being picked up because of symptoms and are biased towards detection of symptomatic cases. Due to the paucity of broad testing and surveillance, we do not know how frequently reinfection occurs among individuals who recovered from their 1st infection. Asymptomatic reinfection cases can only be picked up by routine community testing or at an airport, for example, and we are probably severely underestimating the number of asymptomatic reinfections. Why do some reinfections result in milder disease, whereas others are more severe?
Further investigation is needed of pre-existing immune responses before 2nd exposure and viral inoculum load.

Does infection by different viral isolates mean we need a vaccine for each type? While differences in the viral genome sequence of the various isolates are a great way to know if an individual is reinfected (ruling out reactivation of lingering virus infection), it does not indicate that the 2nd infection was due to immune evasion.
There is currently no evidence that a SARS-CoV-2 variant has emerged as a result of immune evasion. For now, one vaccine will be sufficient to confer protection against all circulating variants. Furthermore, reinfection by a distinct viral variant from the original virus does not imply immune escape.

Does immunity prevent transmission from those who are reinfected? The Ct value of PCR correlates with viral load, and low Ct values (high viral load) might indicate infectiousness of the individual. Although Ct values can vary substantially between various tests and laboratories, in one study, samples with Ct values greater than 35 were only 8% positive for cultivable virus. A good proxy for

infectiousness can be obtained through viral plaque assays that measure the infectious virus. However, these assays require biosafety level 3 facilities and are labour intensive, and the assays are not routinely done in clinical laboratories. Since some reinfection cases had Ct values less than 35, infectious virus might have been harboured in the nasal cavity. Thus, reinfection cases tell us that we cannot rely on immunity acquired by natural infection to confer herd immunity; not only is this strategy lethal for many but also it is not effective. Herd immunity requires safe and effective vaccines and robust vaccination implementation.

As more cases of reinfection surface, the scientific community will have the opportunity to understand better the correlates of protection and how frequently natural infections with SARS-CoV-2 induce that level of immunity. This information is key to understanding which vaccines are capable of crossing that threshold to confer individual and herd immunity.

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[Plaque reduction neutralization assays are needed to determine whether protective antibody or at least neutralizing antibody, has been made against these individuals' primary infections. In only one reported case is it known that IgM antibody was made in response to the 1st infection. Following cases serologically is difficult to accomplish except in carefully designed animal models since in humans, re-infection with the disease after both infections is such a rare event. It is impossible to say whether there is more reinfection occurring without or with unremarkable mild symptoms following the 2nd infection that would then go unnoticed. Because comprehensive testing is very limited, such cases would not be detected. Sequence analysis is also highly informative in deciphering reinfections, as demonstrated in the case of the Nevada patient, but is not regularly done in all cases of apparent relapse or reinfection. If serological analyses were done immediately upon confirmation of SARS-CoV-2 in patients who had apparently recovered from an initial infection some time earlier, it would also be informative to follow IgM and IgG response to the relapse or reinfection. Until such studies and assays are conducted, it will not be clear what are the implications for vaccination and herd immunity. - Mod LK]

in 5.1.2e et al, the authors describe the 1st reported fatality attributed to reinfection, 59 days following the 1st infection in an immunocompromised host. Antibodies following the 1st infection were not obtained. On days 4 and 6 of the 2nd infection, no antibodies were detectable. Genomic studies on the 2 viruses showed 10 nucleotide positions, more than would have been expected following 2 months of infection, leading the authors to conclude it was most likely reinfection. Depending on the status of the patient's bone marrow at the time of the infection, the patient may have had significant immunocompromise leading to the 2nd infection as well as the severe disease.

Reference
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5.1.2e, van der Vegt DSJM, Oude Munnink BB, et al. Reinfection of
SARS-CoV-2 in an immunocompromised patient: a case report. Clin Infect Dis. 2020: ciaa1538. doi: 10.1093/cid/ciaa1538. Epub ahead of print.
PMID: 33043962;
<https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1538/5920950>
- Mod.MPP]

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[2] Explaining low mortality rates: India, Africa [A] India
Date: Sun 11 Oct 2020
Source: Yahoo News/News 18, AFP (Agence France Presse) report [edited] <https://sg.news.yahoo.com/under-reporting-young-population-mystery-073300506.html>

India, with its population of 1.3 billion people, has the world's 2nd-highest number of coronavirus cases, now more than 7 million, but far fewer reported deaths than other badly-hit countries. The figures have baffled experts, with explanations ranging from the young population to immunity given by other endemic viral diseases and under-reporting.

