

Pandemic with a novel virus is almost impossible to predict

However, the vaccine efficacy and safety data published almost a year ago were astounding, and gave us great hope.

However, Delta was a game changer. We learned the virus can mutate very significantly.

Delta is 225% more contagious, which means much higher levels of immunity are needed to control the pandemic.

It is more virulent, causing 2 - 2.5X hospitalizations

And there is more immune breakthrough

It is now much harder to predict, especially since worldwide, immunity levels - due to vaccination or prior infection is overall very low.

COVID-19 5 Main Tools:

Vaccination

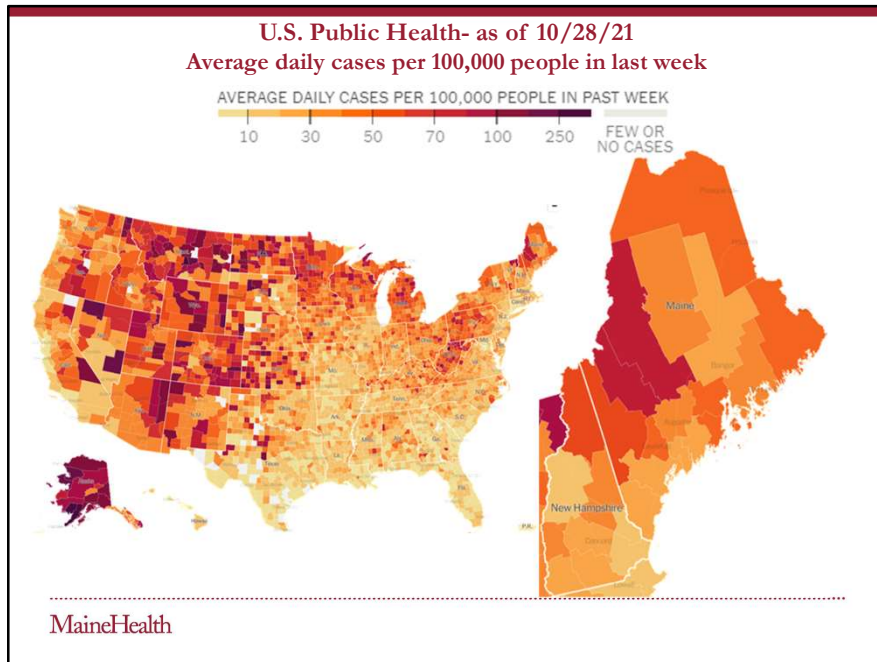
Masking

Distancing

Ventilation

Testing

<https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&time=2020-11-30..latest&facet=none&pickerSort=asc&pickerMetric=location&hideControls=true&Metric=Hospital+patients&Interval=7-day+rolling+average&Relative+to+Population=true&Align+outbreaks=false&country=GBR~USA~ISR~DNK>



Map retrieved from: <https://www.nytimes.com/interactive/2021/us/covid-cases.html>

COVID-19 Vaccination Data- as of 10/28/21

Vaccines Administration in Maine, NH, US

% of Total Population fully vaccinated

- 70% in Maine
- 58% in the U.S.
- **Maine tied for 2nd highest % fully vaccinated of all U.S. States**
(VT=71%; RI=71%; CT=71%; MA=70%).

% of population 12+ years old fully vaccinated

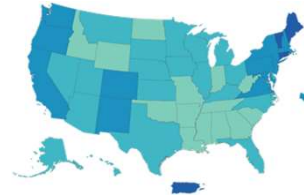
- 80% in Maine
- 67% in the U.S.

Areas of biggest concern in Maine: whites under 60 years old, and those in rural communities- particularly those in western ME

- Franklin, Oxford, Piscataquis & Somerset Counties = 57-60% total population fully vaccinated; vs. Cumberland = 78%
- White: 54% fully vaccinated, vs. 72% among all minorities

% People Fully Vaccinated

0% 0.1 - 49.9% 50 - 59.9% 60 - 69.9% 70 - 79.9% ≥ 80%



Maine Fully Vaccinated by Age

12-29 yr olds = 62%

30-59 yr olds = 73%

60+ yr olds fully vaccinated = 95%

MaineHealth

Brief Summary of Vaccine Administration Data: <https://covid.cdc.gov/covid-data-tracker/#vaccinations>

Vaccine Administration via MaineHealth: Data from EPIC-based reports for all LHS except Mid-Coast; Mid-Coast providing data from separate tracking system via their pharmacy department.

