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COVID-19 Updates and Insights

Spanish session

December 15th , 2020

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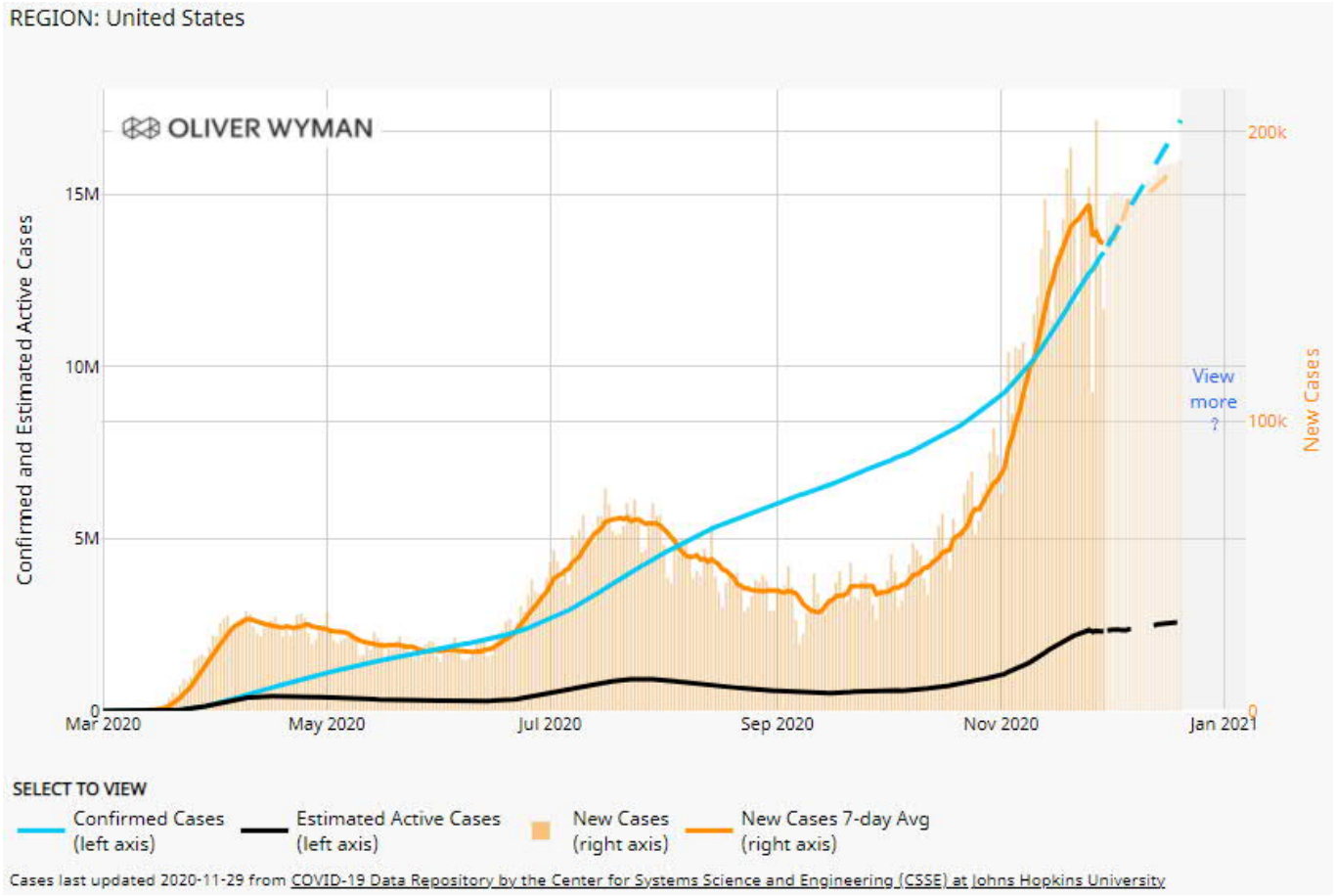
NY

