HHP/HPH COVID-19 Community Webinar Series:

Reopening Hawai‘i and Returning to School

Monday, July 27, 2020

5:30pm – 6:30pm

HAWAI‘I PACIFIC HEALTH | HAWAI‘I HEALTH PARTNERS

CREATING A HEALTHIER HAWAI‘I

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 Information

- You have been automatically muted. You cannot unmute yourself.
- You will be able to submit questions via the Q&A section.
  - Due to time constraints, any unanswered questions will be addressed this week and posted on the HHP website
- A recording of the meeting will be available tomorrow on the HHP website and intranet.

How to Claim CME Credit

1. Step 1: Confirm your attendance
   - You should have completed a brief questionnaire 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.
   - Questions? Email hphcontinuingeduc@hawaiipacifichealth.org

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 1.0 AMA PRA Category 1 Credit (s) ™ for physicians. This activity is assigned 1.0 contact hour for attendance at the entire CE session.

JOINTLY ACCREDITED PROVIDER™

INTERPROFESSIONAL CONTINUING EDUCATION

Disclosures

- The planners and presenters of this activity report no relationships with companies whose products or services (may) pertain to the subject matter of this meeting.

Reopening Hawai‘i

Raymond P. Vara, Jr.
President and Chief Executive Officer, *Hawai‘i Pacific Health*
Member, *Hawai‘i Public Health Recovery Task Force*
Member, *House Select COVID-19 Committee on Economic and Financial Preparedness*

Key Assumption: Everyone Does Their Part

- Government plan: public health measures of appropriate screening, testing, contact tracing, ability to quarantine

- Individuals: physical distancing, wearing masks, good hand hygiene, staying home when sick

Overview of COVID-19 Projections

The following slides display projected COVID-19 cases in Hawai‘i based data as of

7/20/2020 Key Assumptions:

- ~5-8% of COVID-19 cases require ICU care based on US data*
- Hawai‘i’s adult ICU beds are 70% occupied
- Integrates current US COVID-19 case rates: est. 0.98% COVID-19 prevalence COVID-19 prevalence amongst US states expected to travel to Hawai‘i
- Hawai‘i will reopen trans-pacific travel on 9/1:
  - Negative COVID-19 test 72 hrs prior to departure and airport screening will reduce travel-related infections by 80%**
  - Incoming travelers will reach 8K/day by October 2020 (3 months after revising trans-pacific travel restrictions)***
- Does not account for presence of super-spreaders / unexpected clusters

A model from Stanford University was used to develop these projections.