When Maine Expanded Vaccine:

1/18: 70+ year olds

3/3: 60s

3/23: 50s

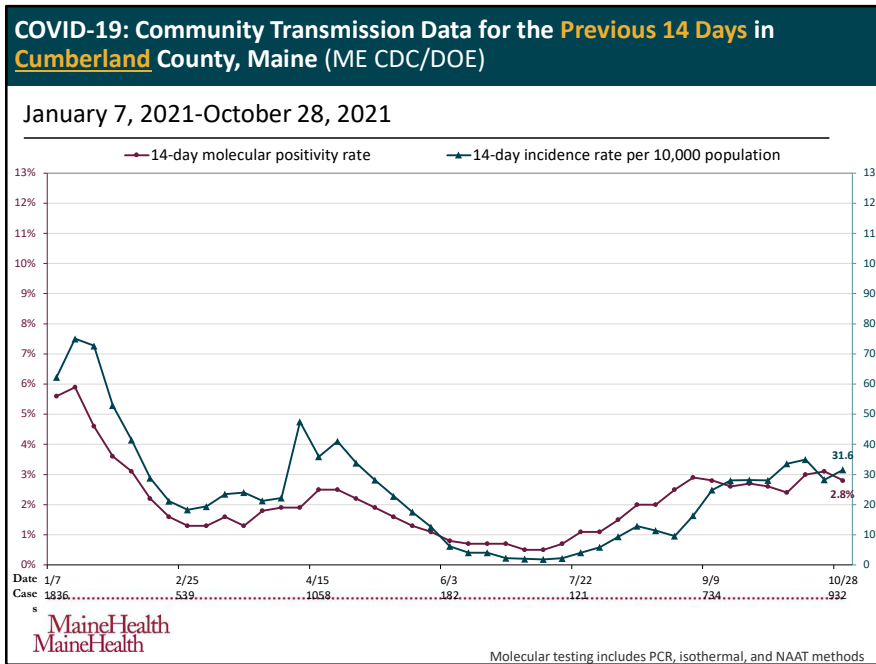
4/7: All ages 16+

5/12: 12-15 yrs

Vaccination Rates 10/27/21 of all ages

MAINE	70%
Cumberland	78%
Knox	75%
Lincoln	73%
York	72%
Sagadahoc	70%
Hancock	69%
Waldo	64%
Washington	64%
Penobscot	64%
Kennebec	63%
Aroostook	62%
Androscoggin	61%
Oxford	60%
Franklin	57%
Piscataquis	57%
Somerset	55%