COVID-19 will influence our world for months to come



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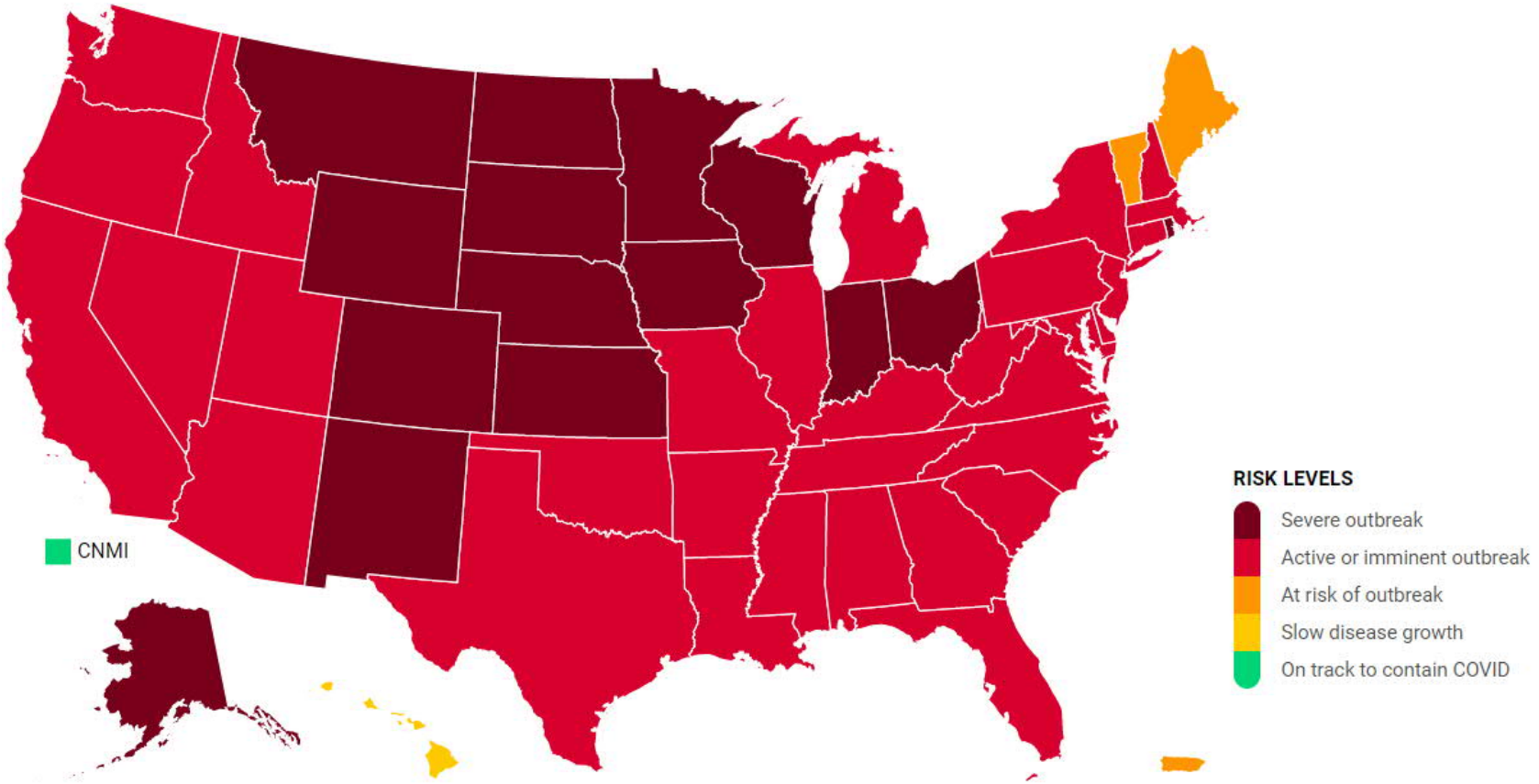

Source: covidactnow.org

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COVID-19 Hospitalization and Death by Race/Ethnicity

Race and ethnicity are risk markers for other underlying conditions that affect health including socioeconomic status, access to health care, and exposure to the virus related to occupation, e.g., frontline, essential, and critical infrastructure workers.