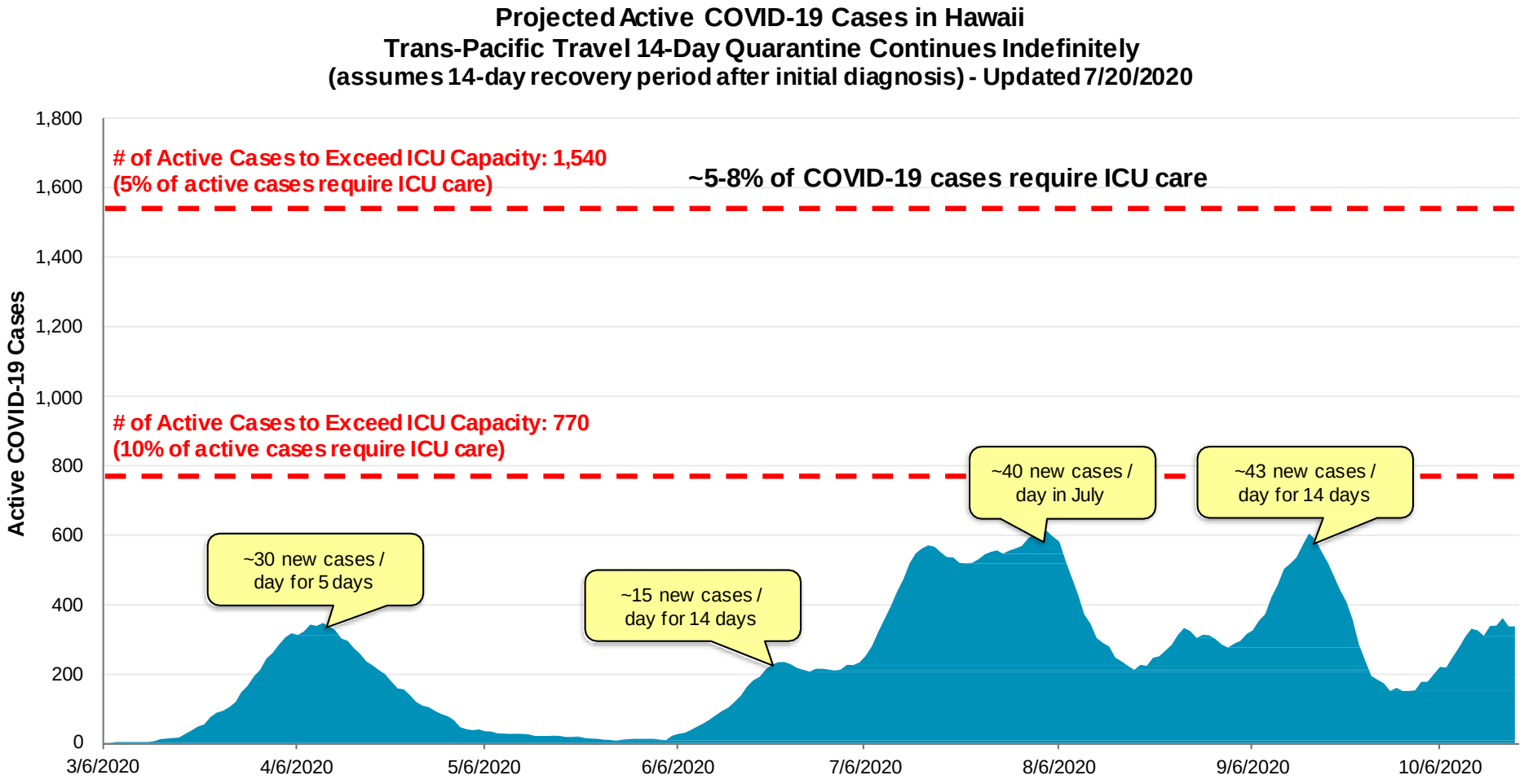
- Model simulates the impact restrictions to control community spread (e.g. social distancing)
- Peaks and valleys in the projections take place as model assumes a society will naturally adapt as the # of COVID-19 cases increases / declines (e.g. people will increase social distancing as more individuals are infected)
- Model aligns with Alaska’s case growth

