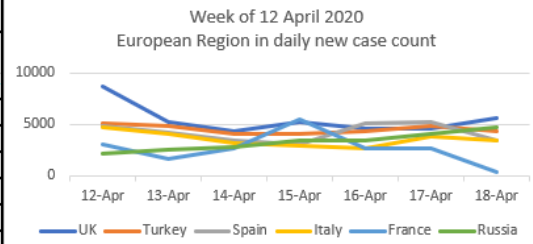
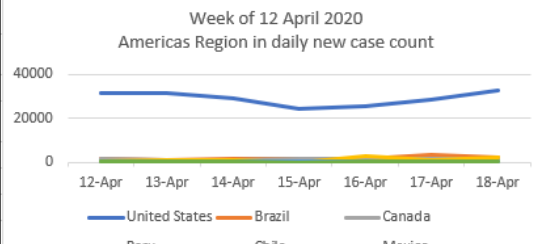


Weekly COVID-19 Update: April 12- 18 2020

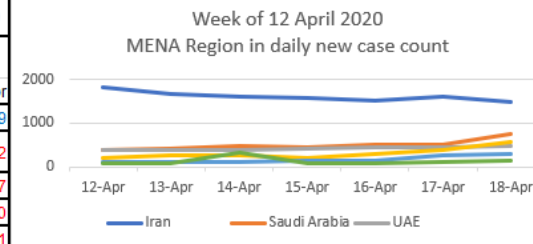
European Region	Daily change in new reported cases (decreasing shown in blue, increasing in red)						
Country	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
UK	8719	5288	4342	5252	4603	4617	5599
Turkey	5138	4789	4093	4062	4281	4801	4353
Spain	4830	4167	3477	3045	5092	5183	3493
Italy	4694	4092	3153	2972	2667	3786	3493
France	3104	1595	2668	5483	2622	2623	385
Russia	2186	2558	2774	3388	3448	4070	4785



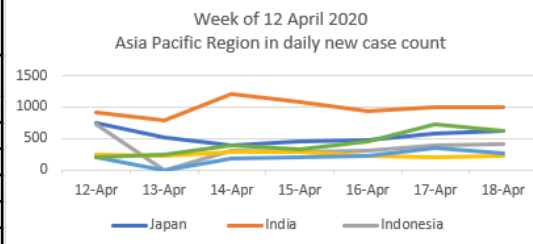
Americas Region	Daily change in new reported cases (decreasing shown in blue, increasing in red)						
Country	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
United States	31606	31633	29308	24446	25802	28711	32549
Brazil	1781	1089	1442	1261	1832	3058	2105
Canada	1318	1158	1084	1360	1394	1344	1775
Peru	641	951	671	0	2784	1172	2014
Chile	426	286	312	392	356	534	445
Mexico	403	375	442	353	385	448	450



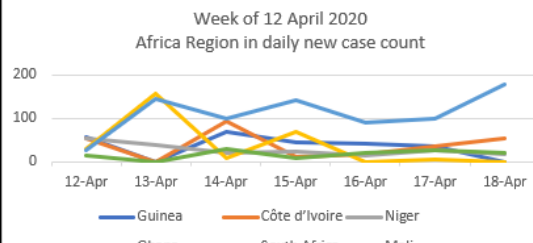
MENA Region	Daily change in new reported cases (decreasing shown in blue, increasing in red)						
Country	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
Iran	1837	1657	1617	1574	1512	1606	1499
Saudi Arabia	382	429	472	435	493	518	762
UAE	376	387	398	412	432	460	477
Qatar	216	251	252	197	283	392	560
Morocco	97	116	102	125	136	259	281
Algeria	64	89	313	87	90	108	150



Asia Pacific Region	Daily change in new reported cases (decreasing shown in blue, increasing in red)						
Country	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
Japan	743	507	390	455	482	585	628
India	909	796	1211	1076	941	1007	991
Indonesia	729	0	316	282	297	380	407
Philippines	233	220	284	291	230	207	218
Bangladesh	197	0	182	209	219	341	266
Singapore	191	233	386	334	447	728	623