MaineHealth

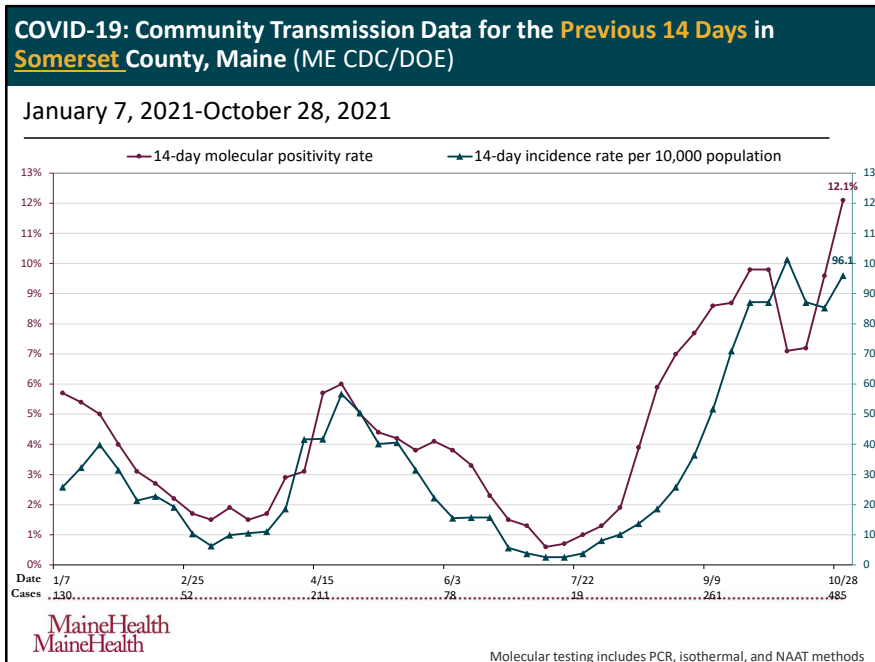


Maine school risk assessment data retrieved using data table from:

<https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/coronavirus/data.shtml>

Maine County categorizations retrieved from:

<https://www.maine.gov/doe/framework/part-1>

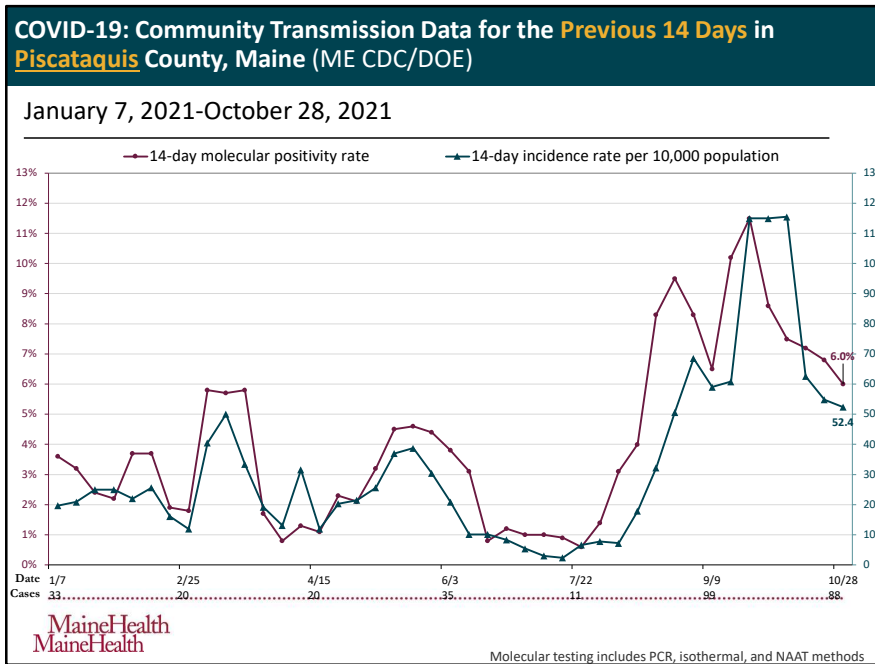


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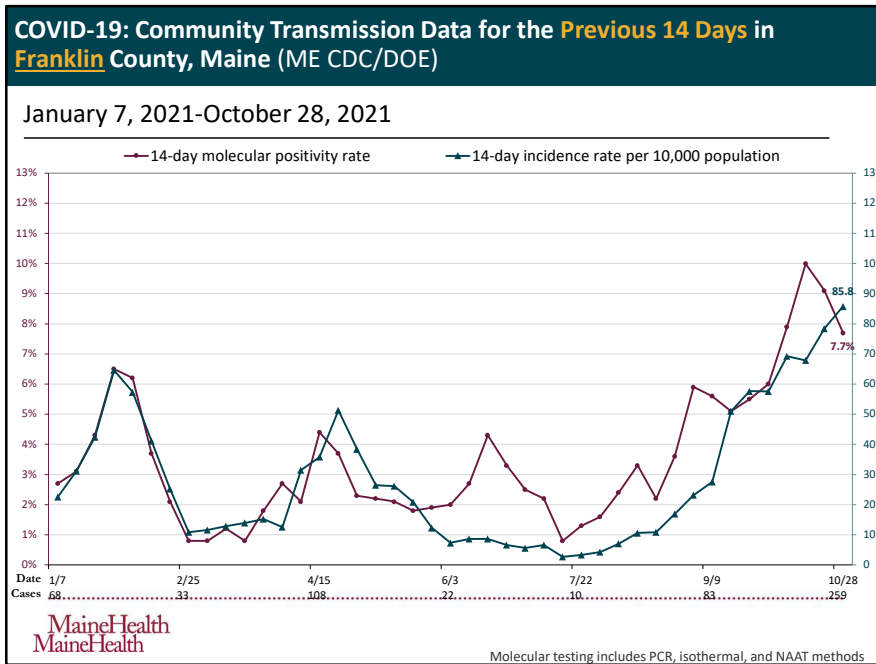