Here are some of the questions and theories raised by India's pandemic statistics:

Q. What are the figures?
A. India said on Sunday [11 Oct 2020] there had been 108 334 fatalities from COVID-19 since the 1st death was reported in mid-March [2020]. The world's 2nd-most populous nation has the lowest number of deaths per 100 confirmed cases -- the observed case-fatality ratio among the top 20 worst-affected nations at 1.5 percent, according to a Johns Hopkins University tally. In comparison, the United States, the most infected country, has a death rate of 2.8 percent. India's number of deaths per 100 000 population is 7.73, compared with 64.74 in the United States.

Q. Younger population
A. Older people suffering from conditions such as diabetes and heart disease have become a particular target of the pandemic but India has a young population with a median age of 28.4, according to the UN World Population Prospects report. In comparison, France -- which has reported almost 700 000 cases and more than 32 000 deaths for a death rate of 4.7 percent -- has a median age of 42.3

Q. Late start, strict lockdown

A. The Indian government says the 1st infection was detected on [30 Jan 2020], with numbers passing 100 in mid-March [2020]. By that time, the epidemic was already raging across Europe. Italy had reported more than 24 000 infections and almost 2000 deaths, while France recorded nearly 5500 cases and around 150 deaths. Prime Minister Narendra Modi ordered a nationwide lockdown from [25 Mar 2020] that severely limited movement. That gave India time to prepare for the pandemic, while experts say the strict lockdown may have helped doctors learn from the experiences of other countries. "Many of the treatment protocols were much better stabilised (by that time), whether it was oxygen use or ICU use," Anand Krishnan, a community medicine professor at the All India Institute of Medical Sciences in New Delhi, told AFP.

Q. Possible immunity
A. Virologist T Jacob John and other experts told AFP it is possible that other viral diseases such as dengue fever, which is endemic in India, may have given the population some antibody protection against the coronavirus. Others say it is also plausible that exposure to other milder coronaviruses could give some cross-immunity. But all experts say more research is needed into this line of defence.

Q. Under-counting
A. India already does not count all deaths. The problem is more acute in rural areas where 70 percent of the population live. Many rural deaths are not recorded unless the person has been in a hospital. This has been accentuated during the coronavirus. In many cities, tallies given by city governments and at cemeteries and crematoria do not match. Activists accuse some states of deliberately blaming other conditions for COVID-19 deaths. "Our poor routine death surveillance system... misses many deaths in the 1st place," Bangalore-based community medicine expert Hemant Shewade told AFP. He reckons that only one in 5 deaths is recorded with a cause. Shewade, who has been analysing India's official toll data, said many suspected COVID-19 deaths were not being recorded. Government-conducted serological surveys -- which test blood for antibodies to estimate how many have fought off the virus -- indicate that 10 times the official number of people may have already been infected, meaning many deaths could have gone unreported, he added. Meanwhile, in some cases, the coronavirus may not be listed as the cause of death for patients with other medical conditions.

Q. How to boost accuracy?
A. Experts say greater toll accuracy is possible if there is more testing, better recording of deaths, and post-mortem examinations are carried out on suspected victims. Monitoring excess mortality -- the number of deaths above the "normal" figure --, as well as deaths at home, could also shed some light on the real toll, Shewade said.
Mumbai, the country's worst-hit city, found 13 000 excess deaths in March-July [2020] compared with the same period last year [2019] -- twice the number of reported virus deaths at that time, the Indian Express reported.

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[B] Africa
Date: Wed 7 Oct 2020
Source: The Conversation [edited]
<https://theconversation.com/covid-19-examining-theories-for-africas-low-death-rates-147393>

As the threat of a COVID-19 pandemic emerged earlier this year [2020], many felt a sense of apprehension about what would happen when it reached Africa. Concerns over the combination of overstretched and underfunded health systems and the existing load of infectious and non-infectious diseases often led to it being talked about in apocalyptic terms.

