

Illustrative and subject to change

Because of the fluid nature of this epidemic and states' varying responses and mandates, this report is a point in time, illustrative exercise.

COVID-19 Modeling Update

Presentation to Public Employees' Benefits Program Board – for conversational discussion
September 24, 2020

COVID-19 Overall Updates

Statistics

Approaching 7M confirmed cases in the US

Over 200k Fatalities; Over 1k per day

- 80% ages 65+ (as of early Aug)
- 15% ages 50-64 (as of early Aug)

Significant Socioeconomic Disparities in Infection Rates

- 32% of Cases Hispanic
- 20% of Cases African American

Actual cases likely 5-10x+ higher than serology data

700-900k Viral tests per day, still facing logistical challenges

Good News

Fatality Rate: 0.5-1.0%

- <0.2% Ages 0-50
- ~0.5% 50-60
- ~1.5-2.0% 60-75
- >5% over 75

No reinfections yet

Risk Awareness / Masking

Rapid Vaccine Progress

- Multiple Vaccines in Phase III trials
- Expected Prelim Approvals toward end of 2020/early 2021

Progress on Therapeutics/Reduction in Mortality

Ongoing Concerns

Ongoing spread and secondary surges

Impact of Fall/Winter season and School Re-openings

Long-term complications emerging

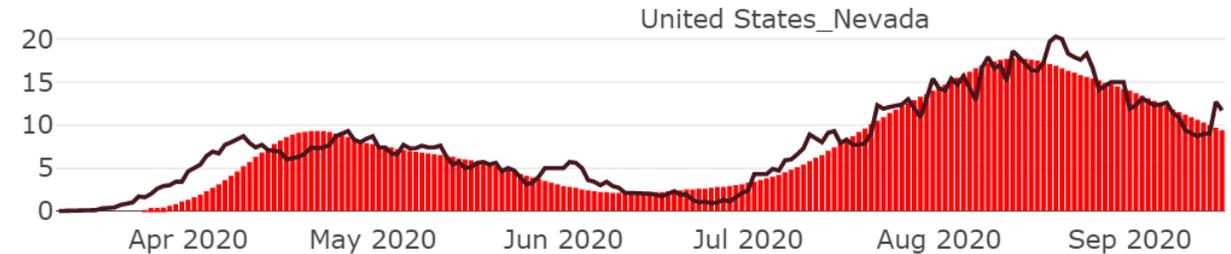
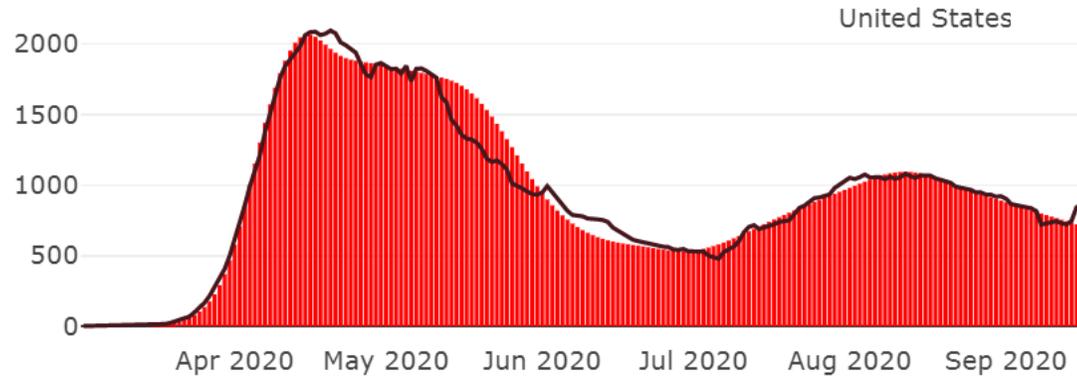
Immunization Timing and Logistics

Provider Economic Impact

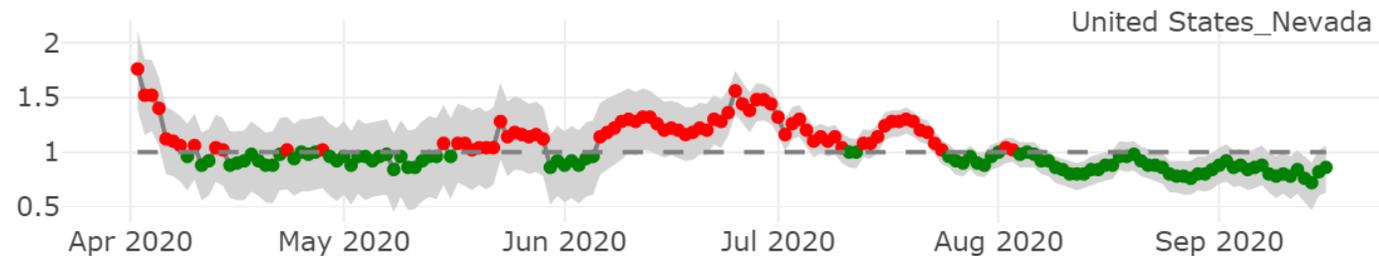
Ongoing data challenges in US

COVID-19: Shape of the Pandemic

The black line represents 7 day moving average of actual deaths reported, the red bars reflect the fatalities fitted by the Aon Employee Impact Model