* Based on Uptodate

** UH’s Economic Research Department estimate

*** UH’s Economic Research Dept. estimates will reach 7-8K/day by end year

Scenario 1: Hawai‘i Continues at Status Quo

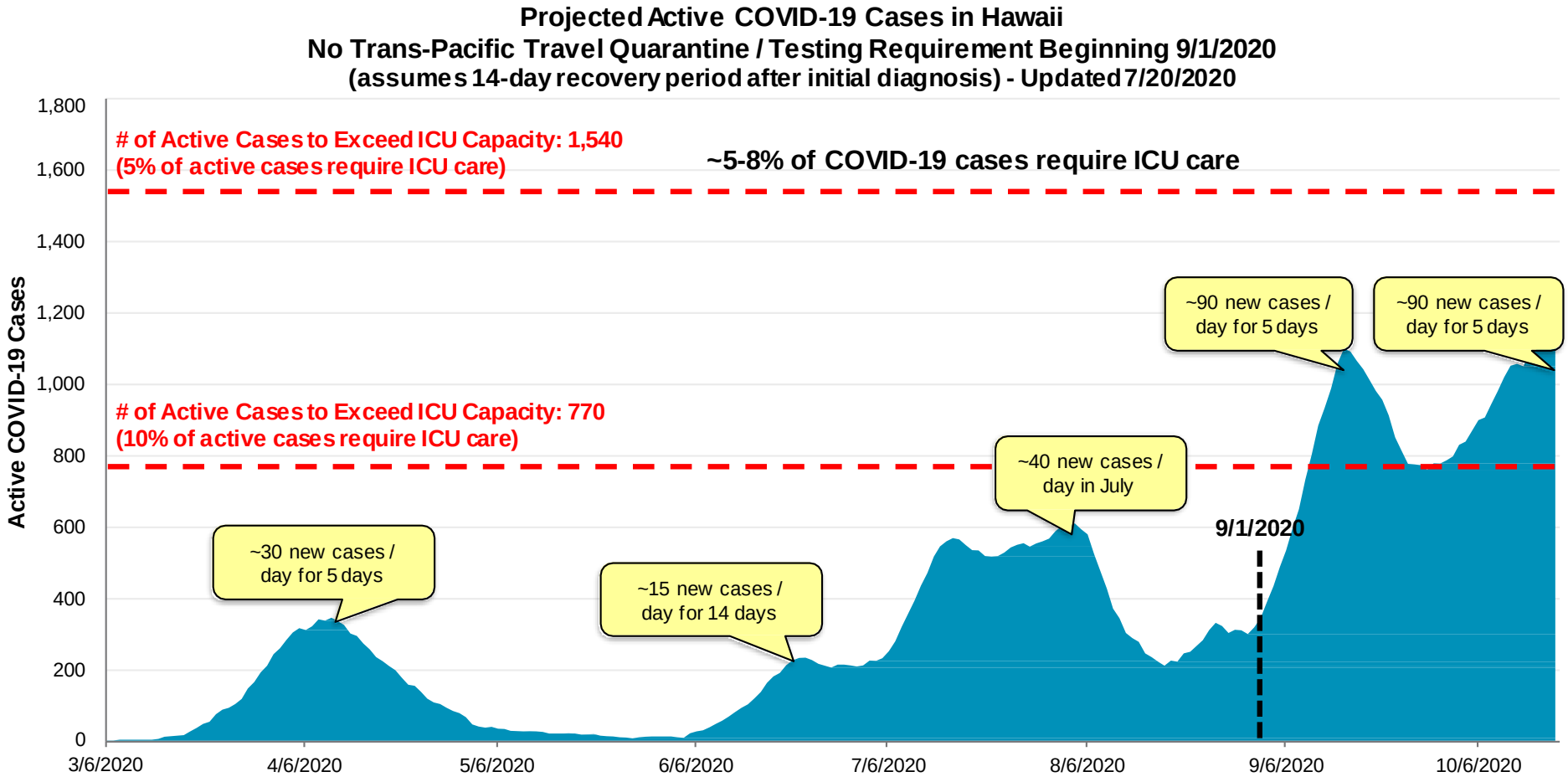


Projection incorporates information from:

- Hawai‘i Department of Business, Economic Development and Tourism (DBEDT)
- Modeling data from Stanford University
- Case growth information from Alaska
- Proposed travel interventions from the Economic Research Organization at the University of Hawai‘i (UHERO)
- ICU rates from UpToDate

HAWAI‘I PACIFIC HEALTH | KAPI‘OLANI PALI MOMI STRAUB WILCOX

Scenario 2: Hawai‘i Reopens Trans-Pacific Travel with No Safeguards – Health Care System Will Near Capacity