However, it has not turned out quite that way. On [29 Sep 2020] the world passed the one million reported deaths mark (the true figure will of course be higher). On the same day, the count for Africa was a cumulative total of 35 954. Africa accounts for 17% of the global population but only 3.5% of the reported global COVID-19 deaths. All deaths are important, we should not discount apparently low numbers, and of course, data collected over such a wide range of countries will be of variable quality, but the gap between predictions and what has actually happened is staggering. There has been much discussion on what accounts for this.

As leads of the COVID-19 team in the African Academy of Sciences, we have followed the unfolding events and various explanations put forward. The emerging picture is that in many African countries, transmission has been higher but severity and mortality much lower than originally predicted based on experience in China and Europe.

We argue that Africa's much younger population explains a very large part of the apparent difference. Some of the remaining gap is probably due to under reporting of events but there are a number of other plausible explanations. These range from climatic differences, pre-existing immunity, genetic factors, and behavioural differences.
Given the enormous variability in conditions across a continent -- with 55 member states -- the exact contribution of any one factor in a particular environment is likely to vary. But the bottom line is that what appeared at 1st to be a mystery looks less puzzling as more and more research evidence emerges.

The importance of age
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The most obvious factor for the low death rates is the population age structure. Across multiple countries, the risk of dying of COVID-19 for those aged 80 years or more is around 100 times that of people in their 20s. This can best be appreciated by a specific example. As of

[30 Sep 2020], the UK had reported 41 980 COVID-19 specific deaths while Kenya, by contrast, had reported 691. The population of the UK is around 66 million with a median age of 40 compared with Kenya's population of 51 million with a median age of 20 years. Corrected for population size the death toll in Kenya would have been expected to be around 32 000. However, if one also corrects for population structure (assumes that the age specific death rates in the UK apply to the population structure of Kenya), we would expect around 5000 deaths.
There is still a big difference between 700 and 5000; what might account for the remaining gap?

Other possible contributors
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One possibility is the failure to identify and record deaths. Kenya, as with most countries, initially had little testing capacity and specific death registration is challenging. However, Kenya quickly built up its testing capacity and the extra attention to finding deaths makes it unlikely that a gap of this size can be fully accounted for by missing information.

There has been no shortage of ideas for other factors that may be contributing. A recent large multi-country study in Europe reported significant declines in mortality related to higher temperatures and humidity. The authors hypothesised that this may be because the mechanisms by which our respiratory tracts clear virus work better in warmer more humid conditions. This means that people may be getting fewer virus particles into their system. It should be noted however that a systematic review of global data -- while confirming that warm and wet climates seemed to reduce the spread of COVID-19 -- indicated that these variables alone could not explain most of the variability in disease transmission. It's important to remember that there's considerable weather variability throughout Africa. Not all climates are warm or wet and, if they are, they may not stay that way throughout the year.

Other suggestions include the possibility of pre-existing protective immune responses due either to previous exposure to other pathogens or to BCG vaccination, a vaccine against tuberculosis provided at birth in most African countries. A large analysis -- which involved 55 countries, representing 63% of the world's population -- showed significant correlations between increasing BCG coverage at a young age and better outcomes of COVID-19.

Genetic factors may also be important. A recently described haplotype (group of genes) associated with increased risk of severity and present in 30% of south Asian genomes and 8% of Europeans is almost absent in Africa.

The role of these and other factors -- such as potential differences in social structures or mobility -- are subject to ongoing investigation.

More effective response
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An important possibility is that the public health response of African countries, prepared by previous experiences (such as outbreaks or epidemics) was simply more effective in limiting transmission than in other parts of the world. However, in Kenya, it is estimated that the epidemic actually peaked in July [2020] with around 40% of the population in urban areas having been infected. A similar picture is emerging in other countries. This implies that measures put in place had little effect on viral transmission per se, though it does raise the possibility that herd immunity is now playing a role in limiting further transmission.

At the same time, there is another important possibility: the idea that viral load (the number of virus particles transmitted to a person) is a key determinant of severity. It has been suggested that masks reduce viral load and that their widespread wearing may limit the chances of developing severe disease. While WHO recommends mask wearing, uptake has been variable and has been lower in many European countries, compared with many parts of Africa.

So, is Africa in the clear? Well, obviously not. There is still plenty of virus around and we do not know what may happen as the interaction between the virus and humans evolves. However, one thing that does seem clear is that the secondary effects of the pandemic will be Africa's real COVID-19 challenge. These stem from the severe interruptions of social and economic activities as well as the potentially devastating effects of reduced delivery of services which protect millions of people, including routine vaccination as well as malaria, TB, and HIV control programmes.