The chart below shows the live transmission rates R_t



Impact of COVID-19 on Medical Costs Nationally

Medical Claims increased in July but remain below expected levels

	2H Mar	Apr	May	Jun
IP Admits	-25%	-30%	-15%	-10%
IP Surgery	-40%	-50%	-15%	-5%
OP Surgery	-55%	-75%	-30%	-10%
ER Visits	-30%	-50%	-35%	-20%
Office Visits	-45%	-55%	-30%	-10%

*Average net hospital utilization statistics from Tenet and HCA earnings and investor calls
Strata Decision hospital reporting and Commonwealth Fund office visits reporting
Aon client experience*

PEBP's Experience: Actual Incurred Claims over Expected

- PEBPs Pharmacy and Dental Actual to Expected Claim Payments have been similar by month to Aon's book of business experience
- The Medical side didn't see as large of a claim drop in April and May as the rest of the benchmark

	PEBP Incurred Claims Actual / Expected			Aon Book of Business Actual / Expected		
Incurred Month Paid through July	Medical	Rx	Dental	Medical	Rx	Dental
March	95%	114%	66%	84%	110%	75%
April	73%	107%	18%	60%	98%	20%
May	96%	95%	62%	76%	92%	80%
June	116%	106%	97%	98%	100%	105%
July	103%	97%	106%			

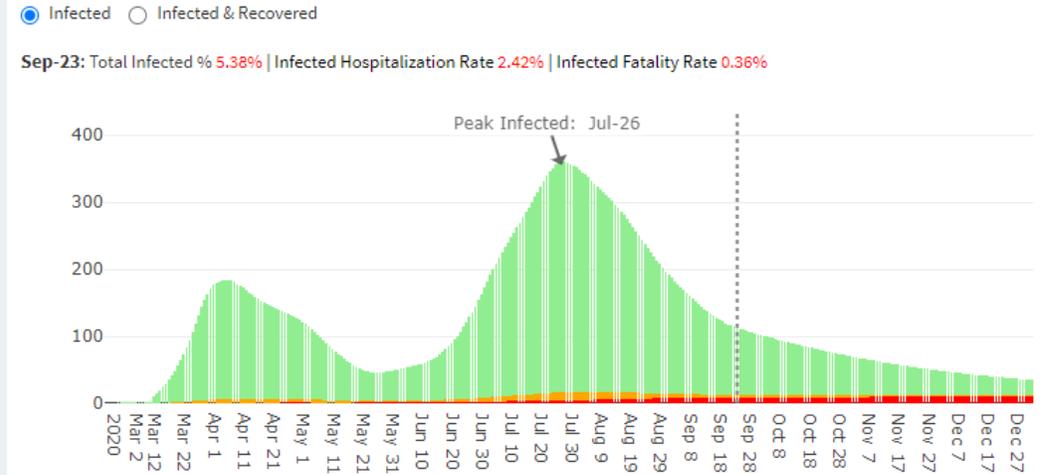
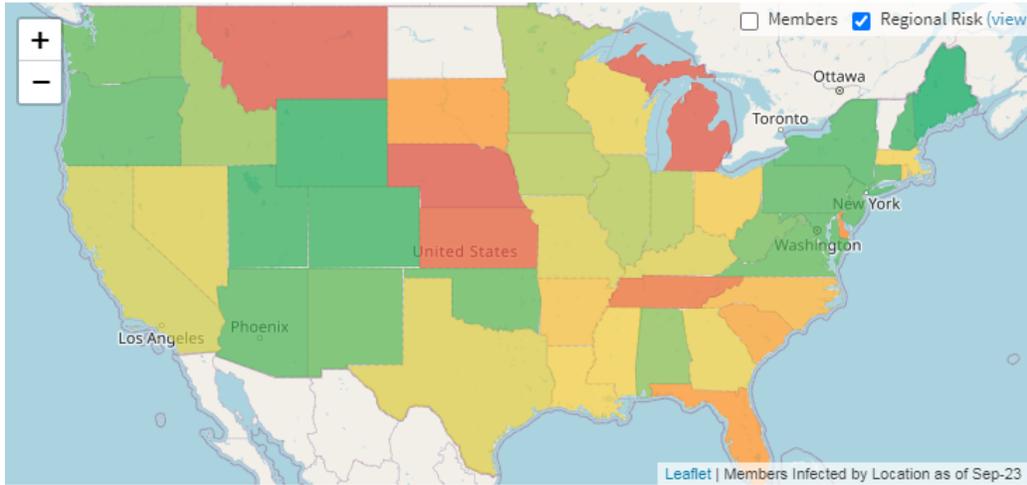
- July (and to some extent June) is still very immature, the completion factors being applied may not prove to be in line with actual runout experience seen in the days of COVID