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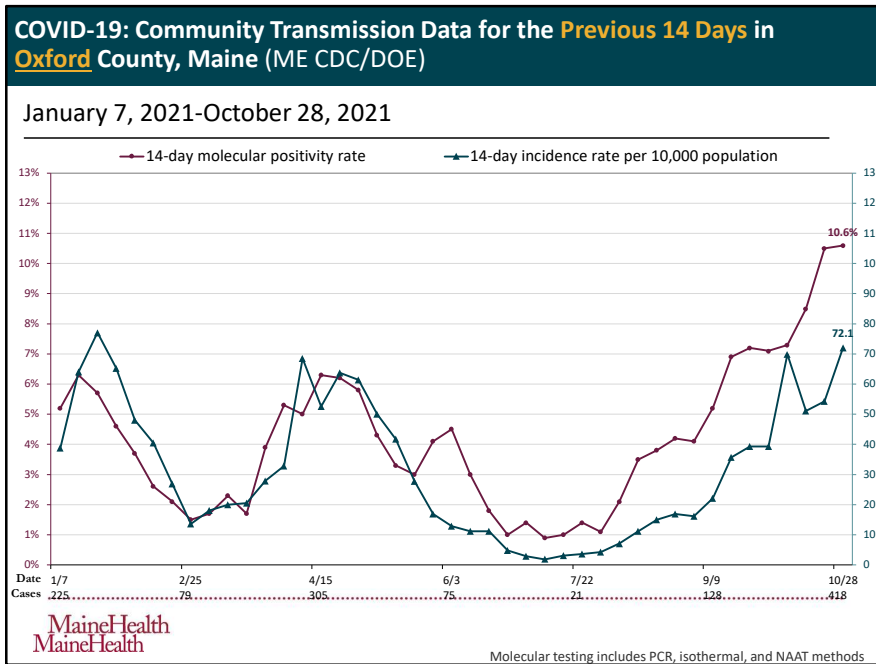


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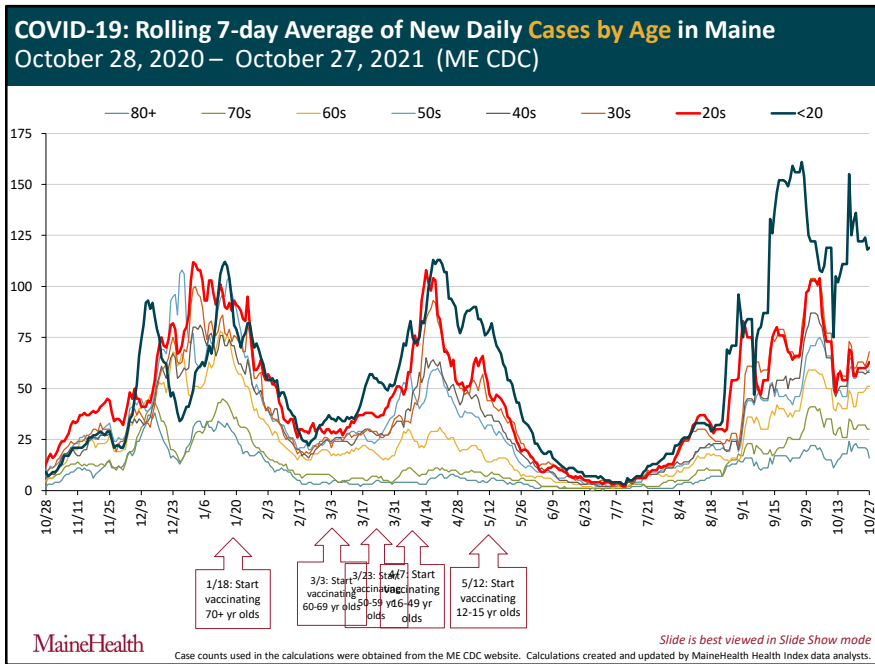