Research agendas
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Major implications of the emerging picture include the need to re-evaluate African COVID-19 research agendas. While many of the priorities originally identified may still hold, their relative importance is likely to have changed. The key point is to deal with the problems as they are now rather than as they were imagined to be 6 months ago. The same thing applies to public health policy. Of course, basic measures such as hand washing remain essential (regardless of COVID-19), and wearing masks should be continued while there is any level of COVID-19 transmission. However, other measures with broader effects on society, especially restrictions on educational and economic activity, should be under continuous review.

A key point now is to increase surveillance and ensure that flexible responses are driven by high quality real time data.

[Byline: Kevin Marsh, Moses Alobo]

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[The report above is an interesting viewpoint on the course of the coronavirus disease outbreak in Africa. The writers suggest plausible theories regarding the outbreak in Africa. Health experts all over the world forecasted a worse outcome when the pandemic affected the African continent. They give age, climatic differences, pre-existing protective immune responses, and genetic factors to the relatively lower death rates in Africa.

They also consider the relatively lower rates of testing and mention the research agenda. Research is currently ongoing in a number of African countries on seroprevalence, to have an idea of the spread of the coronavirus disease in the general population.

The most important considerations for Africa are the secondary social and economic effects of the coronavirus disease pandemic. These effects, including the detrimental effects on the delivery of essential health services like immunization programmes, will ultimately affect the populace, especially the vulnerable groups. The writers concluded that measures to increase and ultimately improve surveillance will give a better picture of the burden of the disease in Africa. This would better guide the response in the continent. - Mod.AA

HealthMap/ProMED map of Africa: <http://healthmap.org/promed/p/6075>

See: COVID-19 update (161): Africa, low death rates, theories
http://promedmail.org/post/20201012.7855031

It is interesting to see the hypotheses explaining the lower death rates in India and Africa. Overlaps begin with the younger age distribution of the populations -- a valid speculation as we have data supporting the observation of higher mortality among older age groups. Another common area is under-reporting, although this has been observed outside of India and African countries -- the USA for example. A surrogate measure would be excess mortality from previous years as shown in the India article, and many of the European countries and the USA (see <https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm> and Tanne JH in BMJ, for the USA calculations of excess mortality). As for genetic studies, they are under way. A lot has been learned in 10 months, but a lot more awaits learning.

Reference
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Tanne JH. Covid-19: At least two thirds of 225 000 excess deaths in US were due to virus. BMJ. 2020; 371: m3948. doi: 10.1136/bmj.m3948.
PMID: 33046481; <https://www.bmj.com/content/371/bmj.m3948>.
- Mod.MPP]

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[3] WHO update: Daily new cases reported (as of 13 Oct 2020)
Date: Tue 13 Oct 2020
Source: WHO [abridged, edited]
<https://covid19.who.int/table>

*Daily case reports as of 13 Oct 2020 17:06 CEST

Surveillance
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WHO region (no. countries/territories):
Total confirmed cases (new cases in last 24 hours) / Total deaths (new deaths in last 24 hours)
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Western Pacific Region (19): 660 559 (5122) / 14 376 (21) European Region (61): 7 108 781 (86 507) / 248 498 (964) South East Asia Region (10): 8 053 218 (65 612) / 128 762 (855) Eastern Mediterranean Region (22): 2 639 723 (16 116) / 67 279 (470) Region of the Americas (54): 18 004 043 (91 338) / 592 561 (1636) African Region (49): 1 237 088 (5280) / 27 540 (143) Cases on an international conveyance (Diamond Princess): 741 (0) / 13
(0)

Confirmed cases (new cases in last 24 hours) / Total deaths (new deaths in last 24 hours) Grand total: 37 704 153 (269 975) / 1 079 029 (4089)

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[The number of countries and territories reporting confirmed cases of
COVID-19 to WHO remains at 216.

Data by country, area, or territory for 13 Oct 2020 can be accessed at <https://promedmail.org/wp-content/uploads/world-pdf/WHO%20daily%20tablesOct13_1602621446.pdf>.

