

# HHP/HPH COVID-19 Updates Webinar Series

Monday, June 1, 2020

5:00pm – 6:30pm

# Disclaimer:

- The following is intended as information resource only for HHP/HPH providers, clinicians, administrative and clinical leaders.
- Specific areas may not pertain directly to your clinical practice area and/or may not be applicable to your practice based on your existing workflows, infrastructure, software (e.g. EHR), and communications processes.

# Webinar Details

- You have been automatically muted.  
Do not unmute yourself.
- You will be able to submit questions via the Live Event Q&A section.
  - Due to time constraints, any unanswered questions will be addressed this week and emailed to everyone via [Info@hawaiihealthpartners.org](mailto:Info@hawaiihealthpartners.org)
- A recording of the meeting will be available tomorrow on the HHP website.

# How to Claim CME Credit

## 1. Step 1: Confirm your attendance

- You should have completed a survey before joining today's live webinar.

## 2. Step 2: HPH CME team will email you instructions

- Complete and submit evaluation survey that will be emailed to you within one week of the offering.
- Your CE certificate will be immediately available to you upon completion of your evaluation.

# CME Accreditation Statement

- In support of improving patient care, Hawai'i Pacific Health is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.
- Hawai'i Pacific Health designates this webinar activity for a maximum of 1.5 AMA PRA Category 1 Credit (s) <sup>TM</sup> for physicians. This activity is assigned 1.5 contact hour for attendance at the entire CE session.



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INTERPROFESSIONAL CONTINUING EDUCATION

# COVID-19 & HPH Clinical Updates



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# Hawai'i Data Collaborative Data as of 06/01/20

## Hawaii COVID-19 Data: Cumulative Totals

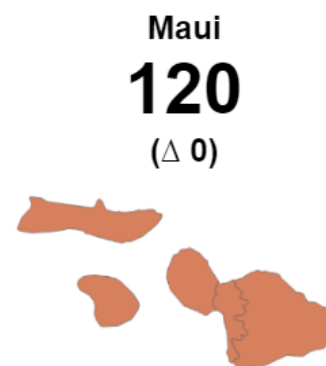
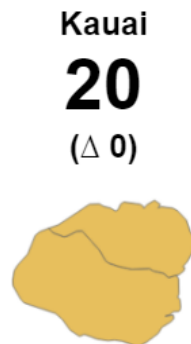
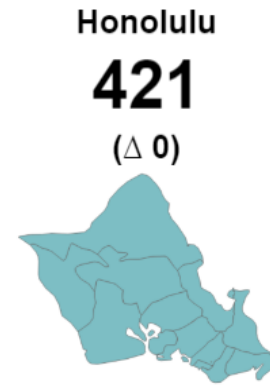
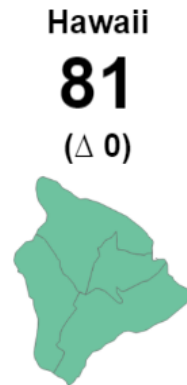
(Values in parentheses refer to change from previous day)

**State**  
**652**  
(Δ 0)

● County Pending: 0

● HI residents diagnosed elsewhere: 10

**Updated:**  
**06/01/20**



**Hospitalizations**  
**83**  
(Δ 0)

**Recovered**  
**608**  
(Δ 0)

**Deaths**  
**17**  
(Δ 0)

 Last updated June 1

<https://www.hawaiidata.org/covid19>

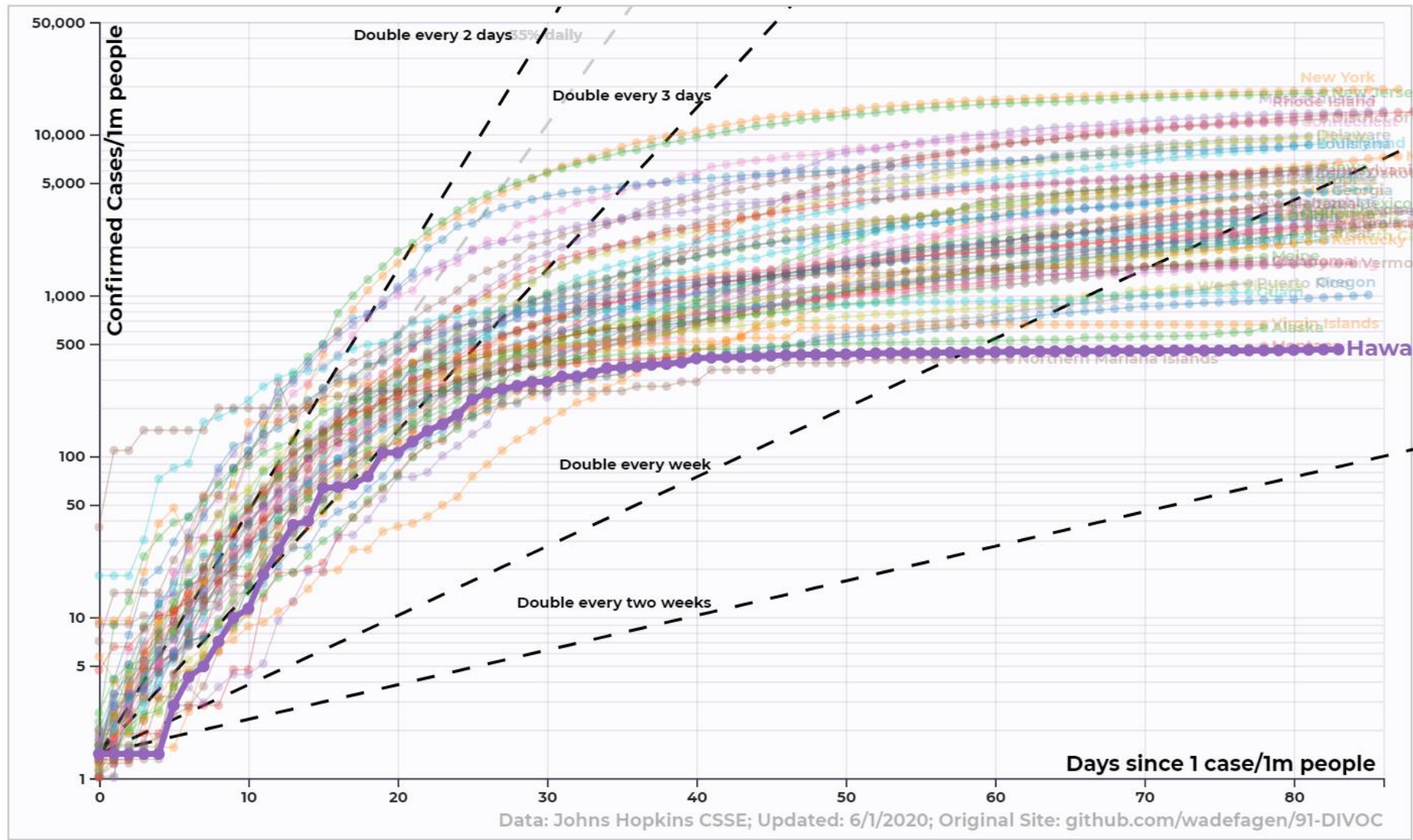
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# Confirmed Cases per One Million People – Hawai'i

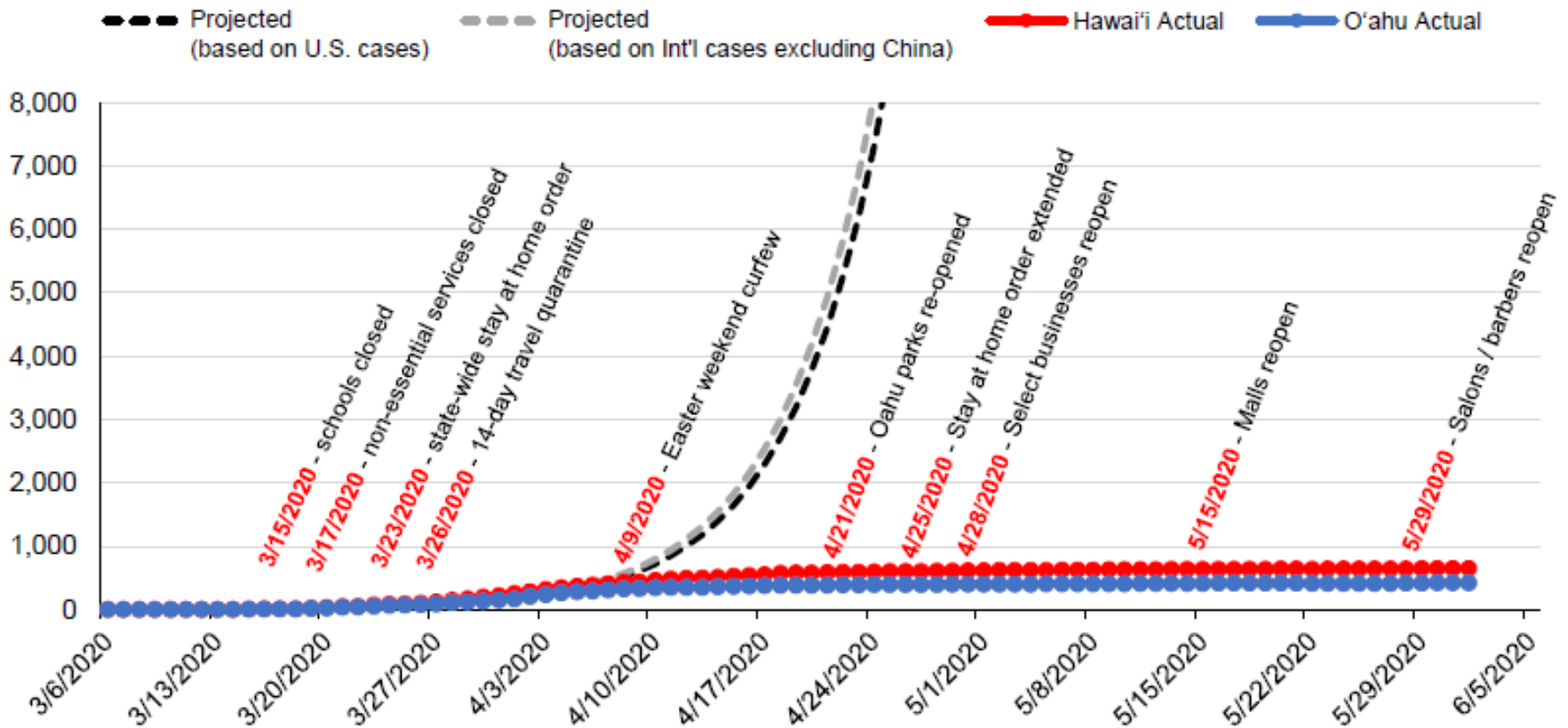


<https://www.hawaiidata.org/covid19>

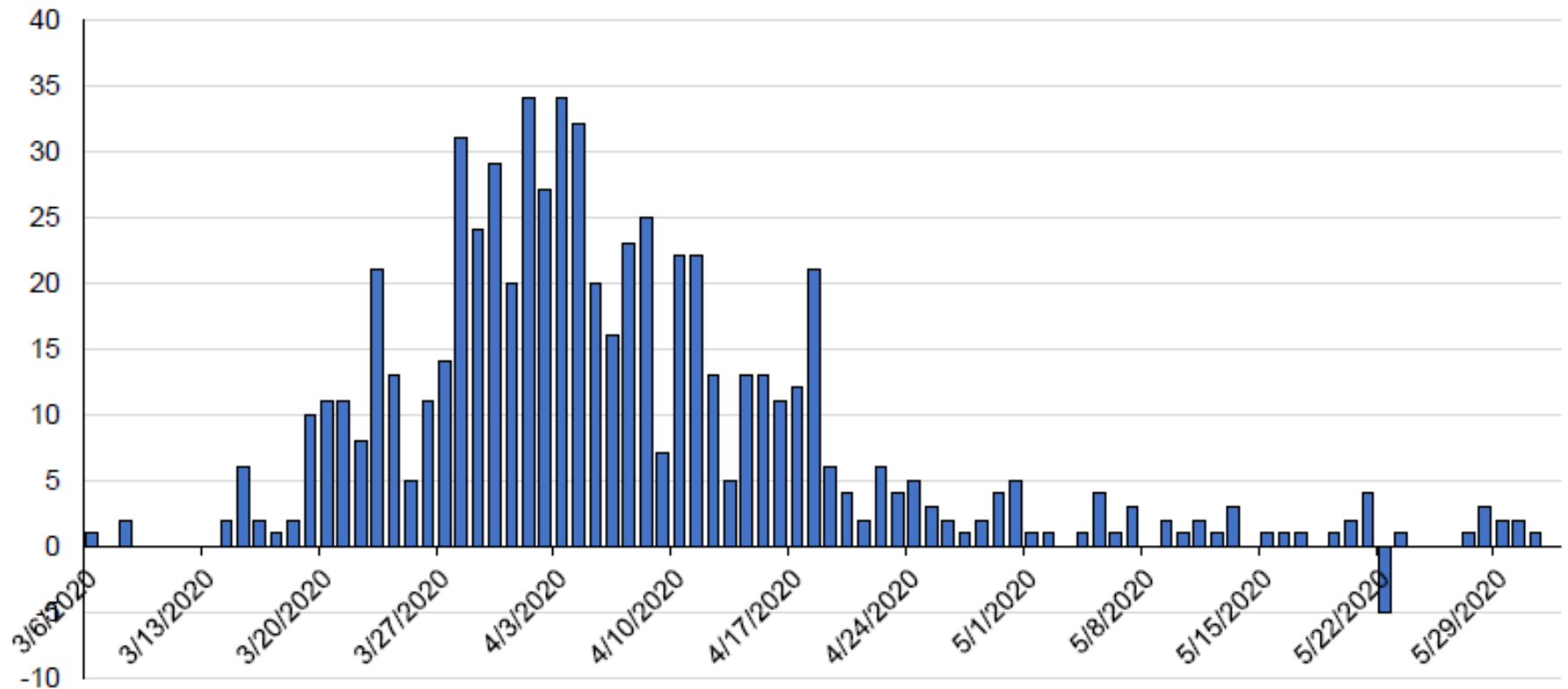
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## Projected and Actual COVID-19 Cases in Hawaii (As of 6/1/2020)



## Hawaii COVID-19 New Cases by Day (As of 6/1/2020)



# R<sub>t</sub> Covid-19

These are up-to-date values for R<sub>t</sub>, a key measure of how fast the virus is growing. It's the average number of people who become infected by an infectious person. If R<sub>t</sub> is above 1.0, the virus will spread quickly. When R<sub>t</sub> is below 1.0, the virus will stop spreading. [Learn More](#).

5/20 model update: some states' R<sub>t</sub> have changed because we improved our testing volume adjustments.