Self-Funded Impact as of September 23rd

Claim costs peak in Q1 of PY21, as COVID-19 cases peaked on July 26th

Includes enrollees in HealthScope CDHP and EPO

Illustrative – to aid in discussion



MEMBER COUNT :	SUSCEPTIBLE 44,854	MILD (80% undetected/20% detected) 100 INFECTED 2,379 RECOVERED	HOSPITALIZED + CRITICAL 4 INFECTED 58 RECOVERED	DEATHS 9	TOTAL 47,404
MEDICAL CLAIMS COST : <i>(excludes non-enrolled)</i>	\$637K (\$50-\$150 per testing)	\$744K (\$0-\$1,500 per case)	\$2.7M (\$20,000-\$80,000 per case)	The medical claims cost and work days lost for cases resulting in deaths is included with the HOSPITALIZED + CRITICAL cases.	\$4.1M (\$86 per enrolled member)
WORK DAYS LOST :	2,719	6,925	1,437		11,082

Disclaimer: The data contained in the COVID-19 Employee Impact Model generates future forecasts derived from historical information. The site relies on publicly-available data from multiple sources, which are updated frequently, and which may not always agree with each other. The use of sources does not constitute or imply endorsement of the organizations or sources that provided the data. The model results are highly dependent upon a number of factors outside of Aon's control. As such, Aon disclaims any and all representations and warranties with respect to the site, including accuracy and fitness for use.

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COVID-19: Self-Funded Medical Impact as of 12/31/20

Net impact of COVID-19 is most likely savings, but depends on the level of COVID-19 claims transmission and the level of claims suppression within PEBP's population

Illustrative – to aid in discussion

	Claims "Saved"/ Suppressed	COVID \$s Transmission $R_t = 0.98$	Total Cost Impact
Low	(\$3.4M)	\$4.7M	\$1.3M
Medium	(\$6.4M)	\$4.7M	(\$1.6M)
High	(\$12.1M)	\$4.7M	(\$7.4M)

- Estimates of COVID-19 transmission rates and ongoing claims suppression are associated with large uncertainty
- Claims suppression assumes:
 - Low: Total claims costs return to normal and bounce back above normal over the remaining months
 - Medium: Total claims costs return to normal and remain slightly elevated for the remaining months
 - High: Total claims costs remain slightly suppressed for remainder of the year
- Costs based on August 31, 2020 rejections

COVID-19: Self-Funded Medical Impact --- Medium Scenario

Under this scenario, net impact is estimated to save PEBP \$1.6M in calendar year 2020

Because PEBPs financial year ends in the middle of 2020, the majority of the savings (\$4.1M) was “booked” in PY20, not in PY21

Illustrative – for discussion

	PY20 and PY21 (in Millions)				Total
	Q3 PY20	Q4 PY20	Q1 PY21	Q2 PY21	
COVID-19 Claims	\$0.4	\$1.2	\$2.6	\$0.5	\$4.7
Claims Suppression	(\$1.3)	(\$4.3)	(\$1.3)	\$0.6	(\$6.4)
Net Impact	(\$0.9)	(\$3.2)	\$1.3	\$1.2	(\$1.6)



Dental has added an additional \$2.5M of surplus thus far in CY20

- COVID-19 estimated increase in claims of \$4.7M or 1.9% in CY2020
- Suppression of non-COVID-19 claims estimated to save 2.6% in CY2020

*COVID-19 claims estimate based on PEBP's demographics and geographic distribution
 Claims suppression assumptions based on feedback from national carriers as well as national data through June
 Actual results may vary*

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- **What remains unknown/volatile:**

- Length of reductions due to suspension of non-critical medical services, timing of returns and their size
- Health care system revenue pressures
- Impact of Federal assistance
- Potential for new drugs or vaccinations to be developed
- Timing and corresponding impact of second wave of infections, willingness of public to maintain mask or “safer-at-home” mandates etc.