Race and ethnicity are risk markers for other underlying conditions that impact health				
Rate ratios compared to White, Non-Hispanic persons	**American Indian or Alaska Native, Non-Hispanic persons**	**Asian, Non-Hispanic persons**	**Black or African American, Non-Hispanic persons**	**Hispanic or Latino persons**
Cases[1]	1.8x	0.6x	1.4x	1.7x
Hospitalization[2]	4.0x	1.2x	3.7x	4.1x
Death[3]	2.6x	1.1x	2.8x	2.8x

1 Data source: Data reported by state and territorial jurisdictions (accessed 11/27/2020). Numbers are ratios of age-adjusted rates standardized to the 2000 US standard population. Calculations use only the 52% of reports with race/ethnicity; this can result in inaccurate estimates of the relative risk among groups.
2 Data source: COVID-NET (https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covid-net/purpose-methods.html, accessed 11/25/2020). Numbers are ratios of age-adjusted rates standardized to the 2000 US standard COVID-NET catchment population.
3 Data source: NCHS provisional death counts (https://data.cdc.gov/NCHS/Deaths-involving-coronavirus-disease-2019-COVID-19/ks3g-spdg, accessed 11/27/2020). Numbers are ratios of age-adjusted rates standardized to the 2000 US standard population.

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https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

Review of COVID-19 testing types

	RT-PCR	Rapid Molecular	Rapid Antigen	Antibody
Purpose	**Identifies virus presence - diagnostic** Detects fragments of SARS-CoV-2 in the nose, throat, or other areas in the respiratory tract.		**Identifies virus presence - diagnostic** Detects proteins that make up part of the SARS CoV-2 virus	**Identifies past infection with the virus,** indicating some level of immunity
Sensitivity/ Specificity	High	High/Moderate	Moderate	Moderate (highly variable esp around PPV)
Turnaround Time	24-72 hours but can be 7+ days	<24 hours (commonly 15 – 60 minutes)	<24 hours (commonly 15 – 60 minutes)	Serologic (blood tests) commonly go to the lab
Examples – FDA EUA	Quest, LabCorp BioReference, Biomeme, Roche	Abbott ID-Now, Cepheid Xpert Xpress, Cue	Becton, Quidel, Abbott Binax-NOW, Roche	Many EUA approved

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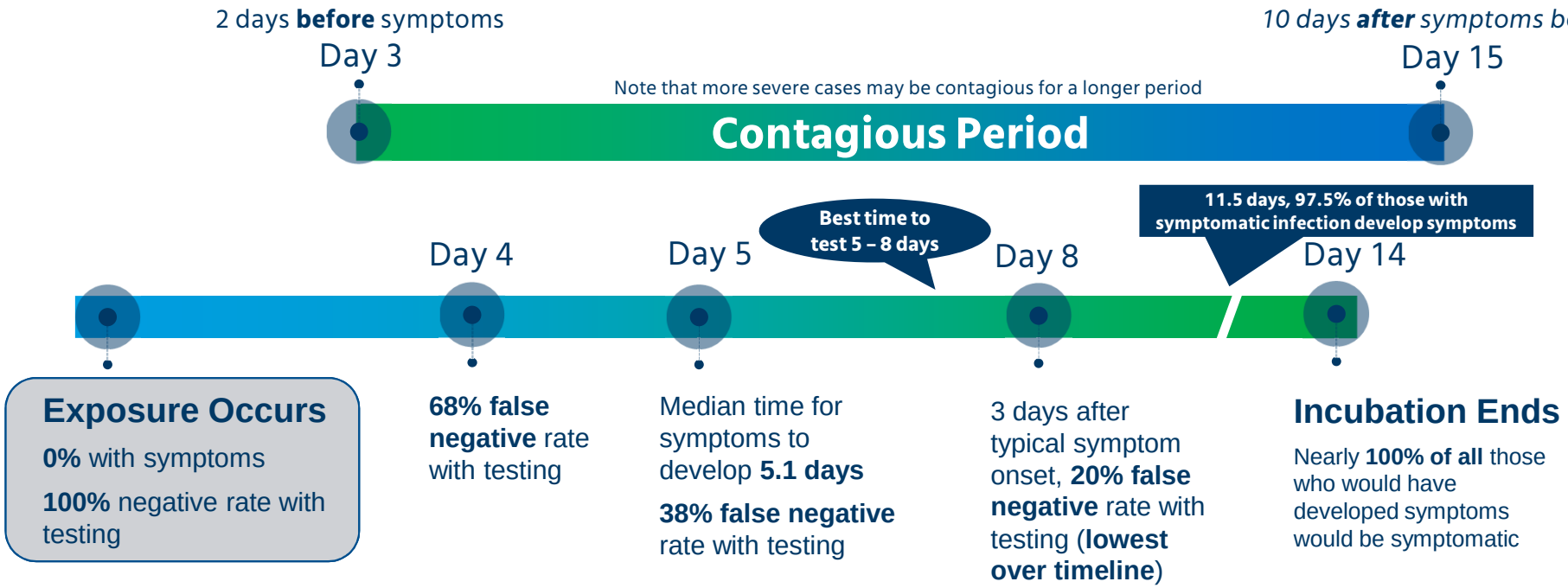
COVID-19 Estimated Incubation Timeline, Testing Accuracy and Contagiousness