Data Last Updated: 6/1 at 7:09AM

Latest

Last Week

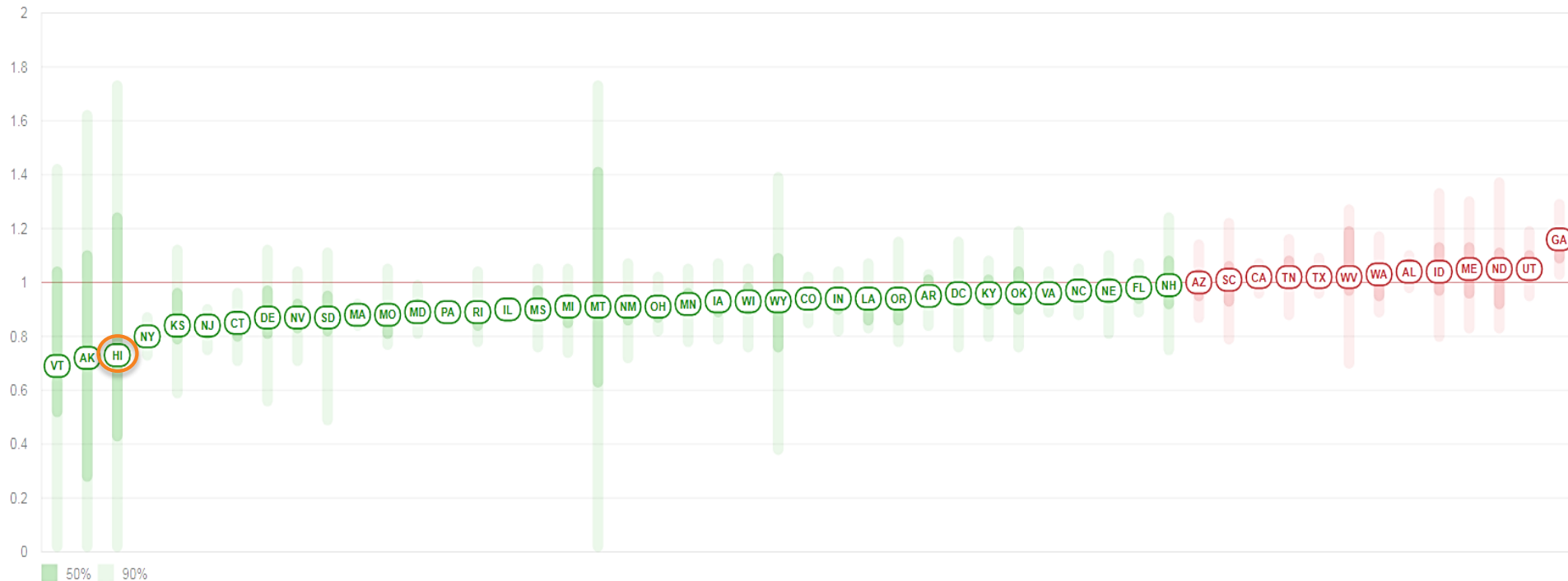
2 Weeks Ago

4 Weeks Ago

6 Weeks Ago

*Local R<sub>t</sub> matters more than National R<sub>t</sub>  
How patchy is it?  
What policies work?  
Search for modifiable risk factors?*

*Use confidence intervals  
(i.e., if upper end of the 90% CI is below 1, good to go with reopening)  
But don't disregard tails (improbable events)*

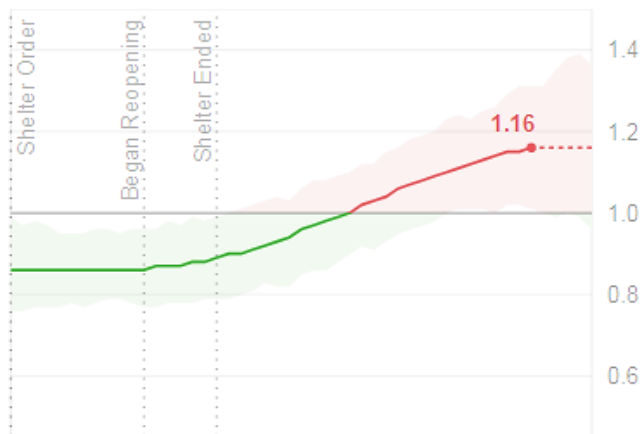


<https://rt.live/> accessed 06.01.2020

## Georgia

[show new cases](#)

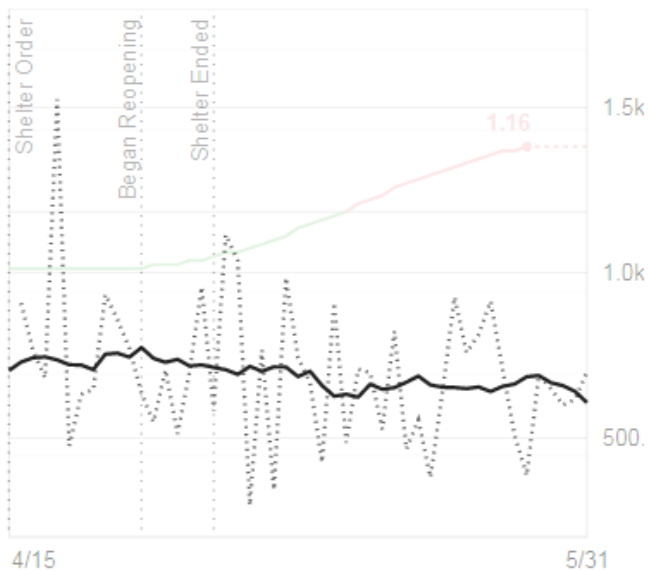
Share



## Georgia

[hide new cases](#)

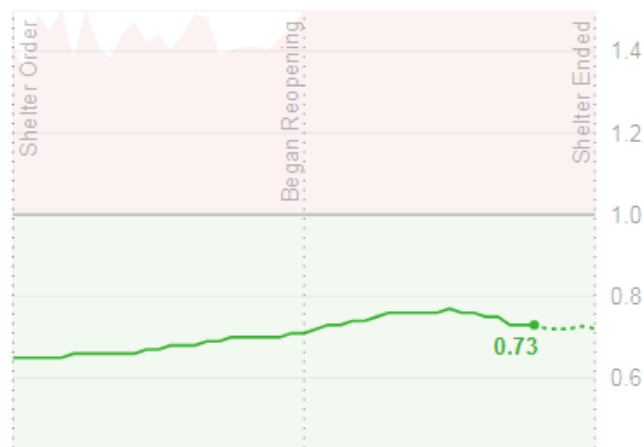
Share



## Hawaii

[show new cases](#)

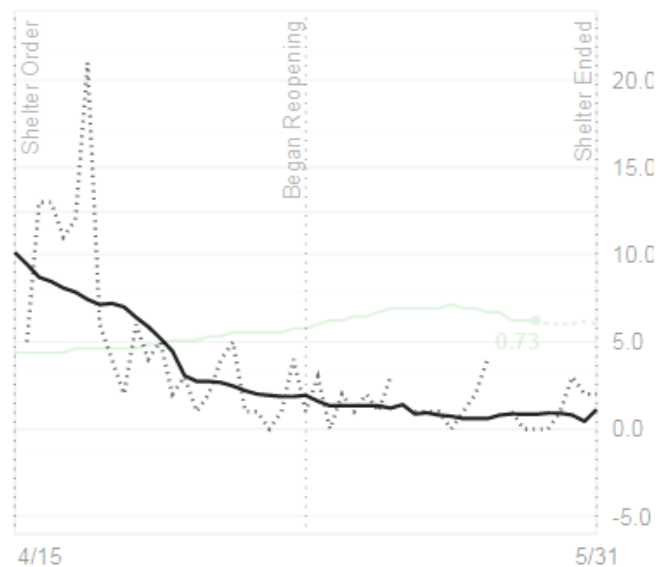
Share



## Hawaii

[hide new cases](#)

Share



<https://rt.live/> accessed 06.01.2020

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As of 06/01/20	Total Census	ICU beds occupied	# Ventilators in use	# New Admissions w/ COVID- 19 screen	# New Admissions w/ positive COVID-19	# Patients currently hospitalized w/ suspect or confirmed COVID-19	# Patients currently on a ventilator w/ suspect or confirmed COVID-19
KMCWC	137	AICU: 0 NICU: 68 PICU: 8	AICU: 0 NICU: 22 PICU: 2 Wilcox: 0	0	0	0	0
PMMC	67	6	6	0	0	0	0
SMC	90	9	6	2	0	2	0
WMC	49	4	1	0	0	0	0

# HPH Site Specimen Collection Thru 06/01/20

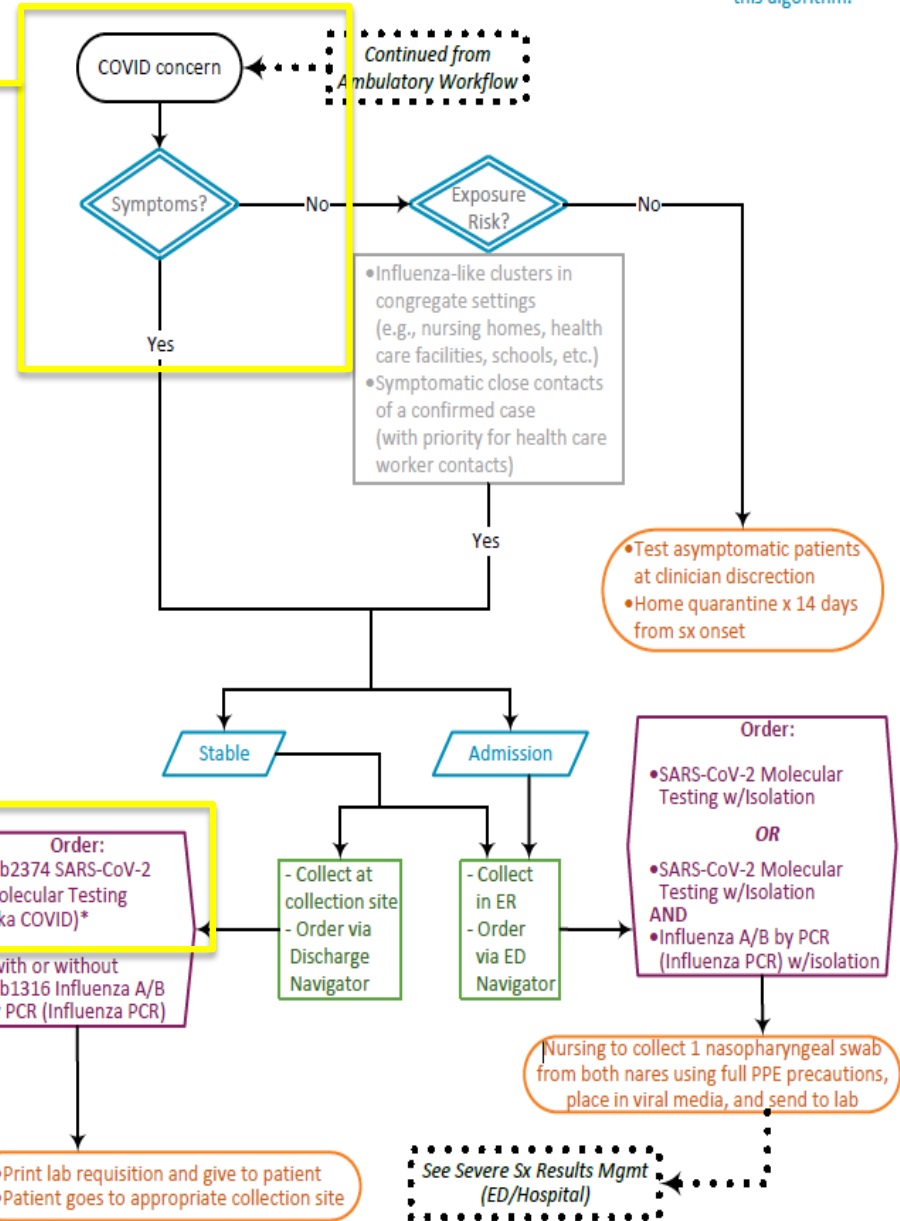
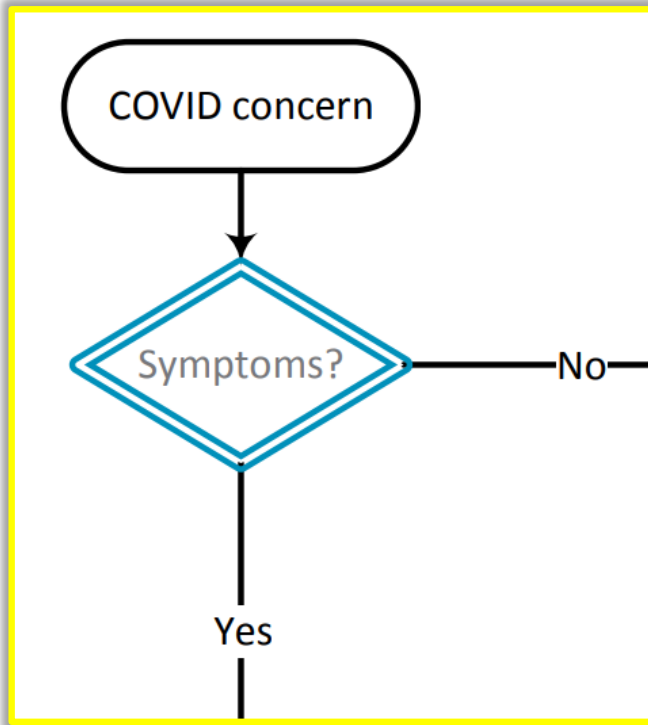
		Totals (New from 05/18/20)		
Location		Ordered	Pending	Positive
Kapiolani Medical Center	Inpatient	288 (52)	1	1 (0)
Kapiolani Medical Center PSC	Outpatient	1,628 (376)	7	14 (0)
Pali Momi Medical Center	Inpatient	703 (131)	7	6 (0)
Pali Momi PSCs	Outpatient	2,992 (654)	0	52 (1)
Straub Clinic and Hospital	Inpatient	647 (155)	3	2 (0)
Straub Clinics	Outpatient	2,204 (473)	3	28 (1)
Wilcox Memorial Hospital	Inpatient	268 (44)	2	3 (0)
Wilcox Clinics	Outpatient	1,575 (286)	18	13 (0)
HPH Total		10,305 (2,171)	41	119 (1)

Inpatient = ED and hospitalized (currently all “inpatient” positives are from ED, none are hospitalized)