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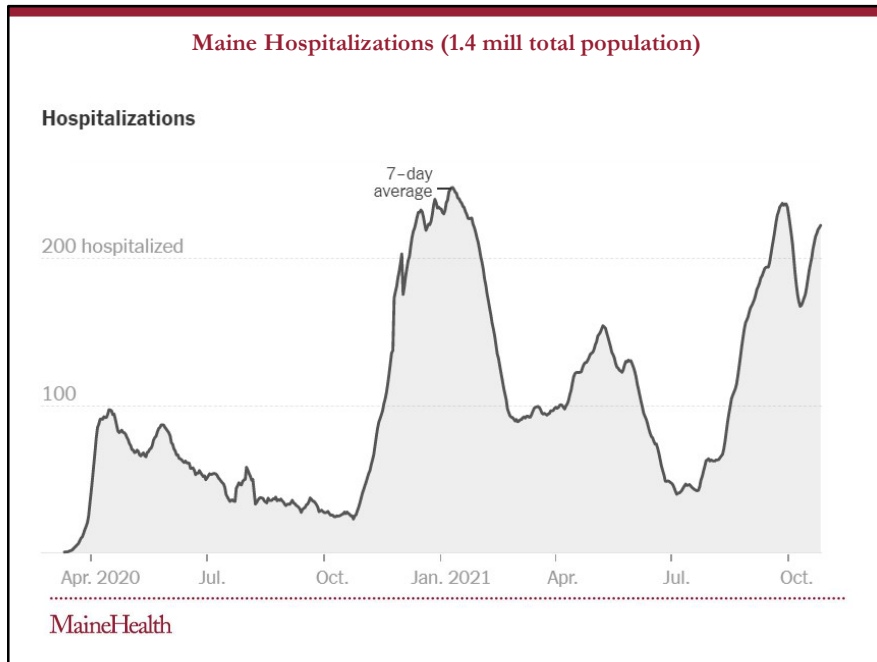
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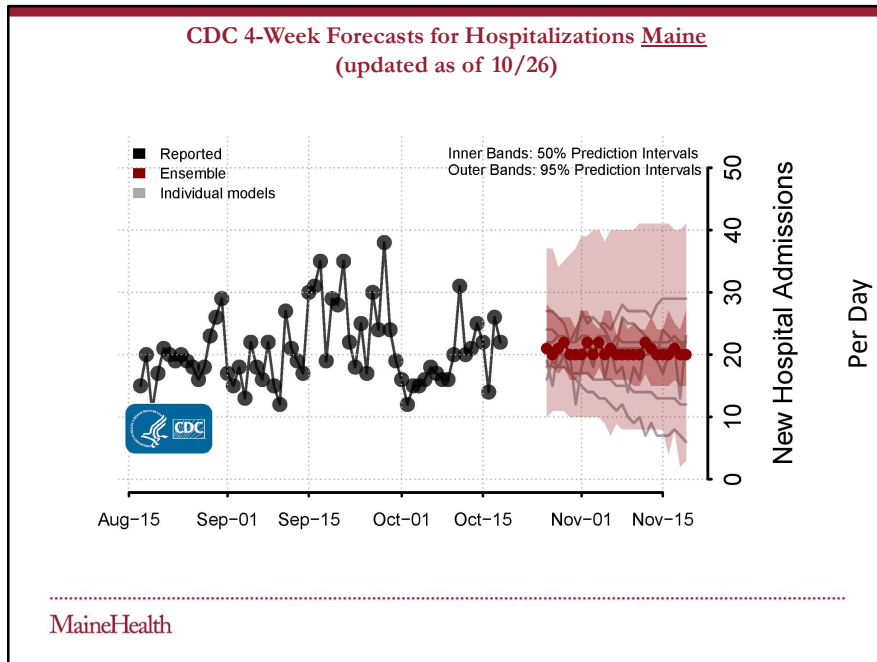
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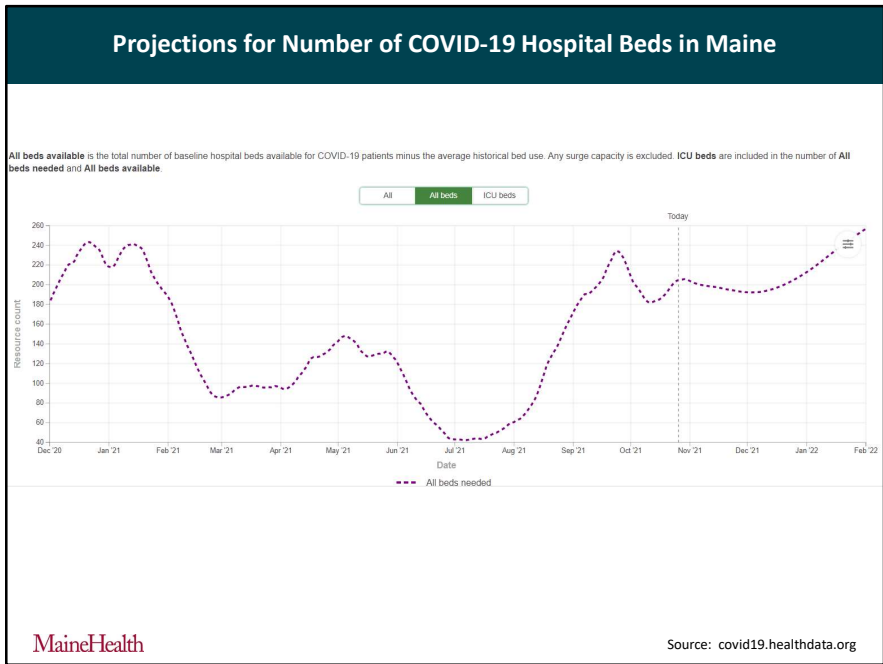