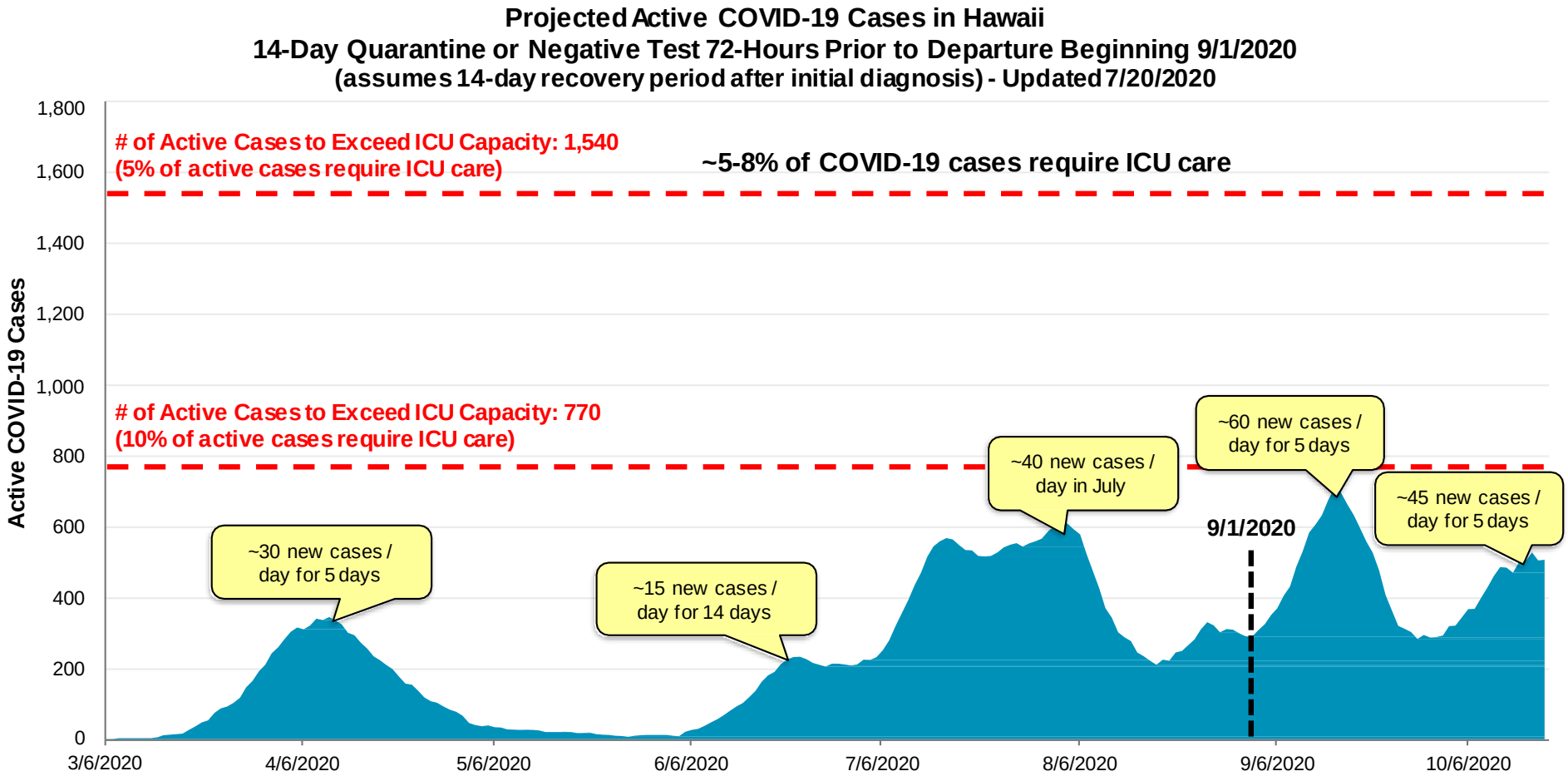


Projection incorporates information from:

- Hawai‘i Department of Business, Economic Development and Tourism (DBEDT)
- Modeling data from Stanford University
- Case growth information from Alaska
- Proposed travel interventions from the Economic Research Organization at the University of Hawai‘i (UHERO)
- ICU rates from UpToDate

HAWAI‘I PACIFIC HEALTH | KAPI‘OLANI PALI MOMI STRAUB WILCOX

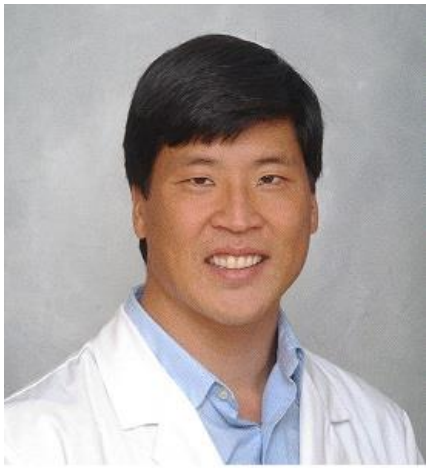
Scenario 3 – Hawai‘i Reopens Trans-Pacific Travel With Testing and Screening Safeguards



Projection incorporates information from:

- Hawai‘i Department of Business, Economic Development and Tourism (DBEDT)
- Modeling data from Stanford University
- Case growth information from Alaska
- Proposed travel interventions from the Economic Research Organization at the University of Hawai‘i (UHERO)
- ICU rates from UpToDate