Outpatient = clinics and specimen collection sites

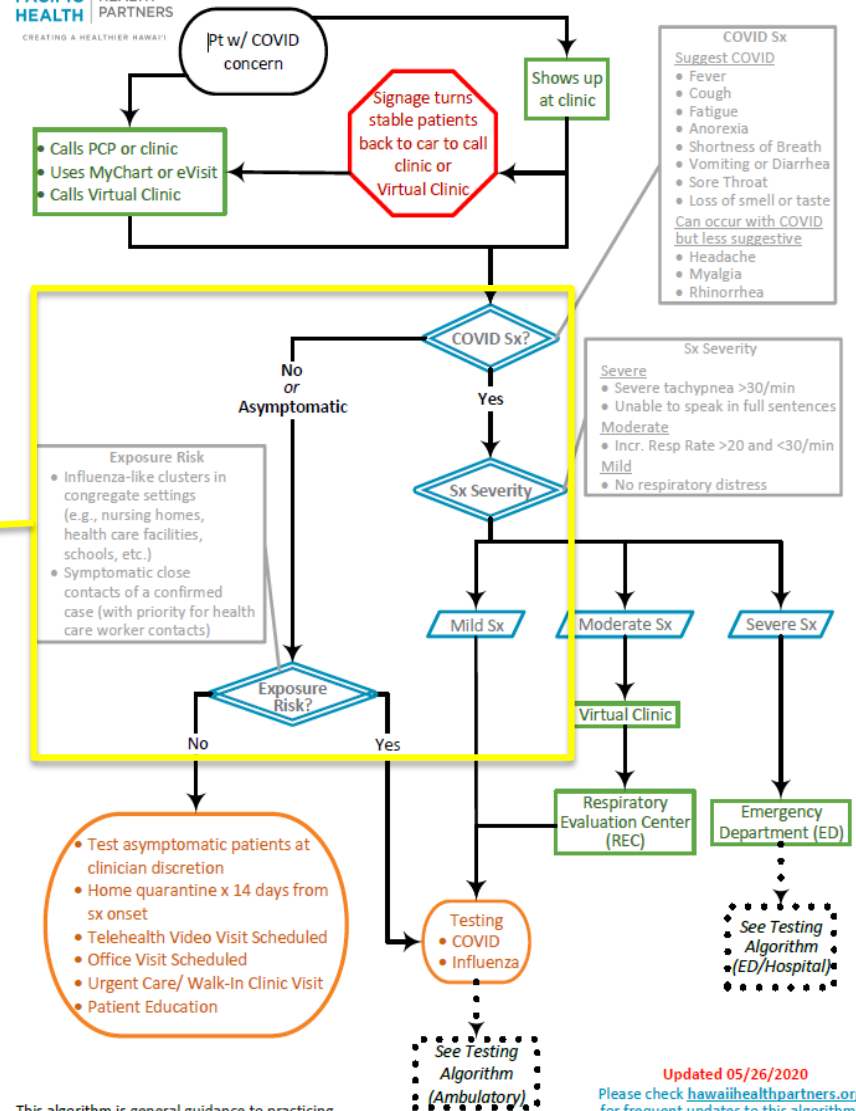
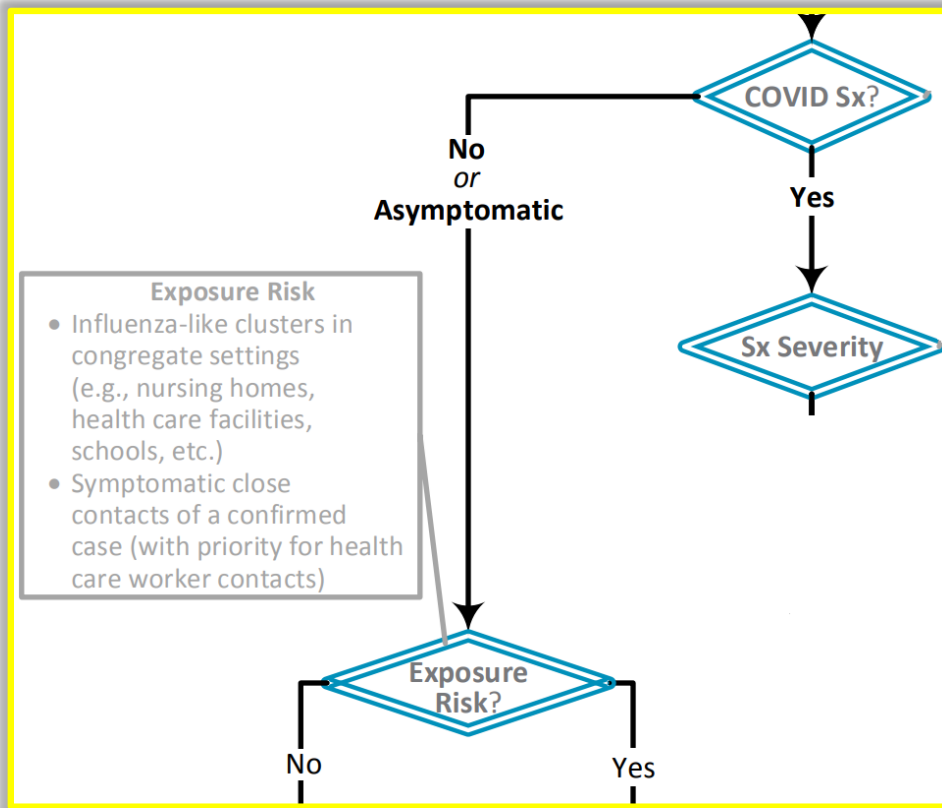
## COVID-19 Testing Algorithm (ED/Hospital)

Updated 05/26/2020  
Please check  
[hawaiihealthpartners.org](http://hawaiihealthpartners.org)  
for frequent updates to  
this algorithm.



**Order:**

- Lab2374 SARS-CoV-2 Molecular Testing (aka COVID)\*



This algorithm is general guidance to practicing clinicians, may change with time, and is not intended to supersede the medical judgment of the clinician.

Updated 05/26/2020  
Please check [hawaiihealthpartners.org](https://hawaiihealthpartners.org) for frequent updates to this algorithm.  
Please send in your questions to: [Covid19Bulletin@hawaiiapacifichealth.org](mailto:Covid19Bulletin@hawaiiapacifichealth.org)

# Nosocomial Outbreak of COVID-19

- March 9 to April 30, 2020
- Sr. Augustine's Hospital, 469 beds, 88 ICU, staff of ~2000
- Durban, South Africa
- Feb 7<sup>th</sup> readiness scores were good (91%)
  - 80% of nursing and other staff trained on COVID-19 and PPE, but only 42% of contract staff, and no doctors
- Virtually no COVID-19 in area during that time
  - 1<sup>st</sup> known case in S Africa was March 5<sup>th</sup> returning from Italy
- Beginning with 1 to 119 confirmed by April 30<sup>th</sup>.
  - 135 suspected, 80 staff confirmed infected, 15 deaths
- Clear identification of Patient 0 and DNA sequence of virus from infected patients
  - Chased down 1892 contacts traced, 191 tested, 7 positive
  - HCW: 1711 tested, 80 positive, mostly from affected wards but none were from the COVID-19 ICU

R. Lessells, Y. Moosa, T. de Oliveira, 2020, May 15. Report into a nosocomial outbreak of coronavirus disease 2019 (COVID-19) at Netcare St. Augustine's Hospital. University of KwaZulu-Natal and the KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP).

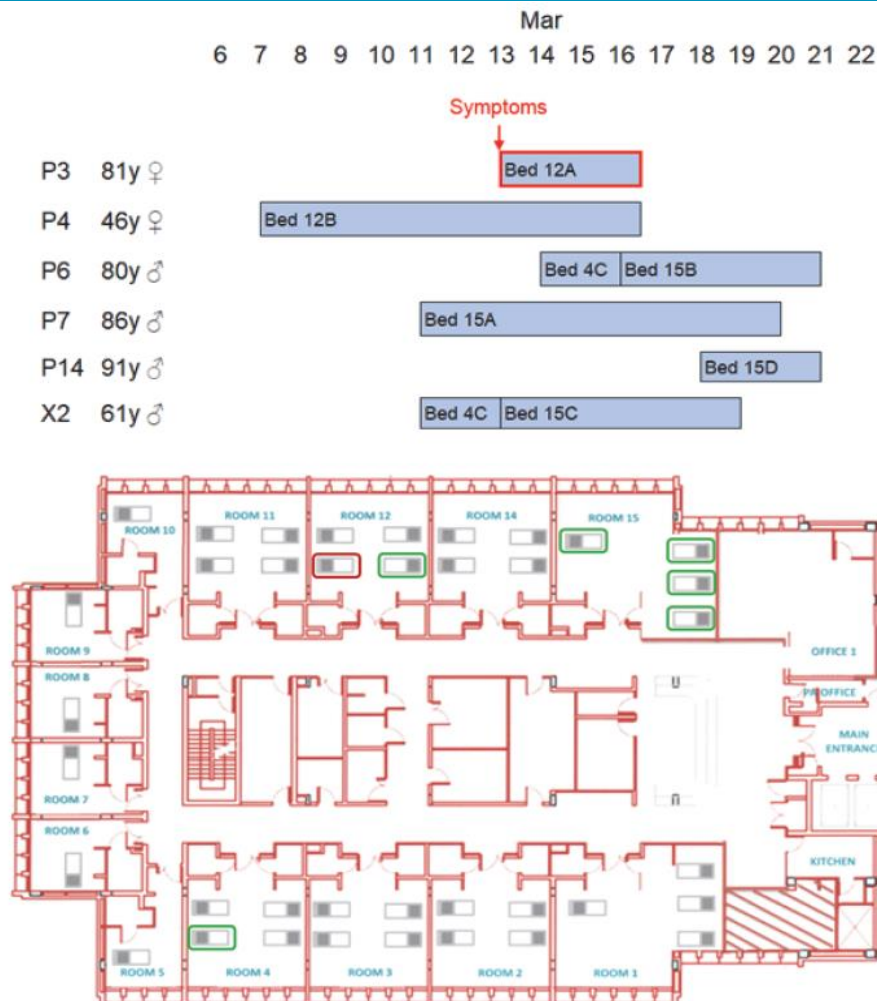


#### Summary of events 9 March

1. P1 attends ED at 1745 and is screened at station outside entrance – reports recent history of travel and respiratory symptoms
2. P1 diverted into isolation/triage room through side entrance
3. Five staff members interact with P1 (doctor, 2 x nurses, Ampath nurse, radiographer)
4. DrA assesses and triages P1 wearing appropriate PPE in a single clinical interaction
5. Nurse collects swabs from P1; radiographer performs portable chest; Ampath nurse enters room for dispute around payment
6. P3 arrives at ED by ambulance at 1932 with suspected stroke – taken to resus bay (bed opposite entrance to isolation/triage room)
7. DrA assesses P3 (having seen other patients in between P1 and P3)
8. P3 taken to X-ray department for CT head scan
9. P1 leaves triage area and ED at 2100
10. P3 transferred from ED to cardiac ICU at 2105
11. Terminal cleaning (3 step) of triage room followed by UV-C treatment same night

*Figure 6 Summary of events in emergency department, St. Augustine's Hospital, 9 March*

R. Lessells, Y. Moosa, T. de Oliveira, 2020, May 15. Report into a nosocomial outbreak of coronavirus diseases 2019 (COVID-19) at Netcare St. Augustine's Hospital. University of KwaZulu-Natal and the KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP).



*Figure 7 Specific timeline and ward layout showing infectious case and exposed individuals on medical ward 1 from 13 March onwards (red outline shows bed occupied by infectious case, green outlines show beds occupied by exposed individuals)*

R. Lessells, Y. Moosa, T. de Oliveira, 2020, May 15. Report into a nosocomial outbreak of coronavirus diseases 2019 (COVID-19) at Netcare St. Augustine's Hospital. University of KwaZulu-Natal and the KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP).

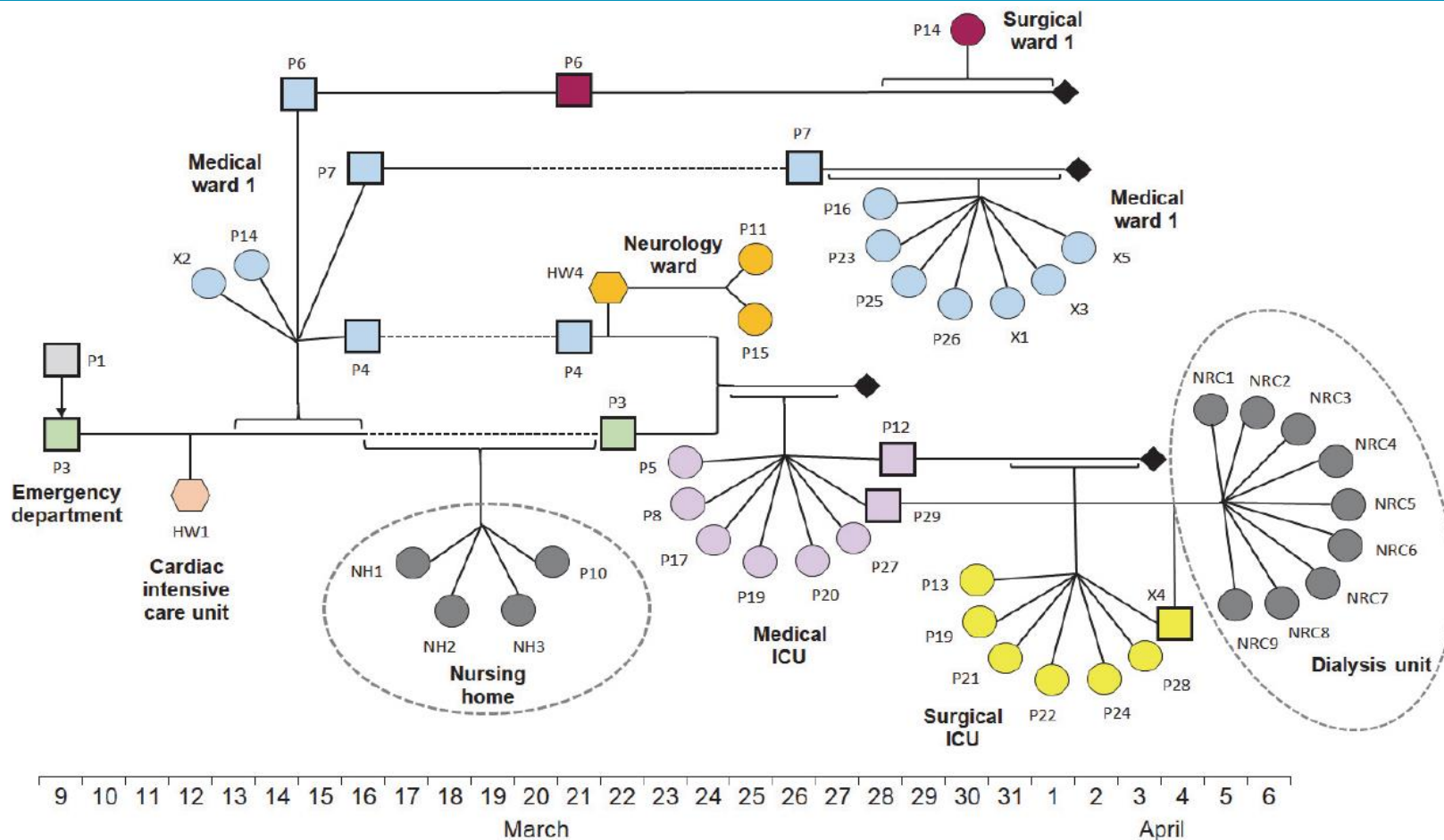


Figure shows the putative waves of transmission centred on different hospital wards and other institutions from 9 March onwards. Coloured squares represent patients that are thought to be sources of transmission; coloured circles represent patients that become infected. P19 is shown twice in medical ICU and surgical ICU as infection could have been acquired on either unit. Only two health care worker infections are shown (HW1 & HW4) as illustrative cases.

Figure 5 Hypothesis showing putative waves of COVID-19 transmission centred on different wards and showing spread to nursing home and dialysis unit

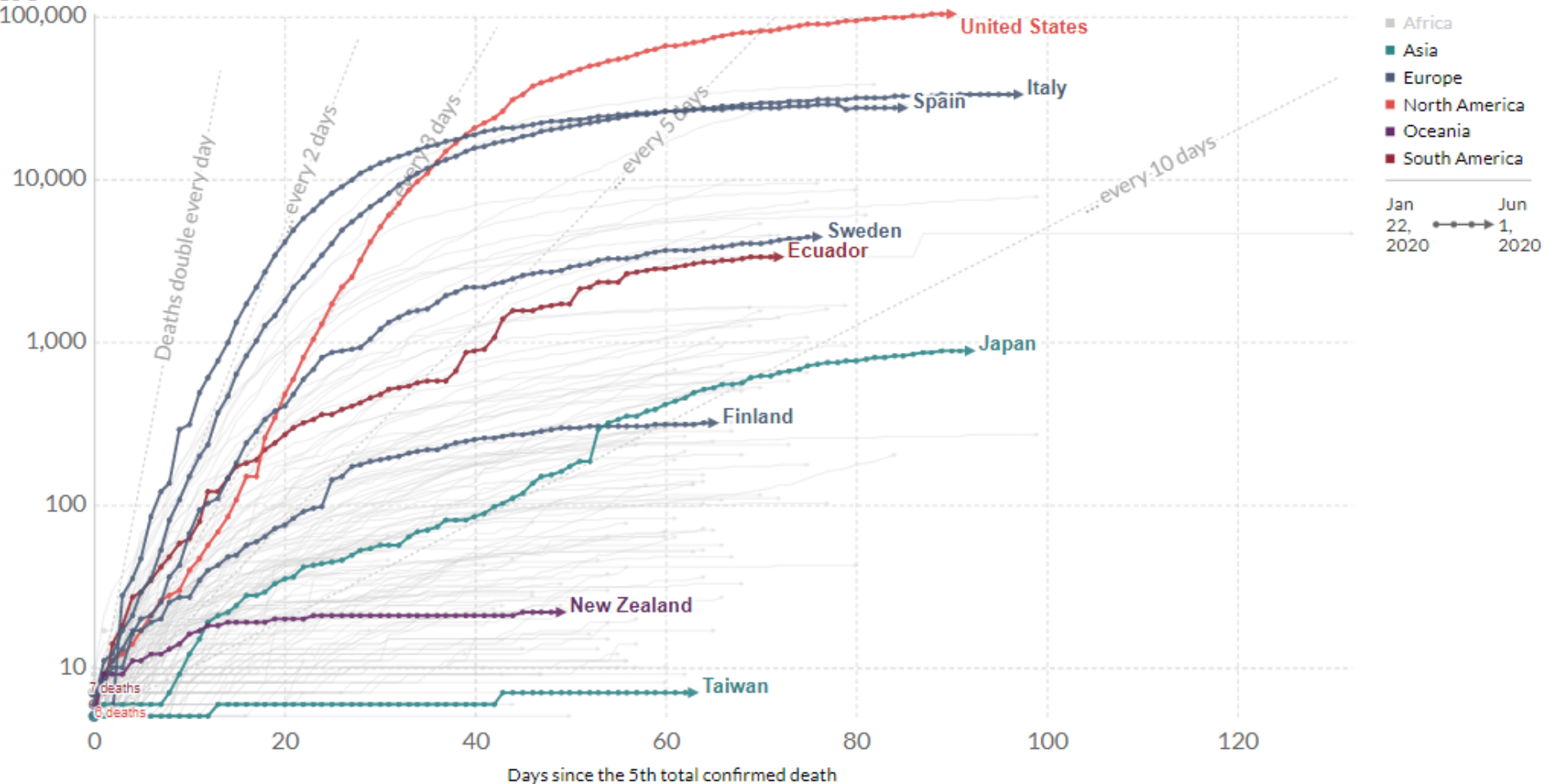
R. Lessells, Y. Moosa, T. de Oliveira, 2020, May 15. Report into a nosocomial outbreak of coronavirus disease 2019 (COVID-19) at Netcare St. Augustine's Hospital. University of KwaZulu-Natal and the KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP).