- The Americas region reported 33.8% of daily case numbers and 40.0% of the daily deaths reported in the past 24 hours, maintaining its position as the most severely affected region, having reported more than 18.0 million cases. The USA and Brazil maintain their

dominance, followed by Argentina, Colombia, Peru, and Mexico. Other countries reporting more than 1000 cases in the past 24 hours include Canada, and Chile. Costa Rica did not report any new cases in the past 24 hours.

- The European region reported 32.0% of daily case numbers and 23.6% of the daily deaths reported in the past 24 hours, and total cumulative cases reported exceed 7.1 million. Countries not reporting cases today (13 Oct 2020) include Spain, Kazakhstan, and Sweden. The UK is dominant, followed closely by Russia, then France, Netherlands, Ukraine, Italy, Poland, Czech Republic, Poland, Germany, Switzerland, and Romania. Other countries reporting more than 1000 cases in the past 24 hours include Israel, Turkey, Hungary, and Portugal.

- The Eastern Mediterranean region reported 6.0% of daily case numbers and 11.5% of the deaths reported in the past 24 hours, having reported a cumulative total of greater than 2.6 million cases. Iran is dominant, followed by Iraq, Morocco, Jordan, Libya, UAE, and Lebanon.
Kuwait and Oman reported more than 500 cases but less than 1000.

- The African region reported 2.0% of daily case numbers and 3.5% of the deaths reported in the past 24 hours and has reported more than
1.2 million cases. Botswana is dominant, followed by South Africa, Ethiopia, Cameroon, Nigeria, Algeria, Reunion, Angola, and Cote d'Ivoire.

- The Western Pacific region reported 1.9% of daily case numbers and 0.51% of the deaths reported in the past 24 hours, having reported a cumulative total of 0.66 million cases. As previously, the Philippines maintains its dominance, followed by Malaysia, Guam, Japan, and South Korea.

- The South East Asia region reported 24.3% of the daily newly reported cases and 20.9% of reported deaths in the past 24 hours, having reported a cumulative total of more than 8.0 million cases. As previously, India remains dominant, followed by Nepal, Indonesia, Bangladesh, and Myanmar.

On the Overview tab at the WHO source URL, the epidemic curve of confirmed COVID-19 cases by WHO region, 30 Dec 2019 through 13 Oct
2020 is an excellent visual representation of the pandemic. - Mod.MPP]

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[4] Global update: Worldometer accessed 13 Oct 2020 22:06 EDT (GMT-4)
Date: Tue 13 Oct 2020
Source: Worldometer [edited]
<https://www.worldometers.info/coronavirus/#countries>

[For those who wish to see the detailed global data, a snapshot of the Worldometer table at the time we accessed it is available at <https://promedmail.org/wp-content/uploads/world-pdf/OCT13DATASET_1602645989.pdf>.

A 7-day series of cumulative data reported by countries, territories, and reporting entities can be found at <https://promedmail.org/wp-content/uploads/world-pdf/OCT13WORLD7_1602646053.pdf>.
- Mod.MPP]

Total number of reported deaths: 1 090 734 Total number of worldwide cases: 38 352 776 Number of newly confirmed cases in the past 24 hours: 317 306

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<5.1.2e@promedmail.org>

[The weekend reporting artifact is somewhat present today with countries such as Brazil and Kazakhstan having marked reductions in their 24 hour newly confirmed cases. India and the USA are still the most severely affected countries in terms of cumulative case counts and daily new case confirmations, with India in the 2nd position in terms of cumulative case counts and dominating in terms of newly reported cases. In the past 24 hours, these 2 countries -- India (63 517), followed by the USA (52 464) -- have maintained their dominance.
A global total of 5399 deaths were reported in the past 24 hours
(12-13 Oct 2020), representing an increase from the past 2 days.

Countries reporting more than 5000 newly confirmed cases in the past
24 hours (14 countries) include India, USA, UK (17 232), Russia (13 868), Argentina (13 305), France (12 993), Brazil (11 415), Czech Republic (8326), Netherlands (7378), Spain (7118), Italy (5898), Ukraine (5133), Poland (5068), and Colombia (5015). A total of 42 countries have reported more than 1000 cases in the past 24 hours; 19 of the 42 countries reporting more than 1000 newly confirmed cases are from the European region, 9 were from the Americas region, and 7 were from the Eastern Mediterranean region.

Comparing the 7-day averages of daily confirmed cases from the past 7 days and those from 8-14 days ago, there is an increase in case counts by 5.1%, while daily reported deaths have decreased by 13.8%.

