COVID-19 Update
July 20,2020

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"I told him as an expert in the field I strongly recommend wearing it, but he just kept bringing up his 'rights'."

Outline

CDC UPDATES

TREATMENT UPDATES

QUESTIONS

COVID-19 Status in the USA

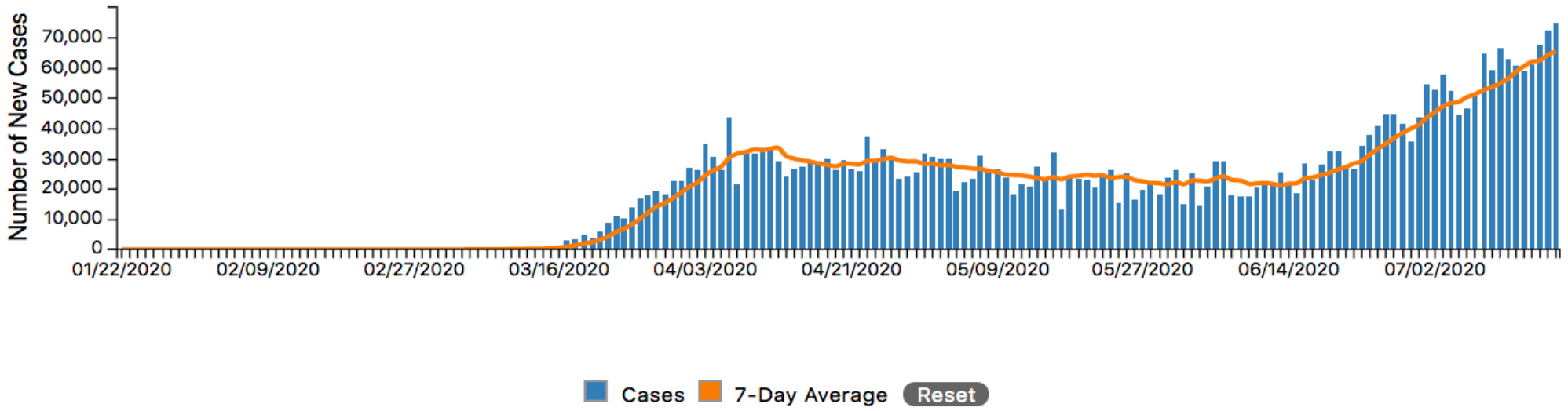
Cases & Deaths among Healthcare Personnel

Data were collected from 2,849,870 people, but healthcare personnel status was only available for 612,399 (21.5%) people. For the 103,643 cases of COVID-19 among healthcare personnel, death status was only available for 69,220 (66.8%).

CASES AMONG HCP	DEATHS AMONG HCP
103,643	543

New Cases by Day

The following chart shows the number of new COVID-19 cases reported each day in the U.S. since the beginning of the outbreak. Hover over the bars to see the number of new cases by day.



The 7-Day moving average of new cases (current day + 6 preceding days / 7) was calculated to smooth expected variations in daily counts.

COVID-19: FACTS

- Concentrations of SARS-CoV-2 RNA in URS decline after onset of symptoms
- In patients with mild to moderate COVID-19, RCV has not been recovered after 10 days following symptom onset
  - Recovery of RCV between 10 and 20 days after symptom onset has been documented in **immunocompromised patients and patients with severe infections**
- High-risk household and hospital contacts do not develop infection if their exposure to a case patient starts 6 days or more after the case patient's illness onset.

URS: Upper Respiratory Specimen, RCV: Replication-Competent Virus

COVID-19 FACTS

- Recovered patients **can continue to have SARS-CoV-2** RNA detected in URS for up to **12 weeks**.
  - Study of 285 "persistently positive" persons, found no infections in 790 contacts
- URS from patients who recovered from an initial COVID19 illness and subsequely developed new symptoms and retested positive by did not have RCV
- The risk of reinfection may be lower in the first 3 months after initial infection
- Currently, there have been no confirmed cases of SARS-CoV-2 reinfection.
- Serologic or other correlates of immunity have not yet been established.