# Total confirmed COVID-19 deaths: how rapidly are they increasing?

Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.

LOG

100,000



Source: European CDC – Situation Update Worldwide – Last updated 1st June, 10:45 (London time)

OurWorldInData.org/coronavirus • CC BY

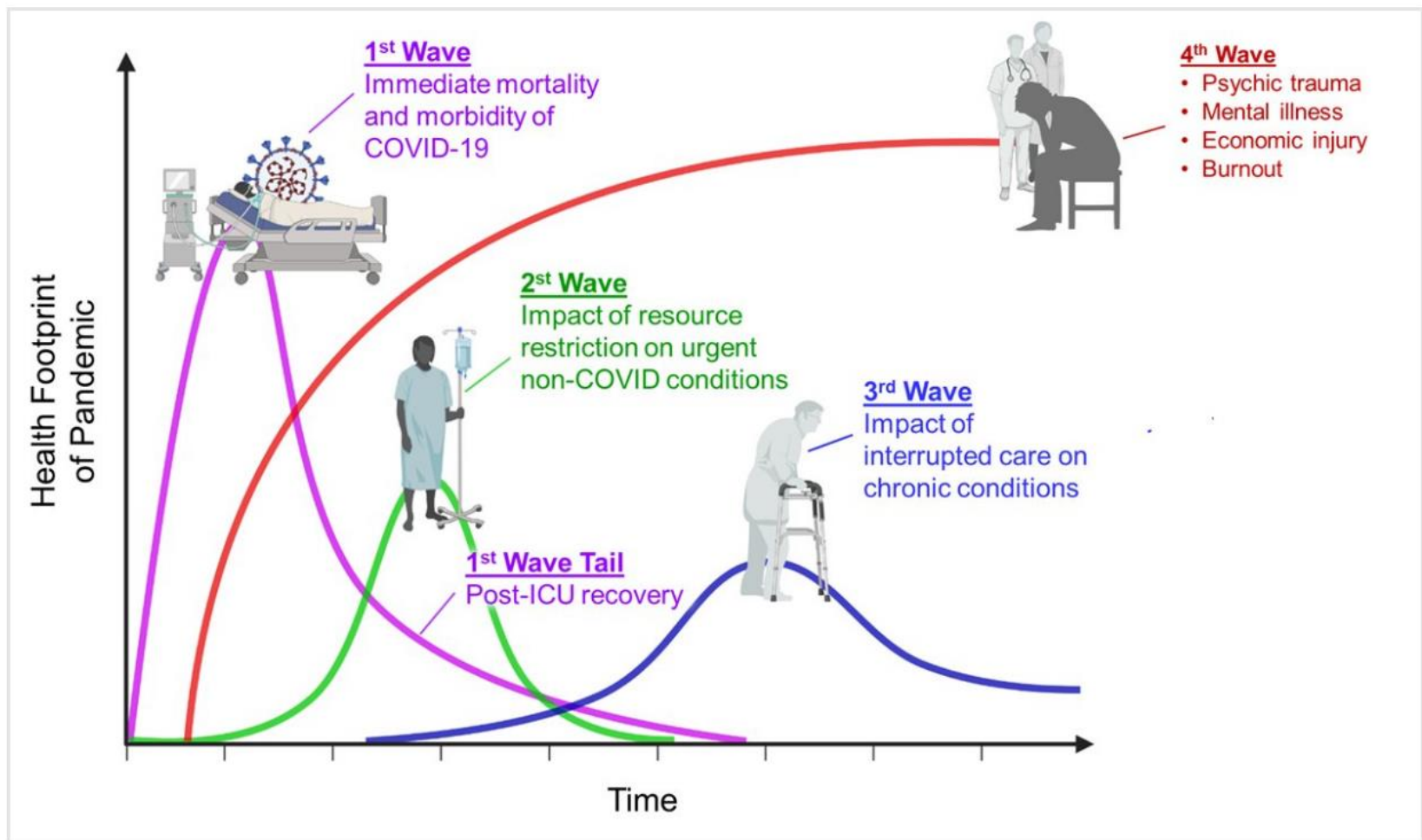
<https://ourworldindata.org/grapher/covid-confirmed-deaths-since-5th-death?country=USA+ITA+ESP+SWE+ECU+FIN+JPN+NZL+TWN>

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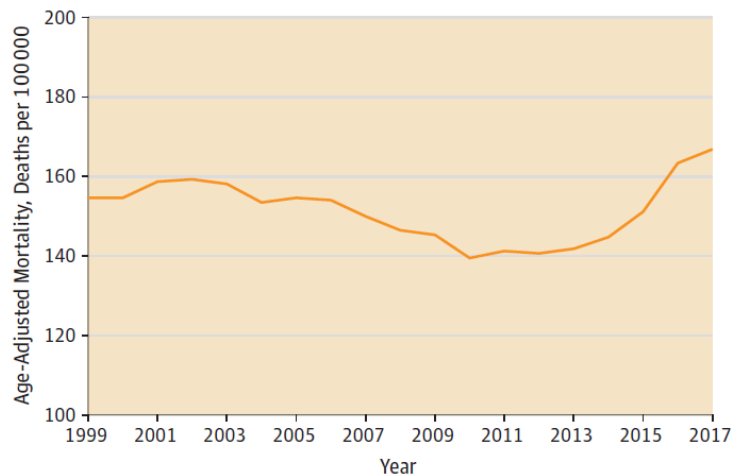
# COVID-19's 4<sup>th</sup> Wave?



Babaian, J. (2020, April 20). The Pandemic's 4<sup>th</sup> Wave. *Health care Leadership Blog (HCLDR)*.  
<https://hcldr.wordpress.com/2020/04/07/the-pandemics-4th-wave/> Illustration by Victor Tseng

# Baseline Life Expectancy/Mortality Rate

D Ages 25-44 y



HI Age-adjusted, All-Cause Mortality Rate, Ages 25-64

— Age-adjusted mortality rate (deaths/100,000)  
 ••••• 3 per. Mov. Avg. (Age-adjusted mortality rate (deaths/100,000))

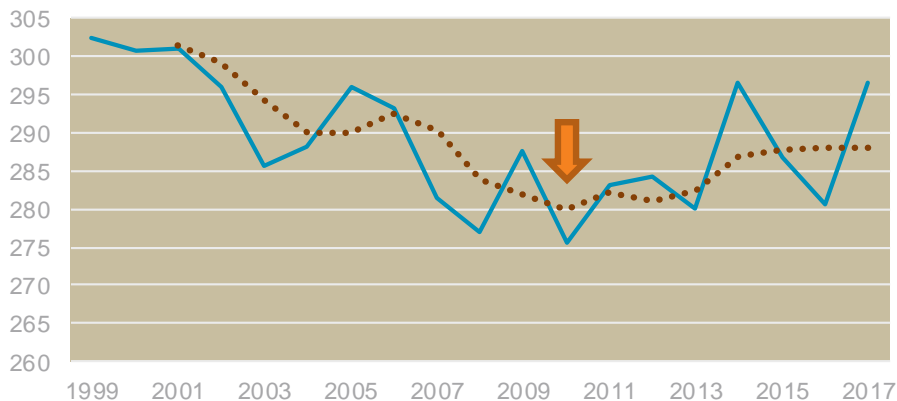
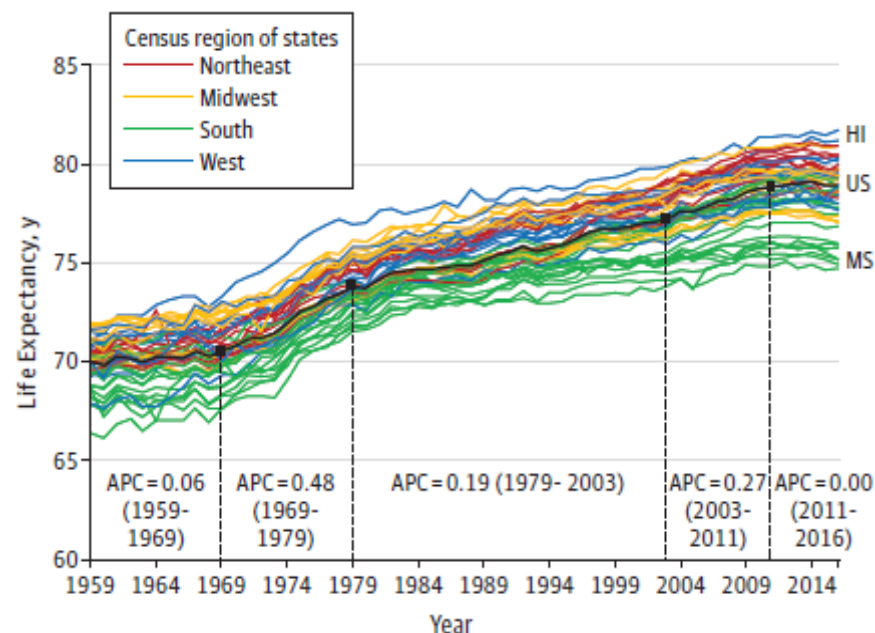


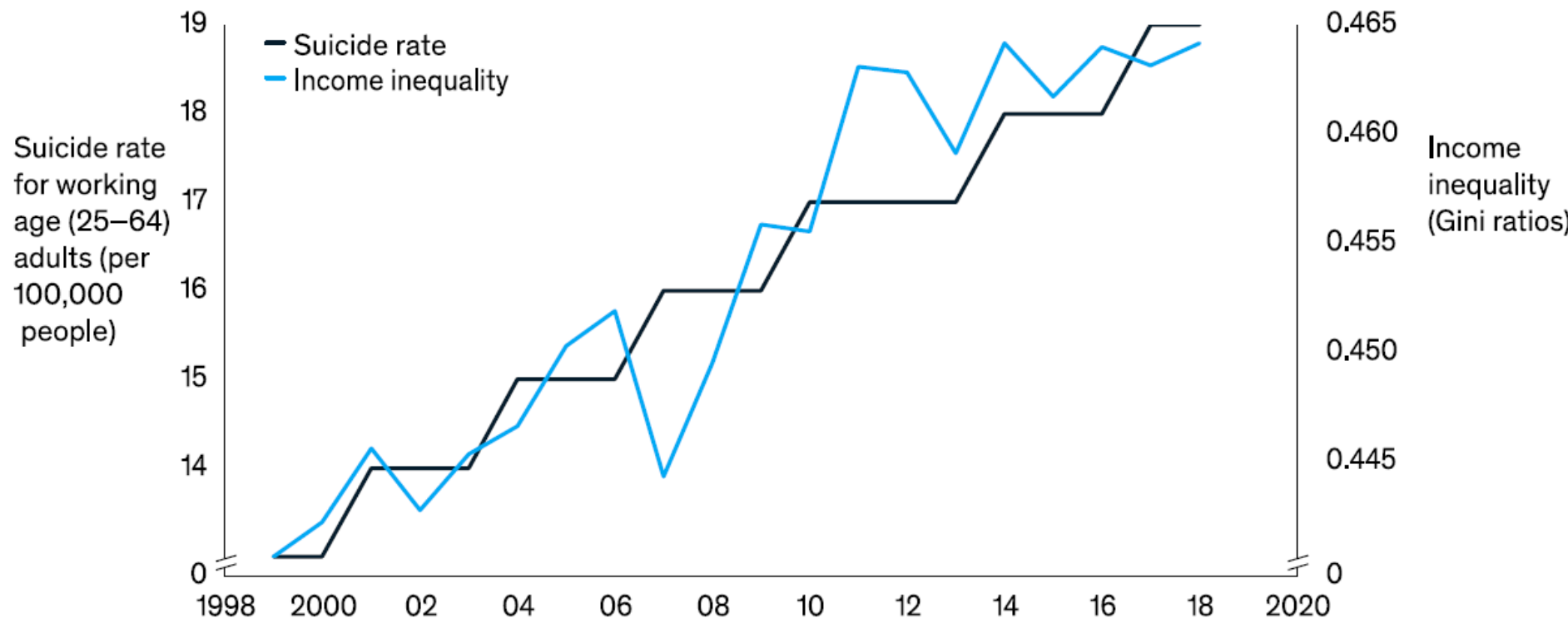
Figure 1. Life Expectancy for United States and 50 States, Grouped by Census Region, 1959-2016



S. Woolf & H. Schoomaker, 2019, November 26. Life Expectancy and Mortality Rates in the United States, 1959-2017. JAMA, Vol. 322, Number 20, (2019).