HAWAI‘I PACIFIC HEALTH | KAPI‘OLANI PALI MOMI STRAUB WILCOX



COVID-19 Reporting

James Lin, MD

Vice President, Information Technology

Pediatric Hospitalist, Kapiʻolani Medical Center

HAWAIʻI PACIFIC HEALTH | HAWAIʻI HEALTH PARTNERS

COVID-19 PANDEMIC RESPONSE,

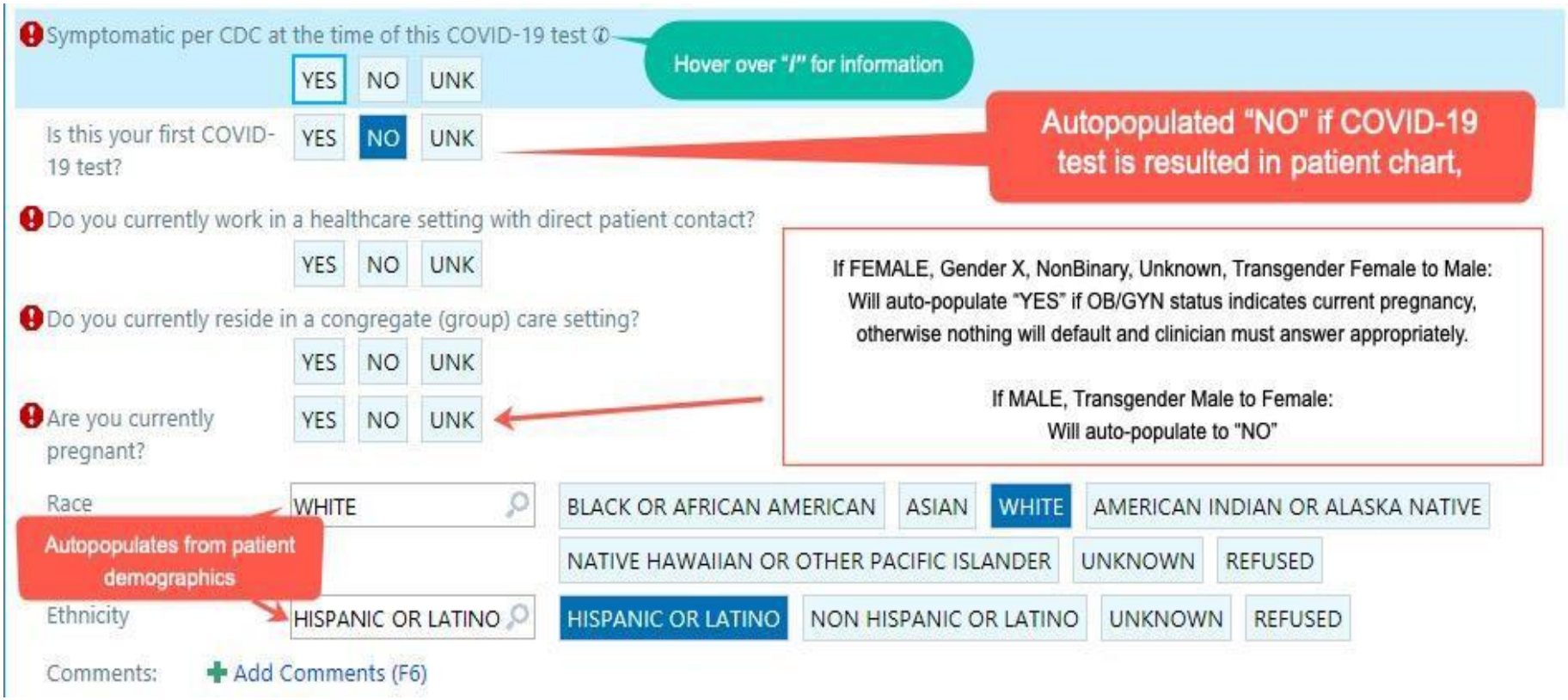
Laboratory Data Reporting: CARES Act Section 18115

On June 4, 2020, the U.S. Department of Health and Human Services (HHS) published new requirements for patient data collection and reporting for COVID-19 test results.