<https://www.nytimes.com/interactive/2021/us/maine-covid-cases.html>

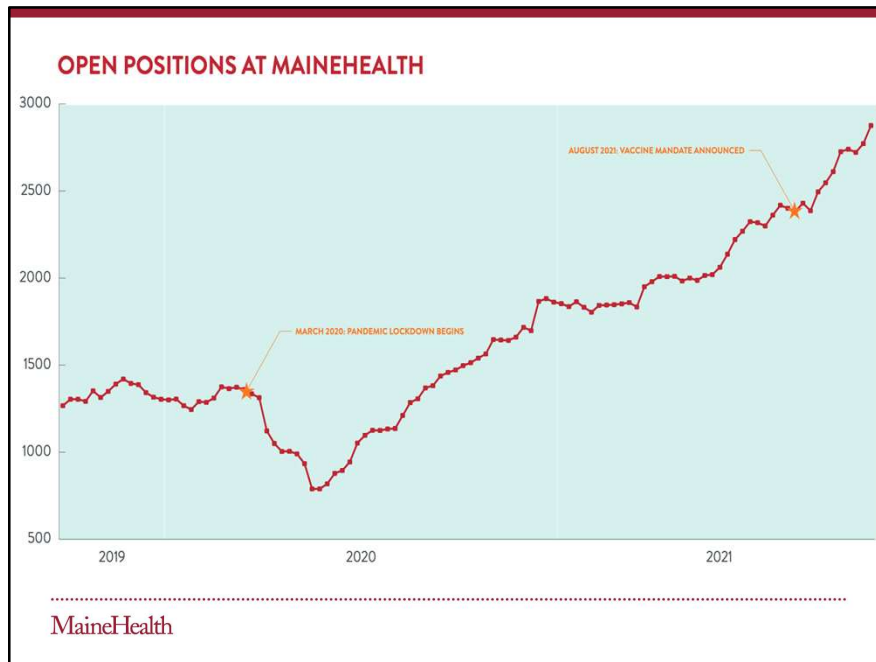


Hospitalizations: <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/hospitalizations-forecasts.html>

Deaths: <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html>



https://covid19.healthdata.org/United-States-of-America/maine?view=resource-use&tab=trend&resource=all_beds



MaineHealth: 22,000 – 23,000 employees

Reasons for chronic workforce shortage, a nationwide challenge but with stronger challenges in Maine:

Demographics.

Maine’s workforce across all sectors is especially hard hit by demographic challenges that result in a smaller proportion of people 18 - 65 in the workforce.

Oldest State. Maine is the oldest state in the nation by two measures: we have the high proportion of people 65 and older (22%, with the country at 16%); and we have the highest median age. The latter is 45, a full seven years over the national median age.

Low Birth Rate. Our pipeline is also smaller, with a longtime decline in our birth rate, specifically, a 25% decline in the last 25 years. Maine has one of the lowest birth rates in the country.

Deaths > Births. We’re one of the few states in the country with higher numbers of deaths than births, something we’ve seen every year beginning in 2011. Since statewide records are available, well over 100 years ago, the last 10 years are the only time deaths have outnumbered births in Maine, with one exception - during the 1918 influenza pandemic.

Low Immigration. Maine has had low immigration for years. For instance, 3.9% of Mainers were born in other countries, compared with 13.7% nationally. Additionally, there have been severe restrictions on the allowable number of J-1 visas the last several summers, something the hospitality industry especially relies on.

Pandemic-Related Issues

Increase Demand for Health Care.

In part because of Maine's aging population, as well as delayed care during the pandemic and because of the pandemic itself, we are experiencing an increase in demand for health care and healthcare professionals.

The 2017 Maine Department of Labor projected that nurses would be the most in-demand higher-wage job through at least 2024. In 2015, the shortage of registered nurses in Maine was 600, and this number was projected to rise to a shortage of 3,200 in 2025. However, a quick scan of the online career openings listed by the four major health systems (that include 24 hospitals) in Maine in early October indicated there were already about 1,500 registered nurse vacancies, and this did not include vacancies in Maine's other 13 hospitals, nursing homes, community health centers, and private practices. It seems as though the 3,200 shortage projected for 2025 is already well on its way.

Early Retirement. Across the country, retirements are up, due to the pandemic as well as the stock market and retirement funds doing well. According to the Washington Post in September, 3.6 million Americans have retired since the pandemic, when only one million would have normally done so.

Collective Existential Crisis. A number of articles are reporting that since the pandemic, many are having second thoughts about their chosen career, and leaving them. For instance, some are trading office jobs for farming. Others are moving from cities to rural communities. Some have decided that working from home with greater flexibility provides them a better work-life balance. According to the Washington Post last month, resignations are the highest on record - up 13% over pre-pandemic levels. There is also a boost in entrepreneurship that has resulted in the largest jump in years in new business applications.

Between the multiple crises of the pandemic, climate change, racial and political strife, it seems that as a society, we're all re-thinking our priorities during a sort of collective existential crisis. And for some, that discernment means a change of jobs.

Childcare Needs. With children having to stay home due to pandemic-related school closures and a shortage of childcare staff, many with children are finding it difficult to work.

Affordable Housing. With pandemic-related increases in real estate, affordable housing is an increasing barrier.