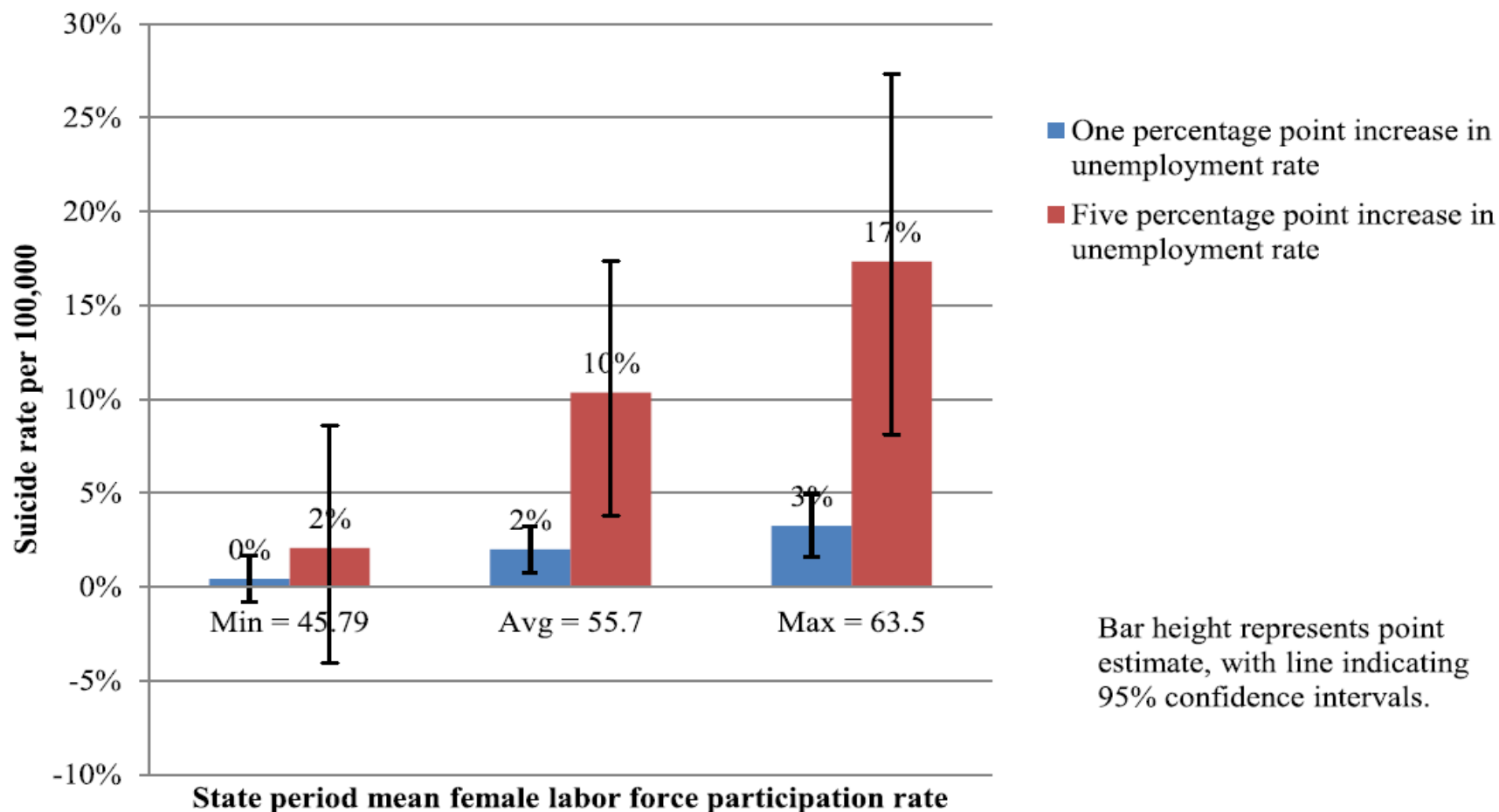
# Association between income inequality and suicide rate in the United States

Suicide rate for working age adults vs income inequality



Source: CDC WISQARS, 2020; U.S. Census Bureau, Current Population Survey, 1968 to 2019 Annual Social and Economic Supplements (CPS ASEC) E. Hutchins Coe & K. Enomoto, 2020 April 2. Returning to resilience: The impact of COVID-19 on mental health and substance use. *McKinsey & Company Healthcare Systems and Services*. 2020

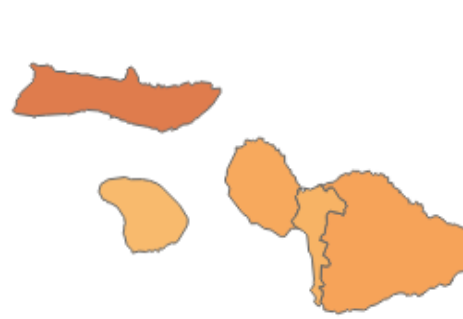
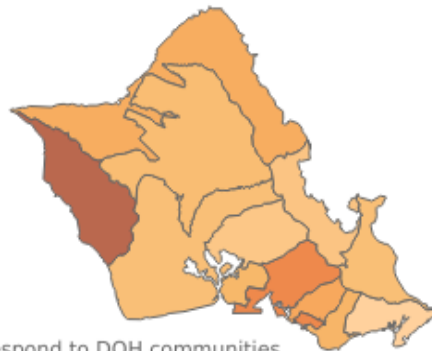
Percentage change in total suicide rate associated with changes in unemployment over time, by mean level of female labor force participation over period.



J.A Phillips & C.N. Nugent, 2014, June 14. Suicide and the Great Recession of 2007-2009: The role of economic factors in the 50 U.S. states. *Elsevier Ltd.* <http://dx.doi.org/10.1016/j.socscimed.2014.06.015>

# Poverty Rate in Hawaii 2017

Percentage of the population living below the federal poverty line



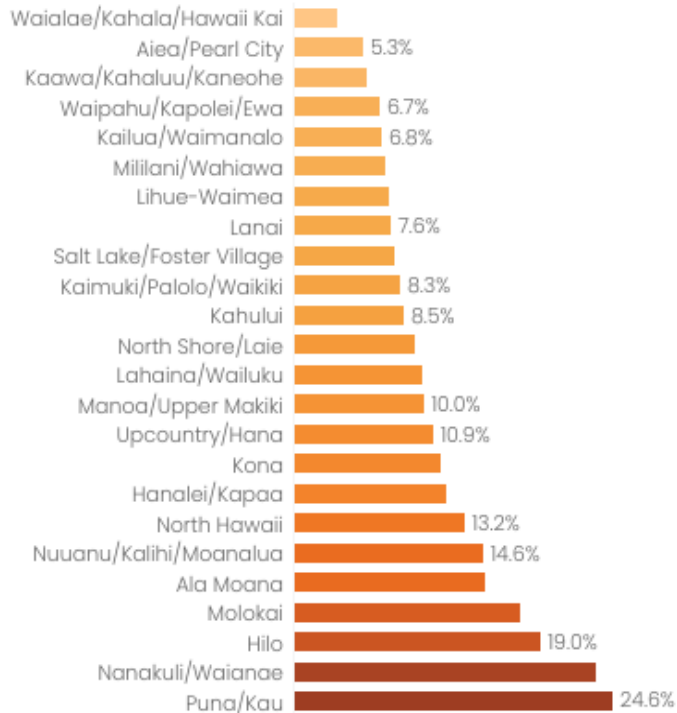
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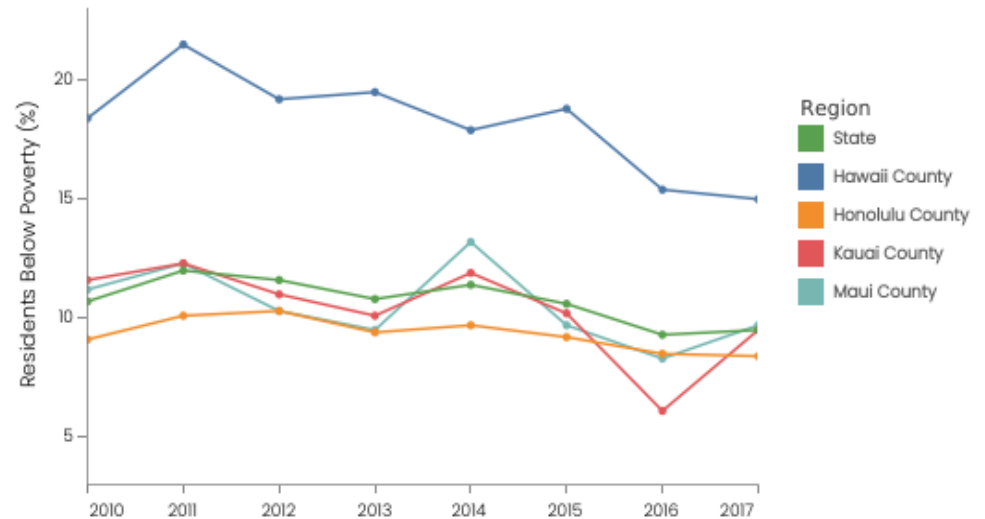
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\*The regions outlined above correspond to DOH communities



## State & County Trend



State of Hawaii Seasonally Adjusted Labor Force Data**					
	Apr 2020	Mar 2020	Apr 2019*		
Labor Force	627,450	665,750	662,950		
Employment	487,550	649,750	644,800		
Unemployment	139,900	15,950	18,200		
* benchmarked data      **totals may not add due to rounding					

	APR 2020	MAR 2020	APR* 2019
<b>Seasonally Adjusted</b>			
<b>STATE</b>	<b>22.3</b>	<b>2.4</b>	<b>2.7</b>
<b>U. S.</b>	<b>14.7</b>	<b>4.4</b>	<b>3.6</b>
<b>Not Seasonally Adjusted</b>			
<b>STATE</b>	<b>23.5</b>	<b>2.3</b>	<b>2.6</b>
<b>HONOLULU</b>	<b>20.0</b>	<b>2.1</b>	<b>2.5</b>
<b>HAWAII COUNTY</b>	<b>24.0</b>	<b>2.9</b>	<b>3.4</b>
<b>KAUAI</b>	<b>34.4</b>	<b>2.3</b>	<b>2.6</b>
<b>MAUI COUNTY</b>	<b>35.0</b>	<b>2.2</b>	<b>2.5</b>
Maui Island	36.1	2.1	2.5
Molokai	12.0	2.7	4.8
Lanai	5.5	2.6	1.2
<b>U. S.</b>	<b>14.4</b>	<b>4.5</b>	<b>3.3</b>
county & island rates are not seasonally adjusted			
* benchmarked data			

## State Unemployment Rates

43 states hit record high unemployment rates in April.

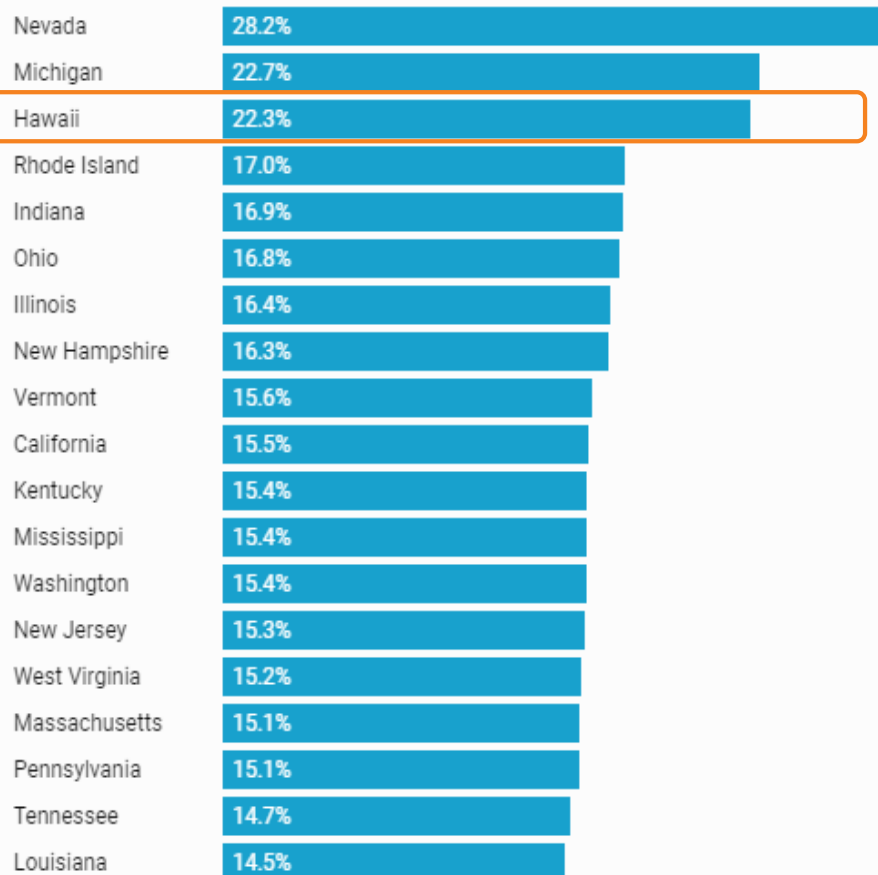
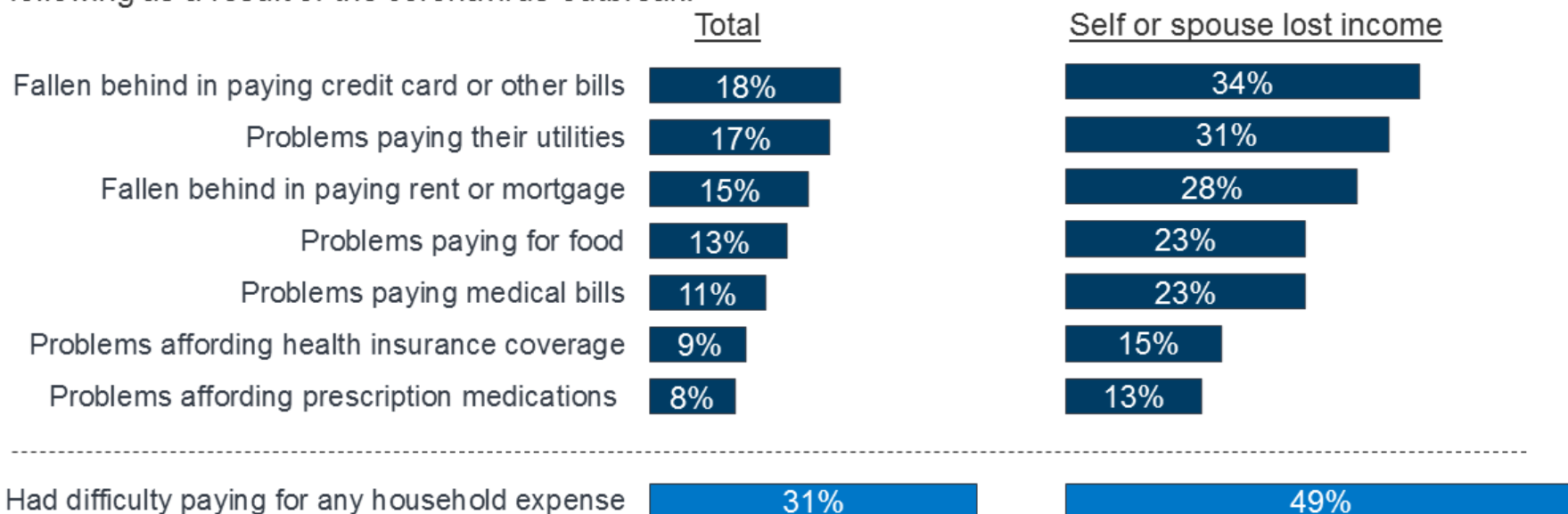


Figure 6

## Large Shares Say They Have Fallen Behind Or Had Difficulty Affording Household Expenses Since February

Percent who say, since February, they or any other adult in their household has experienced each of the following as a result of the coronavirus outbreak:



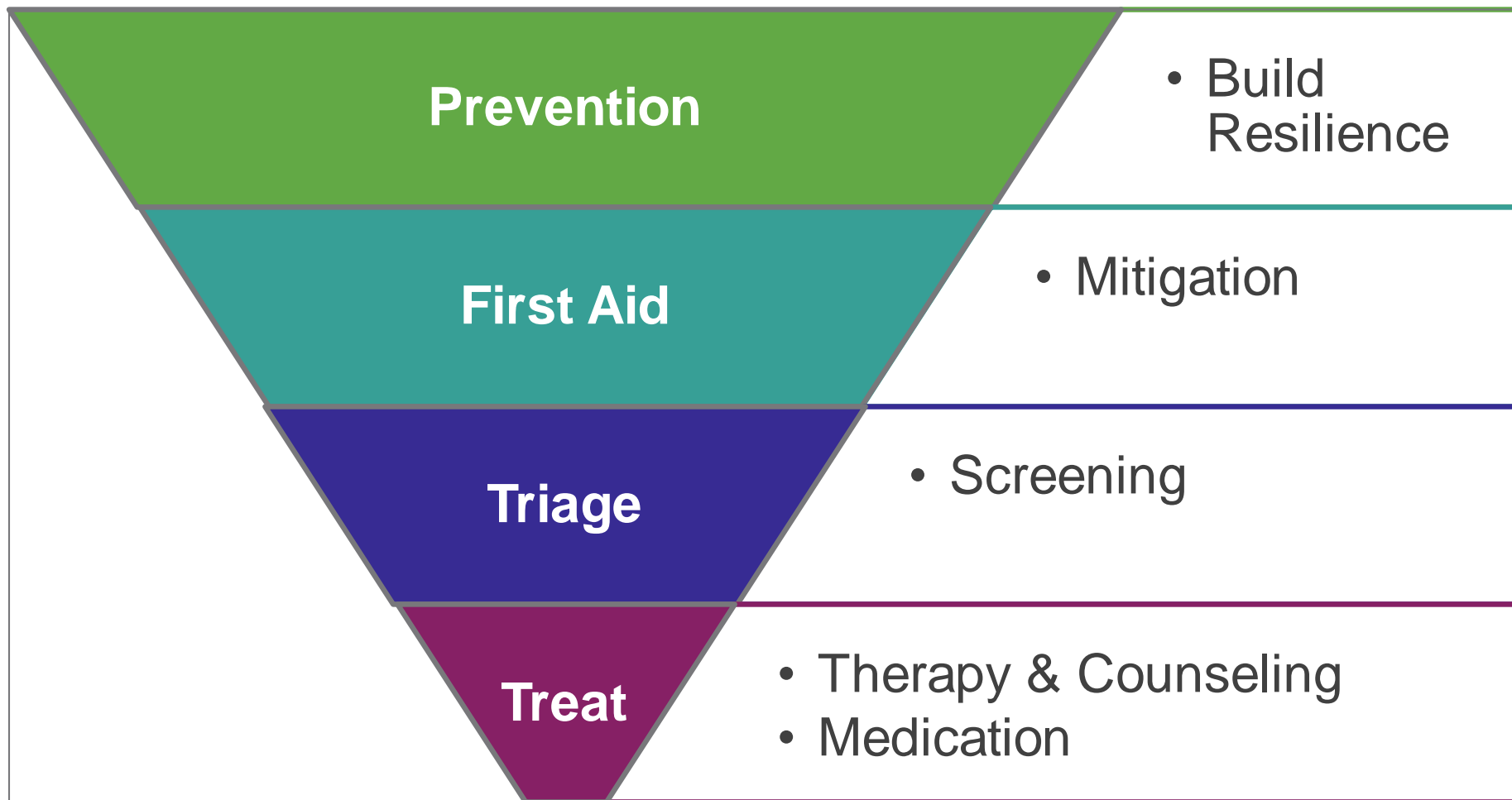
NOTE: 34% of the public said that they or their spouse lost their job or income due to the coronavirus.