Africa Region	Daily change in new reported cases (decreasing shown in blue, increasing in red)						
Country	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
Guinea	56	0	69	44	41	34	0
Côte d'Ivoire	53	0	93	12	16	34	54
Niger	53	38	19	22	14	25	18
Ghana	30	158	8	70	0	5	0
South Africa	25	145	99	143	91	99	178
Mali	13	0	29	7	21	27	19



General Updates

- Total deaths in Wuhan China have been revised with a major increase compared to previously reported deaths
- Recent study in Austria estimates the average number of cases up to 9 times higher than reported due to high levels of asymptomatic or minor symptoms.¹
- Recent study published in Nature Microbiology suggests community transmission taking place in early January in Wuhan²
- Case Reporting Forms (CRF) database with WHO currently only accounts for 44% of the cases reported globally, with Italy, Germany and the US making up 75% of all cases in the database.
- More severe illness and death has been reported among men than women, but there has not been sufficient evidence to show the leading cause of this (desegregating co-morbidities and behaviour patterns) in comparison with genomic or immune response patterns.³
 - Global sex ratio of men to women is 1.03: 1 with highest sex ratios observed in age groups 0-9, 60-69 and 70-79. Lower sex ratios (more women than men) reported in age groups 20-29 and 80+.
- [WHO deploying national polio surveillance](#) and field staff in India to assist with COVID-19 response
- Preparedness, prevention and control of coronavirus disease (COVID-19) for refugees and migrants in non-camp settings guidelines released by WHO calling for the inclusion of refugees and migrants in countries strategies to COVID-19 as part of a wholistic approach 17 April 2020⁴
- Two ongoing studies on the efficacy of Bacille Calmette-Guérin vaccine (BCG) on COVID-19. No conclusive evidence is available at this time which supports use of BCG for COVID-19.
- Crisper used to develop a test in nasal swabs to detect COVID-19 in United States (Nature)
- On average countries are detecting 30% of expected cases
 - Germany, Norway, South Korea, Canada, Australia are testing the most relative to population and likely have truer baseline. These countries are being used to estimate truer case to death ratio.
- Currently no evidence for the severe adverse effects of non-steroidal anti-inflammatory drugs (NSAIDs) in patients with COVID-19 following a systematic reviews
- US and French authorities have authorised the use of chloroquine and hydroxychloroquine, but the EU regulator and WHO say the science doesn't support the decision at this time (multiple studies still under way).⁶
- Time to halving the outbreak considerably longer than doubling time in most locations (Italy estimated at 3.2 day doubling time and 34.8 days halving time)

Review of additional relevant publications

A recent study finds that some patients recovered from COVID-19 have very low levels of antibodies against the virus and in some cases are undetectable (compiled by Nature, 9 April)

A team at Fudan University (Shanghai, China) measured antibodies to COVID-19 in 175 volunteers who had recovered from mild infections. As a result, approximately 30% of the volunteers, particularly those under the age of 40, never developed high levels of SARS-CoV-2 antibodies. This may suggest that there may be other immune responses that help attack against the infection. The results are summarized by F. Wu *et al.* <https://www.medrxiv.org/content/10.1101/2020.03.30.20047365v1>; 2020.

Viral load soars as infected people start feeling ill (compiled by Nature, 8 April)

¹ Csh.ac.at/covid,

² [GenomWeb](#)

³ News articles include [NYT](#), [Vox](#), Journal articles in the [Lancet](#), [China CDC](#), Lancet [gendered dimensions](#)

⁴ [Preparedness, prevention and control of coronavirus disease \(COVID-19\) for refugees and migrants in non-camp settings](#)

⁵ [The use of non-steroidal anti-inflammatory drugs \(NSAIDs\) in patients with COVID-19](#)

⁶ [Lancet 11 April 2020](#)

Two research groups discovered that viral RNA levels are highest in people with COVID-19 soon after their symptoms appear. The higher the viral RNA is detected in a person's body, the more they excrete when coughing or sneezing. These studies were done by K.K.W. To *et al. Lancet Infect. Dis* <http://doi.org/ggp4qx>; 2020 and L. Zou *et al. N. Engl.J.Med.* <http://doi.org/ggmzsp>; 2020. Yet, another study showed contrasting results where people with milder COVID-19 symptoms had much lower concentrations of viral RNA than those who showed more severe symptoms. This study was done by Y.Liu *et al. Lancet Infect.Dis.* <http://doi.org/dqrr>; 2020.