URS: Upper Respiratory Specimen, RCV: Replication-Competent Virus

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UPDATES

- Duration of isolation and precautions
- Role of PCR testing after isolation and precautions are discontinued
- Role of serology tests after isolation and precautions are discontinued
- How to determine when a HCP can return to work after being infected with SARS-COV-2

Remcomendations for Persons with COVID-19
Duration of isolation and precautions

- For most people, isolation can be discontinued 10 days *after symptom onset* **and** resolution of fever for at least 24 hours, without the use of antipyretics , **and** improvement of other symptoms.
    - A limited number of persons with severe illness or immunocompromised may produce replication-competent virus beyond 10 days that may warrant extending duration of isolation for up to 20 days [1].
    - For persons who never develop symptoms, isolation can be discontinued 10 days *after the date of their first positive RT-PCR test.*

1. Consider consultation with infectious disease expert

Recommendations for Persons with COVID-19:
Role of PCR testing after discontinuation of isolation or precautions

- For persons who are severely immunocompromised, a test-based strategy could be considered[1].

- For persons diagnosed with symptomatic COVID-19 who remain asymptomatic after recovery:
  - Retesting is not recommended within 3 months after the date of symptom onset.
  - Quarantine is not recommended in the event of close contact with an infected person.

- For persons who develop new symptoms consistent with COVID-19 during the 3 months after the date of initial symptom onset, if an alternative etiology cannot be identified by a provider:
  - The person may warrant retesting and quarantine may be considered in the event symptoms develop within 14 days after close contact with an infected person[1].
- For persons who never developed symptoms, the date of first positive RT-PCR test should be used in place of the date of symptom onset.

1. Consider consultation with infectious disease expert

Remcomendations for Persons with COVID-19

- **<u>Role of serologic testing</u>**
  - Serology should not be used to establish the presence or absence of infection or reinfection

Testing Health Care Personnel to Determine When They are no Longer Infectious

- In most cases the symptom based strategy should be used to determine when a HCP may return to work

- A test-based strategy could also be considered for some HCP (e.g., severely immunocompromised or severe COVID-19 illness) in consultation with local infectious diseases experts if concerns exist for the HCP being infectious for more than 20 days.

Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status United States, January 22–June 7, 2020

Outcomes Among Pregnant vs Nonpregnant Women

Outcome, n (%)	Pregnant (n = 8207)	Nonpregnant (n = 83,205)	Crude Risk Ratio (95% CI)	Adjusted Risk Ratio* (95% CI)
Hospitalization†	2587 (31.5)	4840 (5.8)	5.4 (5.2-5.7)	5.4 (5.1-5.6)
ICU admission‡	120 (1.5)	757 (0.9)	1.6 (1.3-1.9)	1.5 (1.2-1.8)
Mechanical ventilation§	42 (0.5)	225 (0.3)	1.9 (1.4-2.6)	1.7 (1.2-2.4)
Death‖	16 (0.2)	208 (0.2)	0.8 (0.5-1.3)	0.9 (0.5-1.5)

*Adjusted for age as continuous variable, yes/no for presence of underlying conditions, categorical race/ethnicity variable; nonpregnant women are the reference group. †Missing information for 1539 (18%) pregnant women and 9744 (12%) nonpregnant women, who were assumed to have not been hospitalized. ‡Missing information for 6079 (74%) pregnant women and 58,888 (71%) nonpregnant women, who were assumed to have not been admitted to ICU. §Missing information for 6351 (77%) pregnant women and 63,893 (77%) nonpregnant women, who were assumed to have not required mechanical ventilation. ‖Missing information for 3819 (47%) pregnant women and 17,420 (21%) nonpregnant women, who were assumed to have survived.