SOURCE: KFF Health Tracking Poll (conducted May 13-18, 2020). See topline for full question wording.



<https://www.kff.org/report-section/kff-health-tracking-poll-may-2020-health-and-economic-impacts/> accessed 5/31/2020

# Flatten the 4<sup>th</sup>, Mental Health Wave



# Prevention

- **Reduce Economic Pain**
  - Keep people employed
  - Close income disparities (ALICE report)
  - Unemployment insurance
- **Build Personal & Family Resilience**
  - Connect with others, family dinners, play and exercise, sleep, mindfulness
- **Build Community Resilience**
  - Messaging shared understanding and purpose
  - Critical role of leadership (NZ vs. US)
  - Education and public service announcements

# The Stress First Aid Model:

## A proposed model of intervention for HHP members

1. **Contact and Engagement.** Goal: To initiate contact with individuals who have experienced a traumatic event in ways that are nonintrusive, compassionate and helpful
2. **Safety and Comfort.** Goal: To enhance immediate and ongoing safety and provide physical and emotional comfort.
3. **Stabilize Emotions.** Goal: To calm and orient emotionally overwhelmed or disoriented individuals.
4. **Gather Information.** Goal: To enhance immediate and ongoing safety and provide physical and emotional comfort.
5. **Offer practical assistance.** Goal: To offer practical help to people when addressing immediate needs and concerns

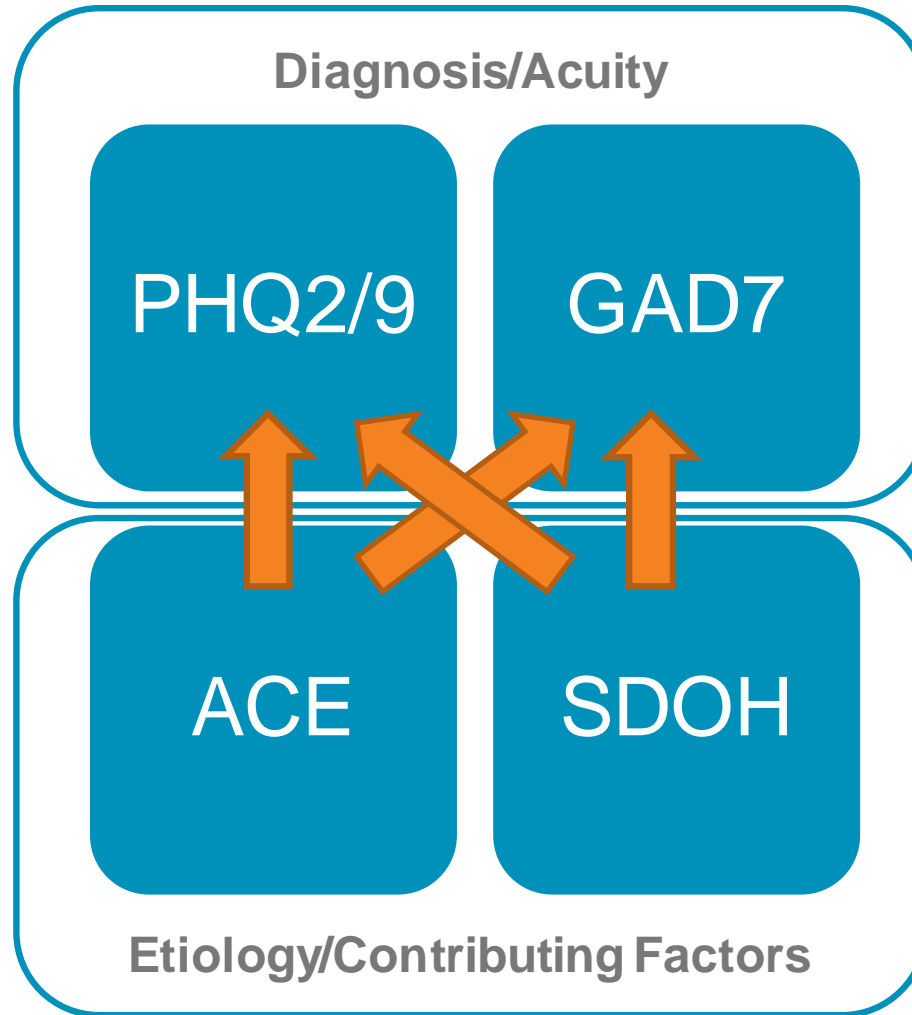
Additional resources: <https://apps.apple.com/us/app/psychological-first-aid-pfa/id551424464>

# Psychological (or Stress) First Aid

*“Control what you can.  
Cope with what you can’t.”*

- What you can always control is how you react to the things that you can’t control

# Triage & Screening by Champions & Staff



# Screening Tools

## GAD-7

1. Feeling nervous, anxious, or on edge
2. Not being able to stop or control worrying
3. Worrying too much about different things
4. Trouble relaxing
5. Being so restless that it's hard to sit still
6. Becoming easily annoyed or irritable
7. Feeling afraid as if something awful might happen

0 = not at all

1 = several days

2 = more than half the days

3 = nearly every day

5-9 = mild

10-14 = moderate

>15 = GAD7 severe

>20 = PHQ9 severe

## PHQ-2/PHQ-9

1. Little or interest in doing things
2. Feeling down, depressed or hopeless
3. Trouble falling asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead, or of hurting yourself

# Epic on SDOH (Storyboard)

**SOCIAL DETERMINANTS**

**Social Determinants of Health**

Icon	Category	Assessment Date	Risk Level
	Tobacco Use	DEC 18 2019	Medium Risk
	Alcohol Use	DEC 18 2019	Not At Risk
	Financial Resource Strain	DEC 18 2019	High Risk
	Food Insecurity	DEC 18 2019	Food Insecurity Present
	Transportation Needs	DEC 18 2019	Unmet Transportation Needs
	Physical Activity		Not on file
	Stress	DEC 18 2019	Stress Concern Present
	Social Connections		Not on file
	Intimate Partner Violence		Not on file
	Depression	DEC 18 2019	At risk
	Housing Stability	DEC 18 2019	High Risk

Additional source <https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities/screening-questions>

# Which of the following did you experience prior to your 18th birthday?

Assign 1 point for each "yes" response.

- ☐ Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?
- ☐ Did you lose a parent through divorce, abandonment, death, or other reason?
- ☐ Did you live with anyone who was depressed, mentally ill, or attempted suicide?
- ☐ Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?
- ☐ Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?
- ☐ Did you live with anyone who went to jail or prison?
- ☐ Did a parent or adult in your home ever swear at you, insult you, or put you down?
- ☐ Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?
- ☐ Did you feel that no one in your family loved you or thought you were special?
- ☐ Did you experience unwanted sexual contact?

Additional resources: [acesaware.org/screen/screening-tools/](https://acesaware.org/screen/screening-tools/)

# Treat

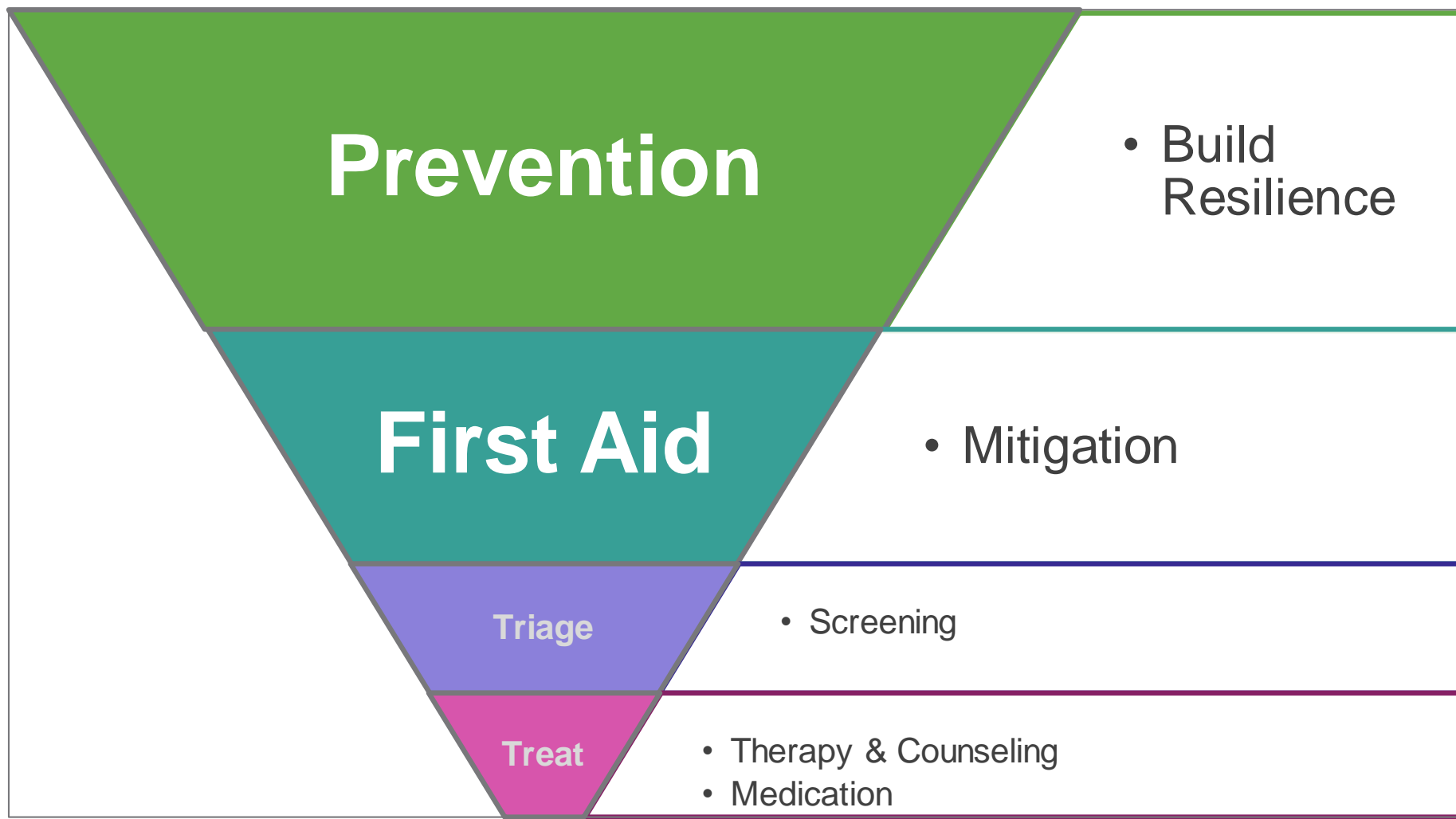
- Prepare and expand Mental Health Resources
  - Therapy and Counseling
  - Treatment
- Enable access
  - Telehealth
  - Online CBT
- Re: SDOH and ACES - Agencies and Community Organizations
  - (e.g. DOH, Aloha United Way 211, Offices of our Senators, Representative, Mayors, Partners in Care, Children's Justice Center, Ho'oikaika, and many more)

# Crisis Lines

- **Hawai'i Department of Health**
  - 1 (800) 753-6879, or text the word ALOHA to 741741
  - Crisis line expanded to 24/7 during COVID-19 pandemic
- **National Help Line**  
(SAMHSA – Substance Abuse and Mental Health Services Administration)
  - 1 (800) 662-HELP (4357)
  - 24/7, 365

<https://www.nami.org/Support-Education/NAMI-HelpLine/COVID-19-Information-and-Resources/COVID-19-Resource-and-Information-Guide>

# Flatten the 4<sup>th</sup> Wave





# COVID-19 Effect on Utilization

**Andy Lee, MD**

Medical Director, *Hawai'i Health Partners*

Chief of Staff, *Pali Momi Medical Center*

Hawai'i Pacific Health

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# COVID-19 Impact on Utilization

- Overwhelm hospital capacity
- Unprecedented reduction in elective and non-essential care
- “Impact” on medical care cost:
  - Cost of testing and treatment of COVID-19
  - Cost of medical services that are not provided (patient behavior)
  - Cost of efforts to preserve hospital capacity (deferred elective surgery)
  - Analysis reveals deferral and elimination of care has more impact on cost than cost of COVID-19 care
  - Cost reduction through June \$140—\$375 billion

# COVID-19 Utilization (compared to SPLY)

## Impact to Top 10 Inpatient Procedures and Surgeries

Primary Knee Replacement	- 99%	Percutaneous Coronary Intervention	- 44%
Lumbar/Thoracic Spinal Fusion	- 81%	Fracture Repair	- 38%
Primary Hip Replacement	- 79%	C-Section	+ 2%
Diagnostic Catheterization	- 65%	Regular Delivery	+ 1%
Diagnostics	- 60%	Mechanical Ventilation	+ 24%

Model examined YoY comparison for a 2 week period (March 24 - April 6, 2019 and March 22 - April 4, 2020)

National Patient and Procedure Volume Tracker: *Analysis of 2 Million Patient Encounters Reveals U.S. Hospitals are Losing \$60 Billion per Month; Uninsured Patients Up 114% During COVID-19 Pandemic.* Version 5.11.2020. Strata Decision Technology, 2020.

# COVID-19 Utilization (compared to SPLY)

## Impact to Inpatient and Outpatient Encounters

Cataracts	- 97%	Chronic Otitis Media and Sinusitis	- 75%	Asthma	- 62%
Sleep Apnea	- 91%	Hypertension	- 74%	Ischemic Stroke	- 56%
Glaucoma	- 88%	Hyperlipidemia	- 74%	Congestive Heart Failure	- 55%
Osteoarthritis	- 88%	Neuro Pain and Neuropathy	- 71%	Chest Pain (non-cardiac)	- 44%
Coronary Heart Disease	- 75%	Care for Diabetes	- 67%	Prostate Cancer	- 44%

Model examined YoY comparison for a 2 week period (March 24 - April 6, 2019 and March 22 - April 4, 2020)  
Care Family definition per Sg2 Care Grouper™

National Patient and Procedure Volume Tracker: *Analysis of 2 Million Patient Encounters Reveals U.S. Hospitals are Losing \$60 Billion per Month; Uninsured Patients Up 114% During COVID-19 Pandemic.* Version 5.11.2020. Strata Decision Technology, 2020.