Note that this is for informational purposes only, is not considered medical advice (Mercer is not a medical advisor), and is based on small, published studies as referenced below as well as assumptions. It should be considered only as a general guidance.



Notes:

- Testing = diagnostic PCR for virus
- Proportion of "false negatives" is relative to all of those who will become infected
- CDC recommends remaining in quarantine for 14 days for all exposed people regardless of testing negative and some state and local public health guidance may provide varying recommendations
- Information is considered up to date as of 09/16/2020 and is expected to change over time

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Sources:

1. Kucirka LM, Lauer SA, Laeyendecker O, Boon D, Lessler J. Variation in False-Negative Rate of Reverse Transcriptase Polymerase Chain Reaction-Based SARS-CoV-2 Tests by Time Since Exposure. Ann Intern Med. 2020
2. Lauer SA, Grantz KH, Bi Q, Jones FK, Zheng Q, Meredith HR, et al. The incubation period of coronavirus disease 2019 (COVID-19) from publicly reported confirmed cases: estimation and application. Ann Intern Med. 2020

Quarantine vs isolation

What's the difference?

1. **Quarantine:** Someone who has been exposed but is not sick and has not tested positive, stays away from others for the duration of the incubation period of the SARS-CoV-2 virus, which is 14 days, and monitors their health for signs and symptoms of COVID-19

2. **Isolation:** Someone who is known or suspected to have SARS-CoV-2 infection (symptoms or positive test) isolates themselves from others, including those in their own home, to prevent spreading the virus. Duration is 10 days from positive test for people without symptoms and for those with symptoms, it's at least 10 days from onset of symptoms, 24 hours fever free and symptoms improving

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Good News on vaccine development

mRNA Vaccines Lead the Pack in Bringing Good News to the Fight Against COVID-19

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Other vaccines: in progress : AstraZeneca (viral vector), Johnson & Johnson (viral vector) and Sanofi/Glaxo SmithKline (protein-based)

Both vaccines require 2 doses spread 21-28 days apart for most of the vaccine candidates

Efficacy

Pfizer - 95% (44,000 participants)