Impression: Global 7-day averages continue to increase, in spite of the weekend artifact lowering the 24-hour changes -- I suspect they will change again over the coming days. - Mod.MPP]

[See Also:
COVID-19 update (437): animal, Netherlands, Denmark, mink, spread, control http://promedmail.org/post/20201013.7858915
COVID-19 update (436): infodemic, brain fog, China, WHO, global
http://promedmail.org/post/20201013.7857069
COVID-19 update (435): Nigeria, PEEP & proning, WHO, global
http://promedmail.org/post/20201012.7854229
COVID-19 update (434): COVAX, viral Load, WHO, global
http://promedmail.org/post/20201011.7852648
COVID-19 update (433): animal, Denmark (ND,MJ) farmed mink, spread, control http://promedmail.org/post/20201010.7851707
COVID-19 update (432): transmission and age, South Asia, WHO, global
http://promedmail.org/post/20201010.7850554
COVID-19 update (431): saliva antibodies, remdesivir, WHO, global
http://promedmail.org/post/20201009.7847920
COVID-19 update (430): animal, USA (UT) mink
http://promedmail.org/post/20201009.7847704
COVID-19 update (420): ECMO, USA serosurvey, WHO, global
http://promedmail.org/post/20200930.7824510
COVID-19 update (410): ACE inhibitors and ARBs, WHO COVAX plan, WHO, global http://promedmail.org/post/20200922.7801717
COVID-19 update (400): lockdowns, influenza co-infections WHO, global
http://promedmail.org/post/20200914.7776512
COVID-19 update (350): USA (TX) animal, cat
http://promedmail.org/post/20200808.7658191
COVID-19 update (300): Korea antibodies, China asymptomatic index case, WHO http://promedmail.org/post/20200703.7536146
COVID-19 update (250): selected countries
http://promedmail.org/post/20200610.7448037
COVID-19 update (200): global, Yemen, WHO
http://promedmail.org/post/20200522.7364937
Undiagnosed pediatric inflammatory syndrome (06): COVID-19, heart, young adults http://promedmail.org/post/20200522.7364506
Undiagnosed pediatric inflammatory syndrome (05): Europe, USA,
COVID-19 assoc http://promedmail.org/post/20200518.7340554
Undiagnosed pediatric inflammatory syndrome (04): USA, UK, PMIS, fatal
http://promedmail.org/post/20200509.7315405
Undiagnosed pediatric inflammatory syndrome (03): USA, Europe,
COVID-19 susp, RFI http://promedmail.org/post/20200505.7299876
COVID-19 update (150): global, USA state prisons, WHO
http://promedmail.org/post/20200502.7290671
COVID-19 update (100): China, S. Korea & high local transmission countries http://promedmail.org/post/20200413.7217806
COVID-19 update (50): China (Hong Kong) animal dog, 2nd case PCR positive, OIE http://promedmail.org/post/20200323.7129951
COVID-19 update (01): China, global, EVZD, reporting criteria, WHO
http://promedmail.org/post/20200213.6984084
Novel coronavirus (42): China, global, COVID-19, SARS-CoV-2, WHO
http://promedmail.org/post/20200211.6979942
Novel coronavirus (41): China, global, clinical pics, asymptomatic trans., WHO http://promedmail.org/post/20200210.6976117
Novel coronavirus (40): animal reservoir, pangolin poss intermediate host, RFI http://promedmail.org/post/20200210.6972104
Novel coronavirus (30): updates, China, Viet Nam, research
http://promedmail.org/post/20200202.6945658
Novel coronavirus (20): China, wildlife trade ban
http://promedmail.org/post/20200127.6922060
Novel coronavirus (10): China (HU, GD, BJ)
http://promedmail.org/post/20200119.6898567
Novel coronavirus (01): China (HU) WHO, phylogenetic tree
http://promedmail.org/post/20200112.6885385
Undiagnosed pneumonia: China (HU) (10): genome available, Hong Kong surveill. http://promedmail.org/post/20200111.6883998
Undiagnosed pneumonia: China (01): (HU) wildlife sales, market closed, RFI http://promedmail.org/post/20200102.6866757
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Undiagnosed pneumonia: China (HU): RFI
http://promedmail.org/post/20191230.6864153
and other items in the archives]
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