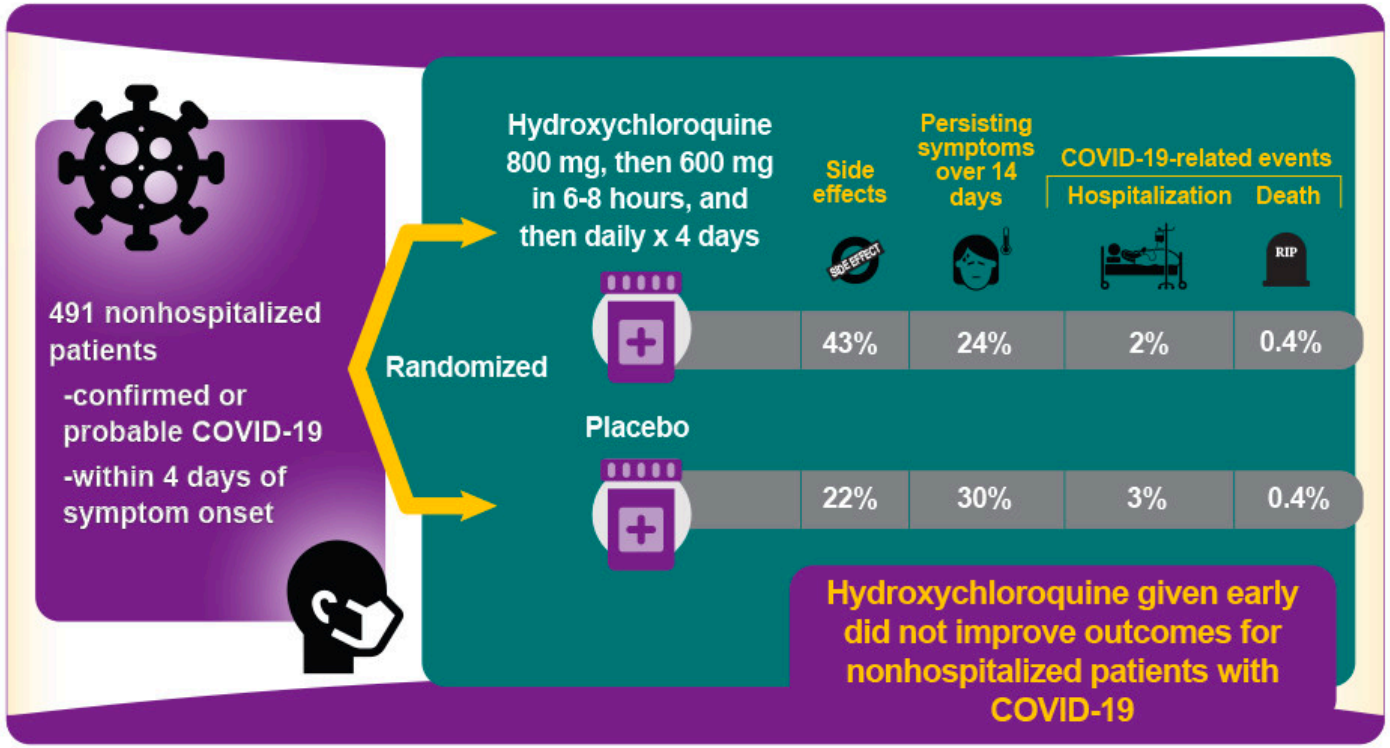
Ellington. MMWR. 2020;69:769.

Slide credit: clinicaloptior

- CDC received reports of 326,335 women of reproductive age (15–44 years) who had positive test results for SARS-CoV-2.
  - Data on pregnancy status were available for 91,412 (28.0%) women with laboratory-confirmed infections;
  - Among these, 8,207 (9.0%) were pregnant

Treatment Update

Does hydroxychloroquine reduce severity of COVID-19 in adult outpatients?



Annals of Internal Medicine

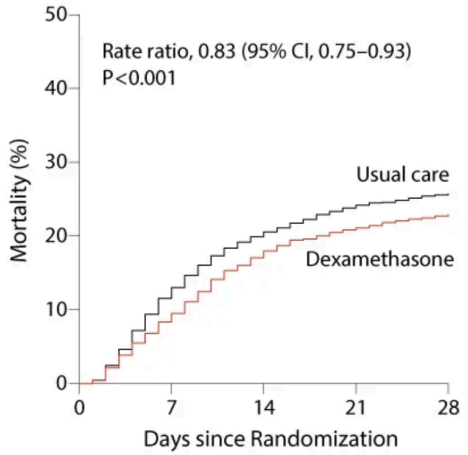
Skipper CP, Pastick KA, Engen NW, et al. Hydroxychloroquine in nonhospitalized adults with early COVID-19:A randomized trial.Ann Intern Med. 2020. [Epub ahead of print]. doi:10.7326/M20-4207
http://annals.org/aim/article/doi/10.7326/M20-4207

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Dexamethasone in Hospitalized Patients with Covid-19 — Preliminary Report

The RECOVERY Collaborative Group*



ORIGINAL ARTICLE

Dexamethasone Treatment in Covid-19

The RECOVERY Collaborative Group

Among hospitalized patients with Covid-19, treatment with dexamethasone resulted in lower 28-day mortality than usual care, according to the level of respiratory support the patients were receiving, indicating a possible correlation between efficacy and the stage of infection.