Moderna – 94.1% (30,000+ participants)

mRNA vaccines are a new, groundbreaking discovery

Requires cold storage to keep the vaccine stable

Moderna -20 ^{O} C– shipped on dry ice , fridge for 1 month

Pfizer – shipped at - 80^{O} C, fridge 2-8 ^{O} C for 5 days

Mid-2021

When we'll likely see vaccine available to the general public

Phased allocation of COVID-19 vaccines

Science → Implementation → Ethics

Healthcare Personnel [1] (~21million)	Essential Workers (non-healthcare) [1] (~87 million)	Adults with high -risk medical conditions [2] (>100 Million)	Adults age ⩾65 years [3] (53 Million)
Examples			
Hospitals Long-term care facilities Outpatient Home health care Pharmacies EMS Public health	Food & Agriculture Food Service Transportation Education Energy Police Firefighters Manufacturing IT & Communication Water & Wastewater	Obesity Severe Obesity Diabetes COP Heart Condition Chronic kidney Cancer Smoking Solid Organ Transplant Sickle cell disease	Community Dwelling Congregate ~3M [4] -Skilled Nursing Facility (~1.3 M) -Assisted living Facilities (~0.8 M) -Residential care communities (~0.6 M) -HUD Senior Housing (~0.3M)

1. https://www.cisa.gov/publication/guidance -essential-critical-infrastructure-workforce
2. https://www.cdc.gov/coronavirus/2019 -ncov/need-extra-precautions/people-with -medical conditions.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019 ncov%2Fneed-extra-precautions%2Fgroupsat-higher-risk.html
3. United States Census Bureau https://www.census.gov/topics/population/older -aging.html
4. Vital and Health Statistics, Series 3, Number 43 (cdc.gov)

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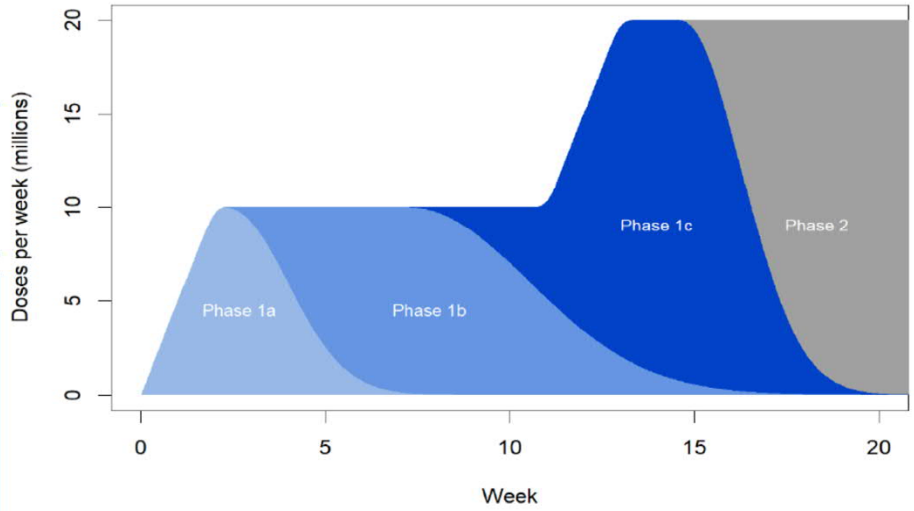
Phased allocation of COVID-19 vaccines