# Estimated Volume Losses by Service Line 2019 vs 2020

<b>Ophthalmology</b>	<b>Spine</b>	<b>Gynecology</b>	<b>Orthopedics</b>	<b>ENT</b>	<b>Endocrine</b>
<b>81%</b>	<b>76%</b>	<b>75%</b>	<b>74%</b>	<b>72%</b>	<b>68%</b>
Dermatology	Gastroenterology	Rheumatology	Neurosciences	General Medicine	Urology
<b>67%</b>	<b>67%</b>	<b>66%</b>	<b>66%</b>	<b>64%</b>	<b>62%</b>
Genetics	Vascular	Hepatology	Cardiology	Pulmonology	Breast Health
<b>60%</b>	<b>59%</b>	<b>58%</b>	<b>57%</b>	<b>56%</b>	<b>55%</b>
General Surgery	Nephrology	Hematology	Allergy & Immunology	Behavioral Health	Burns & Wounds
<b>54%</b>	<b>52%</b>	<b>49%</b>	<b>48%</b>	<b>45%</b>	<b>44%</b>
Cancer	Obstetrics	Infectious Disease	Neonatology	Not Assigned	Normal Newborn
<b>37%</b>	<b>30%</b>	<b>23%</b>	<b>20%</b>	<b>4%</b>	<b>2%</b>

Model examined YoY comparison for a 2 week period (March 24 - April 6, 2019 and March 22 - April 4, 2020)

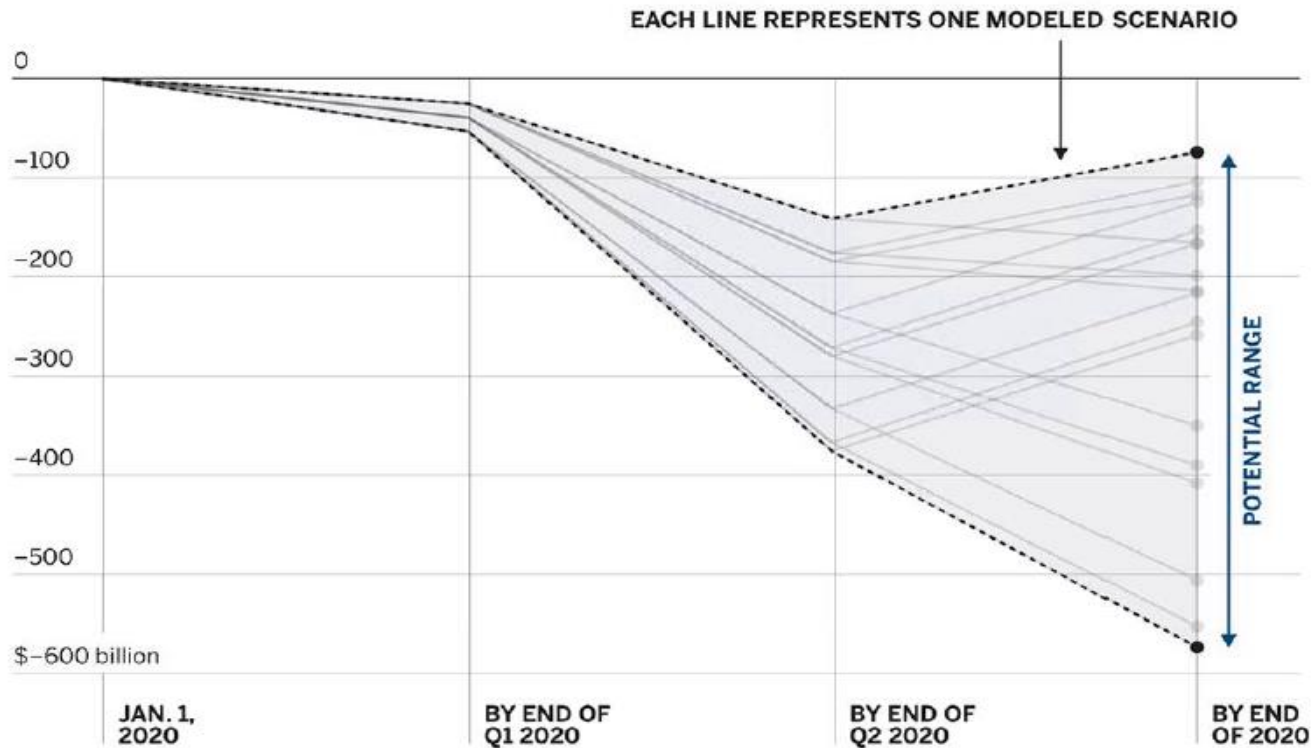
National Patient and Procedure Volume Tracker: *Analysis of 2 Million Patient Encounters Reveals U.S. Hospitals are Losing \$60 Billion per Month; Uninsured Patients Up 114% During COVID-19 Pandemic.* Version 5.11.2020. Strata Decision Technology, 2020.

# COVID-19 Impact on Utilization

- Reduction in net cost by at least \$75 billion → \$575 billion, if elimination of care continues through 2020.
- Net reduction through year-end will depend on pent-up demand
- Second wave can extend the financial impact than first wave to health care providers
- Commercial and Medicare likely net decrease in cost
- Medicaid could experience a net increase

# Milliman: Modeling of 2020 Cost

FIGURE 1: TOTAL 2020 NATIONWIDE NET ALLOWED COST IMPACT OF COVID-19 FOR COMMERCIAL, MEDICARE AND MEDICAID COMBINED



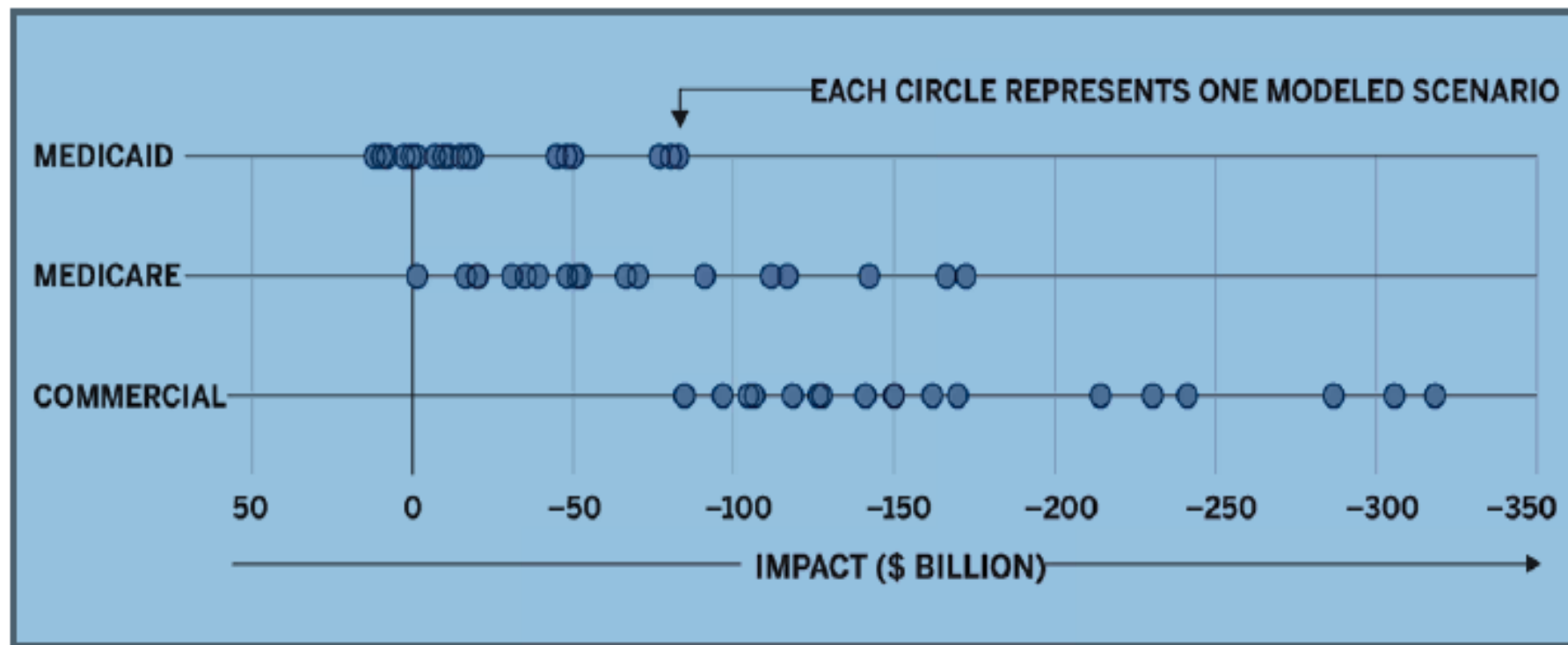
**Impact:** Net cost of COVID-19 care and the cost of services deferred or eliminated

**Conclusion:** Cost of deferral/elimination will greatly exceed cost of COVID-19 care

Rogers, H., Mills, C., & Kramer, M. J. (2020). *Estimating the impact of COVID-19 on healthcare costs in 2020: Key factors of the cost trajectory*. Milliman. <https://milliman-cdn.azureedge.net/-/media/milliman/pdfs/articles/estimating-the-financial-impact-covid19.ashx>.

# Milliman: Payer Modeling for 2020

FIGURE 2: IMPACT BY MARKET AND SCENARIO



**Less Impact:** Hot spots treating more COVID-19

Rogers, H., Mills, C., & Kramer, M. J. (2020). *Estimating the impact of COVID-19 on healthcare costs in 2020: Key factors of the cost trajectory*. Milliman. <https://milliman-cdn.azureedge.net/-/media/milliman/pdfs/articles/estimating-the-financial-impact-covid19.ashx>.

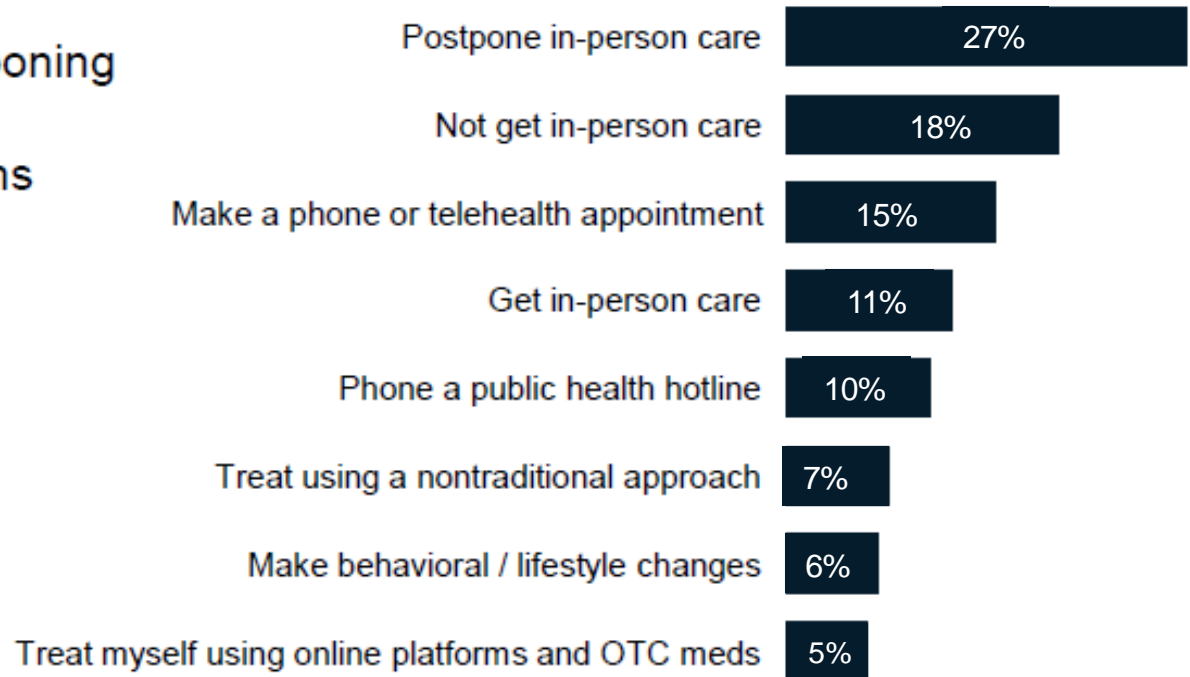
# Delaying Care: Patient Survey

## Changes in healthcare utilization

Some respondents are postponing or foregoing care for new symptoms or health conditions developed during the crisis

### Actions taken by respondents to address new conditions and symptoms<sup>12</sup>

% of respondents who developed new medical conditions or symptoms since COVID-19 pandemic began, n = 107

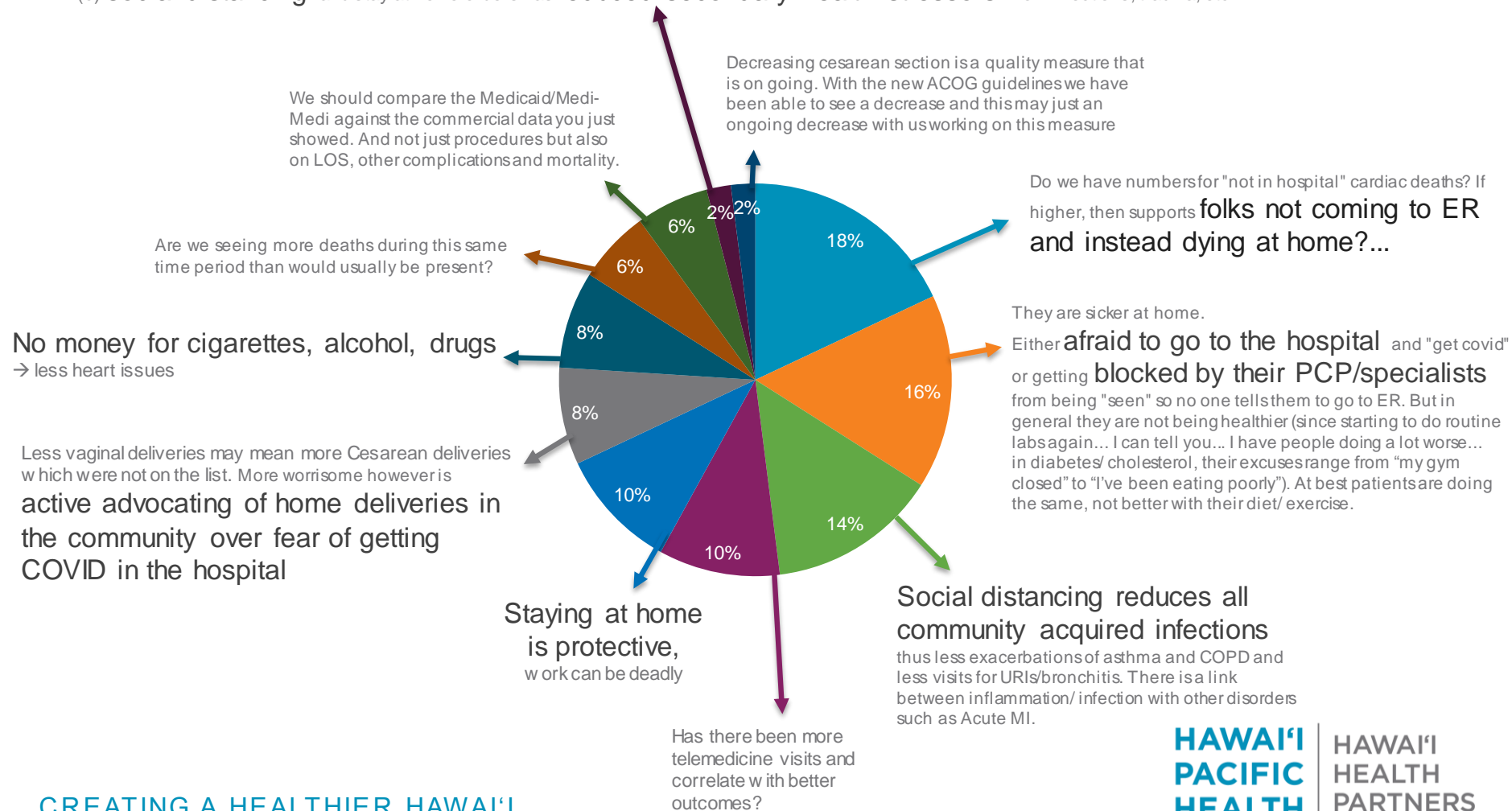


McKinsey & Co. Survey - fielded online on March 16–17, 2020, March 27–29, and April 11–13, 2020. Respondents to March 17 survey (n = 979), March 29 survey (n = 1,265), and April 13 survey (n = 1,265) include US residents between the ages of 18–84. The sample frames were balanced to be nationally representative for sex, age, income, race/ethnicity, region, and type of health insurance. The surveys were conducted only in English. Thus, they do not reflect the behavior or attitudes of those who would have preferred a survey in another language.