A total of 115 COVID-19 vaccine candidates are under development as of 8 April (compiled by Nature Reviews Drug Discovery, 8 April)

Among the COVID-19 vaccine candidates that are currently under development, there is a wide range of the type of vaccine including nucleic acid (DNA and RNA), virus-like particle, peptide, viral vector, recombinant protein, live attenuated virus and inactivated virus approaches as summarized by Le *et al.* <https://www.nature.com/articles/d41573-020-00073-5>. Lurie *et al. N.Engl.J.Med.* <https://www.nejm.org/doi/full/10.1056/NEJMp2005630> describes the challenges of vaccine development in the midst of a pandemic when scientific evidence and funding are demanded in a very short amount of time.

Aerosol and Surface Distribution of SARS-CoV-2

A study examining the spatial distribution of SARS-CoV-2 in two hospital wards in Wuhan, China found that virus was widely distributed on surfaces and detectable in the air up to 4 meters away from patients and that contamination was greater in intensive care units than general wards. Findings suggest that stricter protective measures should be taken by those working in ICUs and that home isolation of suspected COVID-19 cases might not be a good control strategy most families do not have sufficient personal protective equipment or training.

Link: https://wwwnc.cdc.gov/eid/article/26/7/20-0885_article

Transmission of COVID-19 to Health Care Personnel During Exposures to a Hospitalized Patient — Solano County, California, February 2020

https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e5.htm?s_cid=mm6915e5_w

Summary

What is already known about this topic?

Health care personnel (HCP) are at heightened risk of acquiring COVID-19 infection, but limited information exists about transmission in health care settings.

What is added by this report?

Among 121 HCP exposed to a patient with unrecognized COVID-19, 43 became symptomatic and were tested for SARS-CoV-2, of whom three had positive test results; all three had unprotected patient contact. Exposures while performing physical examinations or during nebulizer treatments were more common among HCP with COVID-19.

What are the implications for public health practice?

Unprotected, prolonged patient contact, as well as certain exposures, including some aerosol-generating procedures, were associated with SARS-CoV-2 infection in HCP. Early recognition and isolation of patients with possible infection and recommended PPE use can help minimize unprotected, high-risk HCP exposures and protect the health care workforce.

Characteristics of Health Care Personnel with COVID-19 — United States, February 12–April 9, 2020

https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e6.htm?s_cid=mm6915e6_w

Summary

What is already known about this topic? Limited information is available about COVID-19 infections among U.S. health care personnel (HCP).

What is added by this report? Of 9,282 U.S. COVID-19 cases reported among HCP, median age was 42 years, and 73% were female, reflecting these distributions among the HCP workforce. HCP patients reported contact

with COVID-19 patients in health care, household, and community settings. Most HCP patients were not hospitalized; however, severe outcomes, including death, were reported among all age groups.

What are the implications for public health practice? It is critical to ensure the health and safety of HCP, both at work and in the community. Improving surveillance through routine reporting of occupation and industry not only benefits HCP, but all workers during the COVID-19 pandemic

Cleaning and Disinfectant Chemical Exposures and Temporal Associations with COVID-19 — National Poison Data System, United States, January 1, 2020–March 31, 2020

https://www.cdc.gov/mmwr/volumes/69/wr/mm6916e1.htm?s_cid=mm6916e1_w

Two case reports of poisoning from cleaners associated with cleaning in response to the threat of COVID-19.