Work Group Proposed Interim Phase 1 Sequence

Phase1c
Adults with high -risk medical conditions
Adults 65+

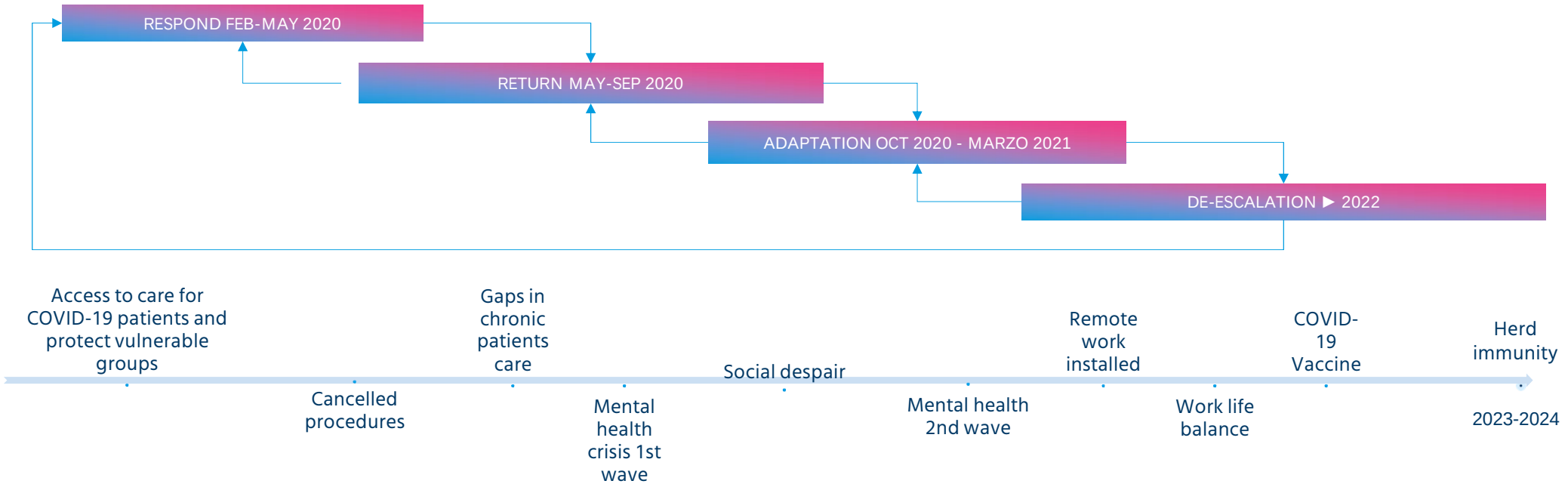
Phase 1b
Essential workers
(examples: Education Sector, Food & Agriculture, Utilities, Police, Firefighters, Corrections Officers, Transportation)

Phase 1a
HCP
LTCF residents



Source: CDC COVID-19 Vaccines Work Group Kathleen Dooling MD,MDPH, Nov 23 2020

We expect to continue following the same actions during the next 12 months “Can not fall in the false sense of security”



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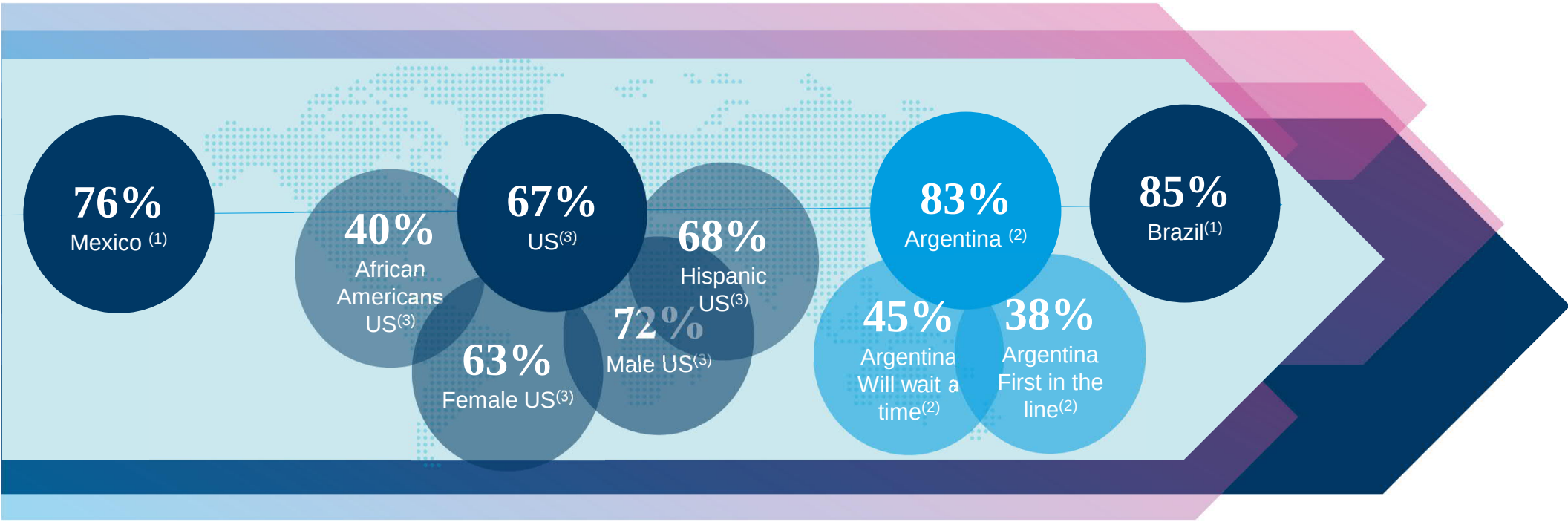
Acceptance of COVID-19 in adults by country