Prevention Updates

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

An mRNA Vaccine against SARS-CoV-2 — Preliminary Report

L.A. Jackson, E.J. Anderson, N.G. Rouphael, P.C. Roberts, M. Makhene, R.N. Coler, M.P. McCullough, J.D. Chappell, M.R. Denison, L.J. Stevens, A.J. Pruijssers, A. McDermott, B. Flach, N.A. Doria-Rose, K.S. Corbett

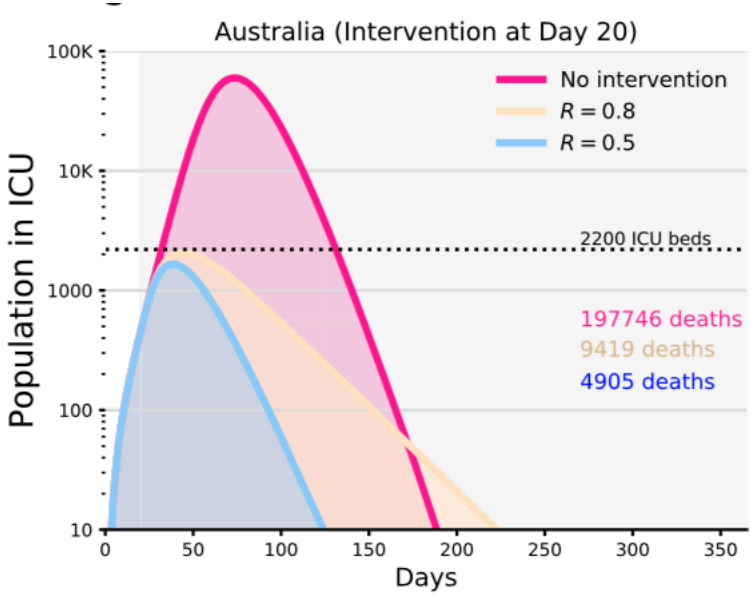
CONCLUSIONS

The mRNA-1273 vaccine induced anti–SARS-CoV-2 immune responses in all participants, and no trial-limiting safety concerns were identified. These findings support further development of this vaccine. (Funded by the National Institute of Allergy and Infectious Diseases and others; mRNA-1273 ClinicalTrials.gov number, NCT04283461).

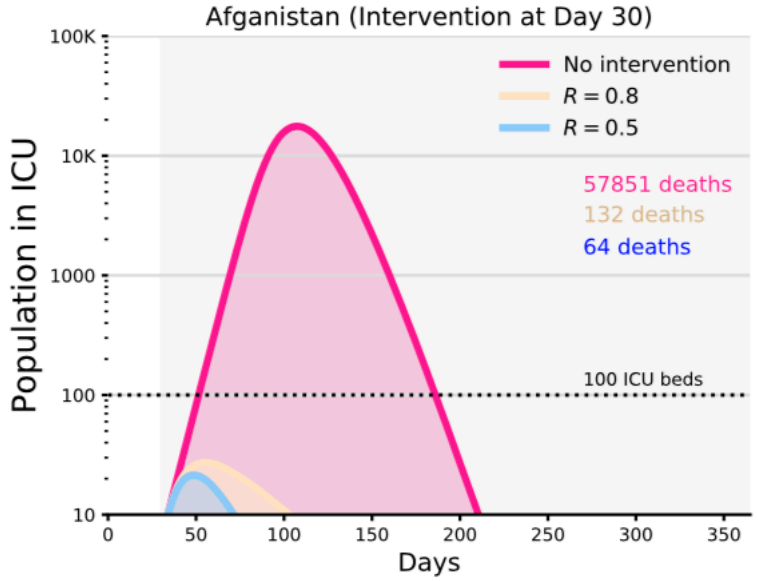
Dynamic interventions to control COVID-19 pandemic: a multivariate prediction modelling study comparing 16 worldwide countries

European Journal of Epidemiology (2020) 35:389–399 https://doi.org/10.1007/s10654-020-00649-w

High Income Country



Low Income Country



Mitigation: R=0.8
Suppression: R=0.5

Questions

- Have you heard or read anything about these masks in the link? I have people asking if these are acceptable at work but I can't tell if they have been studied at all. Let me know if you have any ideas of where I can find more information. Thank you!