# Some necessary care has been delayed. Why? Will it stay that way?

Perhaps a combination of:

- (a) **increased utilization of telehealth** that has improved access to care at early stages of disease,
- (b) more **family members at home improving home care** for those with chronic illness,
- (c) **social distancing** and stay at home orders has **reduced secondary health stressors** from infections, trauma, etc



# COVID-19 Impact on Healthcare

- **Benefits:**
  - Reduced overall spend on Healthcare delivery, including commercial and government
- **Risk:**
  - Lower healthcare revenues 2020
  - Deferred service cost to 2021 likely to be a very significant increase

# Conclusions

- Low COVID-19 cases in Hawai'i
- Behavior change direct consequence of COVID-19 infection
  - Opportunities with public messaging
- Surprise dampening of serious, acute conditions such as AMI
- Anticipate sequelae will depend on public confidence returning and patients seeking care
  - Will be interesting to see the net utilization cost, particularly at different points in time
- Potential high impact in Hawai'i

# PPE: Face Shields Available



- Thank you to HPH for sharing
- Outpatient providers only
  - Sent an email on Friday, May 29th with a link to face shield request form
- Deadline is **tomorrow, June 2<sup>nd</sup> 11:59 p.m.**
- Limited quantities, available while supplies last
- First come, first serve basis
- *Once your order has been processed, depending on supply availability, you will receive a confirmation email from [Info@hawaiihealthpartners.org](mailto:Info@hawaiihealthpartners.org)*



# COVID-19 in Children and Adolescents

*What did we learn in the month of May?*

**Marian Melish, MD**

Pediatric Infectious Disease Division Chief

Medical Director of Infection Control

*Kapi'olani Medical Center for Women and Children – Hawai'i Pacific Health*

Professor of Pediatrics, Tropical Medicine and Medical Microbiology

*University of Hawai'i – John A. Burns School of Medicine*

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# 15 year old girl admitted to KMCWC

- 5/8: Onset fever, headache, myalgia, abdominal pain, vomiting
- 5/9: Pali Momi ED: 101.8, tachycardia 116, Obese, diffusely tender abdomen, Lymphopenia, AST/ALT 2X upper limit of normal, US notable only for fatty liver, Rx Zofran
- Fever persisted, abdominal symptoms resolved
- 5/13: Cough and shortness of breath, chills, history of Asthma
- 5/14: SOB worsened, unable to talk, tachypnea, to KMCWC ED, Tachypneic, O2 sat 94%,
- Rx for asthma – Admitted
- Household member positive for COVID-19

# Hospital Course

- CXR: Patchy opacities in RML, RLL, LLL
- Labs remarkable only for lymphopenia, AST/ALT >2X, <3X ULN
- Increasing O2 requirement to keep sats > 90%
- SARS -2 – PCR Negative x2 (Luminex), Positive DOH – CDC Assay, CLH Panther Instrument
- COVID-19 antibody 1.5 Just barely positive
- Remdesivir given IV for 5 days
- Improved steadily from day 3 of Rx
- Off Oxygen Day 6 of Rx

Note: Adolescent, Severe obesity and diabetes co-morbidity

Overall: <20 age group account for only about 2% of COVID-19 Diagnosis

<1 year and >12 at highest risk of usual COVID-19

Typical Moderately severe COVID-19 with prominent pulmonary disease

# The Game Changer

- Paediatric Multisystem Inflammatory Syndrome or Multisystem Inflammatory Syndrome – Children: PMIS or MIS-C
- Emerged late March in Britain, France, Italy
- Initial descriptions in News Media
- Clearer Picture emerges from 5 reported series – 76 cases, 2 Webinars
- Acute Severe Illness Onset with Fever – Prominent severe GI Sxs, 4 days
  - Conjunctival Injection, Rash, Mucositis, suggestive of or identical to Kawasaki Disease
- Presentation with Severe illness, 65% shock suggestive of KD Shock Syndrome
  - Suggests also Streptococcal and Staphylococcal Toxic Shock Syndrome, HLH
- Shock: Features of Cardiogenic, Septic Shock and Hypovolemic Shock
- Now reported from NYC, Philadelphia, many other US locales

# Multisystem Inflammatory Syndrome in Children MIS- C

- Presentation suggests Septic Shock, myocarditis +/- KD
- Labs: Hyper-inflammatory Disease – High ESR, CRP, ProCalcitonin, Ferritin, Cytokine excess, Troponin and marked BNP elevation
- Echocardiogram: L ventricular dysfunction in most, some with coronary dilation/aneurysm
- Rx: ICU resuscitation, pressors, IVIG, Steroids, Cytokine antagonists
- COVID antibody positive Most, PCR + (minority)
- May be a post-infectious response
- Peak MIS-C follows COVID peak by 3-4 weeks

# Similarities – Differences with KD

- Ages affected – Older in MIS-C
- Ethnic predisposition – Whites Under-represented
  - (MIS-C African ancestry prominent in Britain and US)
  - KD Asian, Pacific Islanders at highest risk
- GI and Kidney injury more severe in MIS-C
- Both seen in previously healthy children
- Pathophysiology of Coronary Disease not yet clear in MIS-C
- Research in one will illuminate both



# Firsthand Account of COVID-19 in New York

**Andy Summersgill, MD**

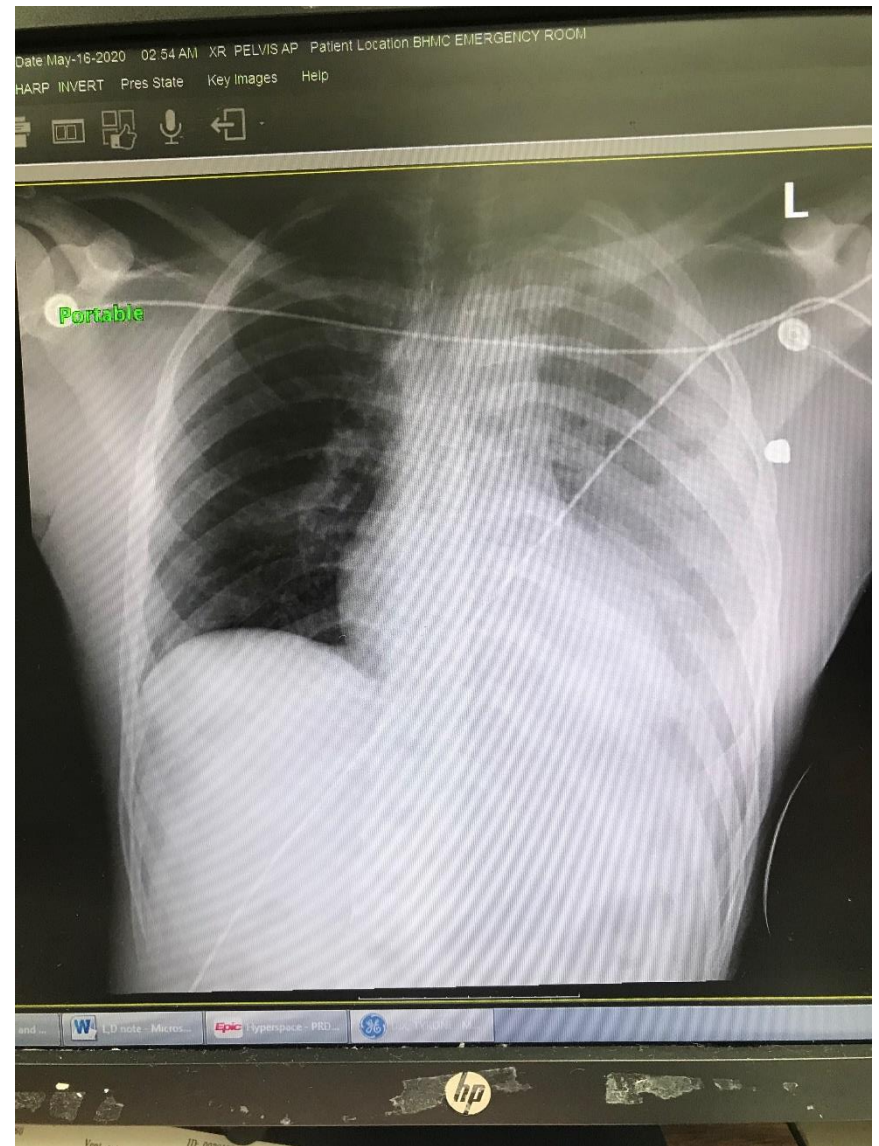
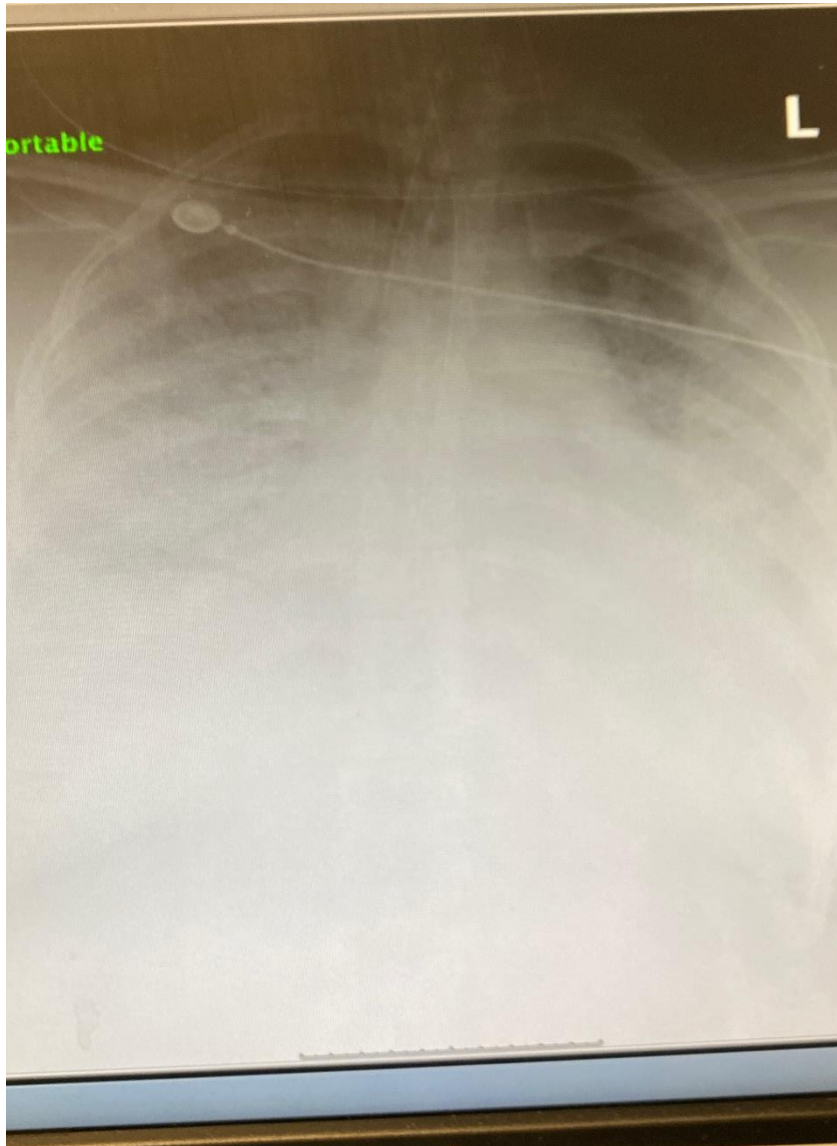
Emergency Medicine

Hawai'i Pacific Health

# Talking Points

- Why I went
- What Lincoln Hospital experienced
- What Brookdale Hospital experienced
- My experience, PPE COVID-19, secondary disease due to COVID-19
- Intubation
- Stay Vigilant







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# Private Specialist Experience: Proceduralists' Challenges and Responses

**Amr El-Sergany, MD RPVI**

Vascular & Endovascular Surgery

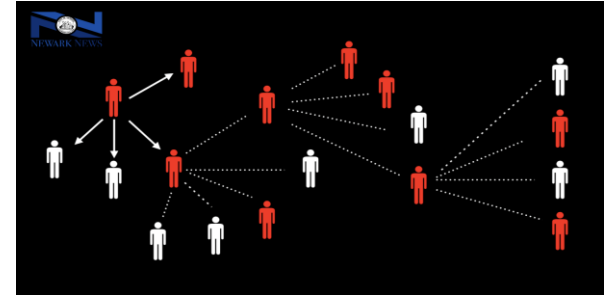
Trauma & General Surgery

Pali Momi Medical Center | Hawai'i Pacific Health

Medical Director | Pacific Vascular Institute

# Vascular Surgery Patient Characteristics

- Hypertension, diabetes, CAD, small vessel disease
- Immunocompromised
- Frequent contact with the health system
  - Establishing care
  - Ultrasound, labs
  - Dialysis center
  - Follow-up office visits
  - Multiple providers due to a vast array of comorbidities
  - **Hospital Admissions**



# Preventative Vascular Care Leads to Improved Outcomes



## Dialysis Access

- Arm AV access creation
- PermCath removal
- Sepsis
- AV access maintenance
  - Fistulagram vs De-clot
- Hyperkalemia, VasCath, Admission, ICU, De-clot
- Ann Vasc Surgery, 2017

## Limb Salvage

- Ischemic rest pain
- Gangrene
- Dry → Wet
  - Sepsis, ER
  - Admission
  - Avoidable staff exposure
  - Add-on case
  - Debridement
  - Revascularization
  - Amputation
- Outcomes?

\*Developing Duplex Ultrasound Criteria for Diagnosis of Arteriovenous Fistula Stenosis Wo K, Morrison BJ, Harada RN. Ann Vasc Surg 2017;38:99-104.

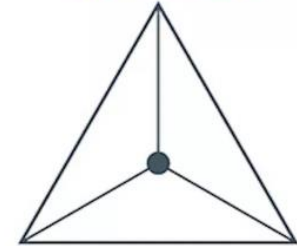
# Shaping The Future of Vascular Care

- Diligent maintenance is paramount
  - Ultrasounds, procedures
  - Beneficial for the patient, providers, hospital, healthcare system
- TeleHealth
  - Outer island and Oahu
  - Physician extenders (PA's and NP's)
  - Duplex in lieu of physical exam \*
- Outpatient Procedures Facility
  - Specialized care of the vascular patient with a focus on limb salvage and dialysis access
  - Virtual training



The Triple Aim

Population Health



Experience of Care

Per Capita Cost

# Shaping The Future of Vascular Care



Pacific Vascular Institute  
(808) 784-3050



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# Q&A

# Thank you!

- A recording of the meeting will be available afterwards.
- Unanswered question?
  - Contact us at [Covid19Bulletin@hawaiipacifichealth.org](mailto:Covid19Bulletin@hawaiipacifichealth.org)