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(1) Nature Research (Oct 2020) A global survey of potential acceptance of a COVID-19 vaccine Jeffrey V. Lazarus
(2) Centro de Opinión Pública (COPUB) de la Universidad de Belgrano Dec 1 2020
(3) El Sevier 26 (2020) 100495 Determinants of COVID-19 vaccine acceptance in the US https://doi.org/10.1016/j.eclinm.2020.100495

We will overcome from this pandemic through behaviors

770,000

Lives could be saved worldwide at Q4 2020 through proven measures such as mask wearing and social distance(1)

- Risk stratification – Covid-19 App
- Mask appropriate wearing
- Physical distance 6 feet
- Hand washing
- COVID-19 testing <5%+
- Strategize your life (Social bubble)
- Quarantine / Isolation / Traceability

Through comparative analysis and applying proportional mortality rates in the US, it was estimated that at least **130,000** deaths and perhaps as many as **210,000** could have been avoided with earlier policy interventions and more robust federal coordination and leadership(2)

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(1) First COVID-19 Global Forecast: IHME Projects Three-Quarters of a Million Lives Could Be Saved by January 1, Sept 3 2020

(2) "130,000 – 210,000 Avoidable COVIID--19 Deaths – and Counting – in the US.." National Disaster Preparedness, Earth Institute, University of Columbia By Irwin Redlener, MD; Jeffrey D. Sachs, PhD; Sean Hansen, MPA; Nathaniel Hupert, MD, MPH; October 21, 2020

Factors that increase community spread and individual risk

Crowded Situations

Close/physical contact

Enclosed space

Duration of exposure

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(1) https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

It’s going to take some time, so don’t forget the basics

Reviewing the factors that influence risk of transmission

Behavior	Activity (exercising, singing, yelling), wearing masks, following other recommendations
Airflow	Amount of air exchange in the environment, outdoors is best
Number	Total number of people interacting and number of cohorts/mixing of different groups
Distance	Physical spread between other people
i	
Time	Cumulative time

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What you should know about the CDC's distribution plans

State Public Health Will Lead Distribution Strategy

The CDC required each state public health department to come up with a plan for distribution. These plans were submitted October 16th in draft form and executive summaries published on the CDC website:

https://www.cdc.gov/vaccines/covid-19/covid19-vaccination-guidance.html

There are different strategies described in these plans, and priority groups (critical populations) are defined uniquely by each of them.

Later Phases of Distribution Might Look Different

HHS announced recently that they will partner with pharmacies across the country, including Walgreens, CVS, Rite Aid, grocers etc.

Details have not yet been shared, but expect to see vaccines available in these locations (60% of pharmacies) in the later phases of vaccine distribution, once priority groups have been immunized.

Wellness, onsite/near-site and other vendors will likely be sources of vaccine administration too.

Sources:
CDC Interim Playbook for Jurisdiction Operations Oct 29th, 2020 https://www.cdc.gov/vaccines/imz-managers/downloads/COVID-19-Vaccination-Program-Interim_Playbook.pdf
HHS - https://www.hhs.gov/about/news/2020/11/12/trump-administration-partners-chain-independent-community-pharmacies-increase-access-future-covid-19-vaccines.html

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General resources on COVID-19

US Centers for Disease Control (CDC)
https://www.cdc.gov/coronavirus/2019-nCoV/index.html

The U.S. Department of Health and Human Services (HHS)

https://www.hhs.gov/coronavirus/covid-19-vaccines/index.html

World Health Organization
https://www.who.int/emergencies/diseases/novel-coronavirus-2019

www.mercer.com/coronavirus
https://www.mercer.com/our-thinking/managing-novel-coronavirus.html

Please also access **local health authority** websites for relevant health information.