Fear of COVID-19. Many are concerned about rejoining the workforce because of fears of contracting the infection. Some are reporting feeling relieved when vaccine mandates are implemented.

2017 Task Force on Maine's 21st Century Economy and Workforce Final Report

<https://legislature.maine.gov/doc/1984>

Tight Labor Market Returns the Upper Hand to American Workers 6/20/21

<https://www.wsj.com/articles/tight-labor-market-returns-the-upper-hand-to-american-workers-11624210501>

The Tables Have Turned and It's a Workers' Market 6/27/21

<https://www.pressherald.com/2021/06/27/the-tables-have-turned-and-its-a-workers-market/>

Maine vital records summary tables, 1900 - 2019

<https://www.maine.gov/dhhs/mecdc/public-health-systems/data-research/data/documents/pdf/vs-h1r.pdf>

Maine Department of Labor July 2021 Survey of Job Seekers

https://www.maine.gov/labor/news_events/article.shtml?id=5585547

Why American has 8.4 million unemployed when there are 10 million job openings 9/4/21

<https://www.washingtonpost.com/business/2021/09/04/ten-million-job-openings-labor-shortage/>

Maine and US data on immigration

<https://www.migrationpolicy.org/data/state-profiles/state/demographics/ME/US/>

Increase in Disease Burden 10 Years Post Katrina

From pre-Katrina to 10-year post Katrina, prevalence or incidence changes:

- Diabetes mellitus increased by about 30%, from 31% to 40%;
- Hyperlipidemia increased by 31%, from 45% to 59%;
- Coronary artery disease prevalence increased by 32%, from 36% to 48%;
- Drug use increased by 51%, from 10% to 15%;
- Smoking increased by 56%, from 34% to 54%;
- Psychiatric illness increased by over 100%, from 7% to 15%;
- Medication non-adherence increased by over 100%, from 7% to 15%;
- Lack of employment increased by over 100%, from 7% to 16%; and
- Acute myocardial infarctions incidence increased 300%, from 0.7% to 2.8%.

MaineHealth

<https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/article/abs/incidence-risk-factors-and-chronobiology-of-acute-myocardial-infarction-ten-years-after-hurricane-katrina/27A64DC81CF4B1A131C3E8157E5FB06C>

Surveillance Overview 10/29/21

Globally: Extremely wide variation – hot spots across the globe. Some having a 2nd surge with Delta, which is causing symptoms more like a bad cold (headache, sore throat, runny nose, fever), but is 225% more contagious, causing more severe illness (2x the hospitalization rate from UK and Danish studies), and results in higher vaccine breakthroughs, though vaccines protective against severe disease/hospitalizations.

Influenza: Type A H3N2 (some H1N1, Type B) being detected in parts of Asia, > fall '20, still lower than usual. Some states showing moderate levels.

US:

- 7-day Average of Daily Case Rate= 22/100K as of 10/25. Cases decreased by 19% over past 14 days.
- Alaska has highest case rate (99/100k); Maine's rate is 34/100k and NH's rate is 19/100k- as of 10/27.
- Delta variant is the dominant strain in the U.S. (estimated 99% of cases)

New England: Northeast regional case rate steady at 21/100K, rate lower than Midwest & West regions.

ME (as of 10/27):

- 462 = 7-day average of daily new cases
- Case rate among fully vaccinated= 840/100,000, vs. 6,424/100,000 among unvaccinated (5/8/21 – 10/21/21)
- 5.2% = PCR test positivity rate
- 6.6 = 7-day average of new hospitalizations per day
- 206 hospitalized – up from 153 on 10/7
- 2.86 = 7-day average of deaths in Maine; down from a month ago (7-day average of 6.0 deaths on 9/24).

We continue to see high incidence from rural counties with low vaccination rates.

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MaineHealth

U.S. and New England data from NYT-

<https://www.nytimes.com/interactive/2021/us/covid-cases.html>

Maine transmission statement- examining trends of 14-day case and positivity rates.

UK Data:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1002580/Vaccine_surveillance_report_-_week_28.pdf

Influenza: <https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update>