Mercury Systems resources

Mercury provides a range of wellbeing resources to help you manage stress and build resiliency

Employee Assistance Program Cigna	Access care by calling 877-622-4327 or visiting the site at www.my.cigna.com go to the EAP tab, and end employer ID "mercurysystems"
Employee Assistance Program GuidanceResources	*Available in 2021 (Additional information on MERC)*
Caregiver support Care@Work	Visit mrcy.care.com and enroll using your company e-mail
Health and Happiness HeadSpace	Visit work.headspace.com/mercurysystems/member-enroll/verify to register
Exercise Aaptiv	If you have not yet received a welcome e-mail, e-mail support@aaptiv.com to get started

Questions?

Disclaimer: The information in this slide deck is not medical or legal advice. Mercer is not a medical or legal advisor. Rather, this guidance is largely assimilated from the information available from the CDC and other public resources as noted below as of December 3, 2020.

https://www.cdc.gov/coronavirus/2019-nCoV/index.html

https://www.who.int/emergencies/diseases/novel-coronavirus-2019

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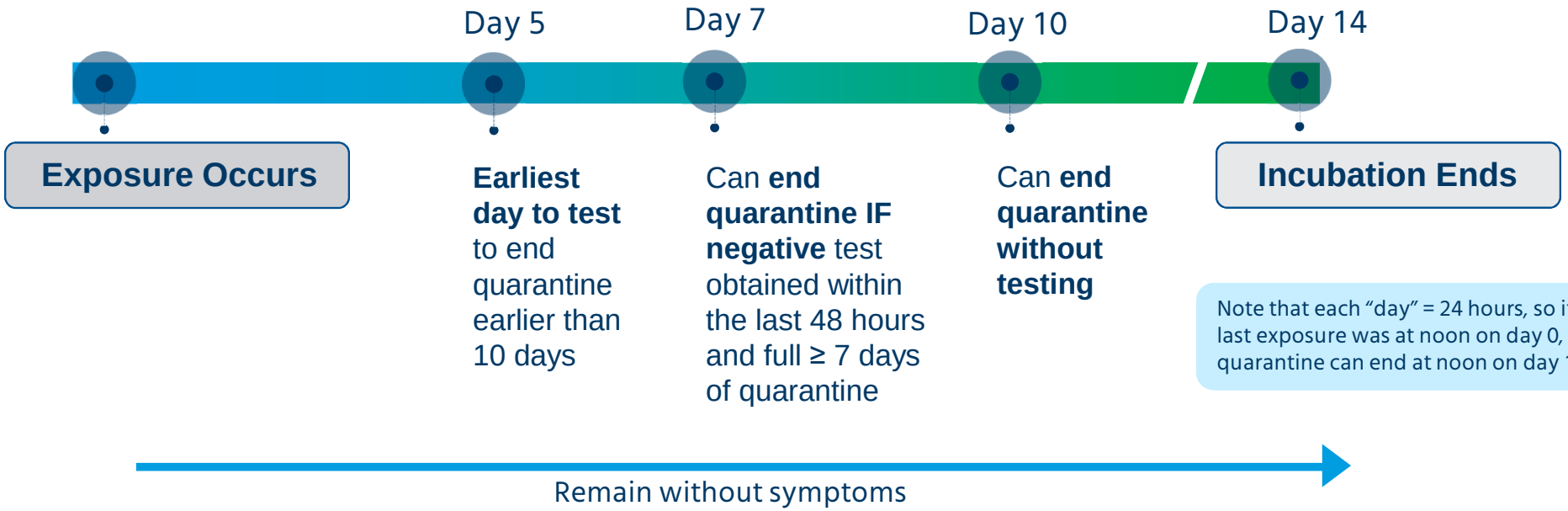
New CDC Guidance on Ending Quarantine



Sources:
https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html

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