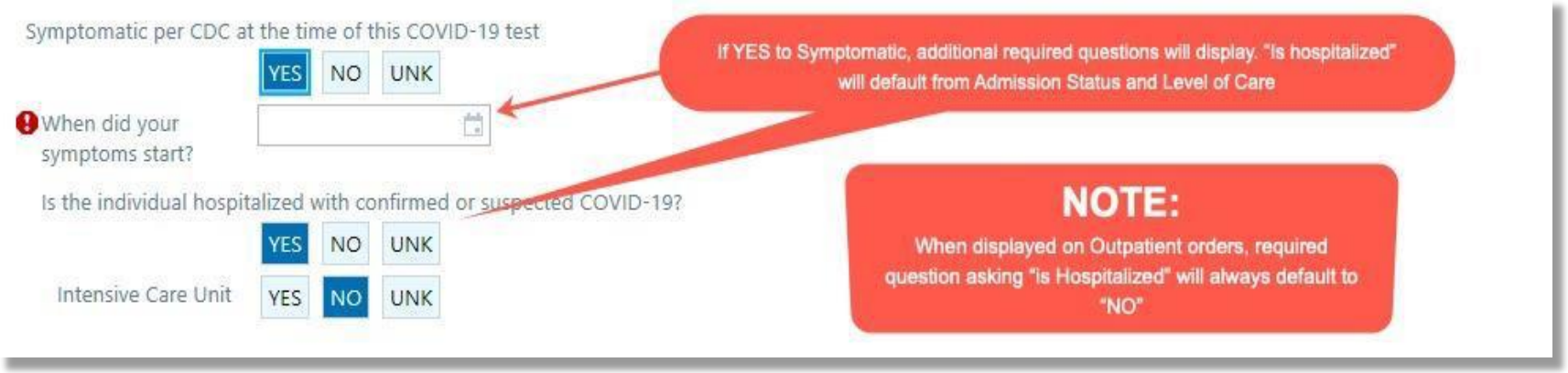
In addition to standardized test results and relevant demographic details, data in the form of answers to the following Ask at Order Entry (AOE) questions will be collected for reporting:

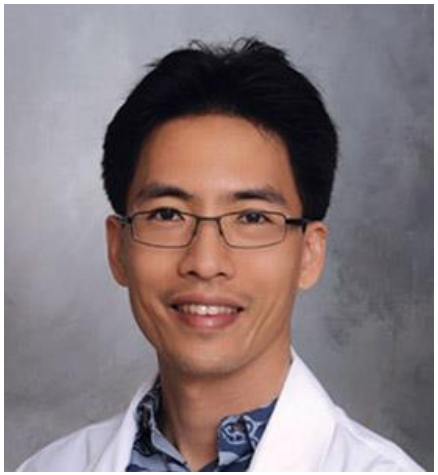
1. Symptomatic per CDC at the time of this COVID-19 test?
   a. If Yes, When did your symptoms start?
2. Is the individual hospitalized with confirmed or suspected COVID-19?
   a. If Yes, In Intensive Care Unit?
3. Is this your first COVID-19 test?
4. Do you currently work in a health care setting with direct patient contact?
5. Do you currently reside in a congregate (group) care setting?
6. Are you currently pregnant?

Questions are required for HHS reporting, recommend reviewing auto-populated information for accuracy and any remaining questions with your patients.



Additional required questions will cascade based on YES/NO/UNK responses to reduce screen clutter





HHP Community Webinar
Keiki, COVID-19, and Classrooms

Brian Wu, MD, FAAP

Pediatric Pulmonologist, Kapi‘olani Medical Center

HAWAI‘I PACIFIC HEALTH | HAWAI‘I HEALTH PARTNERS

A few general COVID-19 principles…

- What you learned today you may need to unlearn tomorrow
- Trying our best to mitigate risks with the resources we have
- There's a way to do it better – find it
- **Together, we are truly stronger**

https://www.nytimes.com/2020/07/17/nyregion/coronavirus-nyc-schools-reopening-outdoors.html

Children *seem* less susceptible to infection

- Lower # of cases compared to other age groups

U.S. Jan 22-May 30, 2020

laboratory-confirmed COVID-19 cases and estimated cumulative incidence by age-group

	Total	
Age group (yrs)	No. (%)	Cumulative incidence*
0–9	20,458 (1.5)	51.1
10–19	49,245 (3.7)	117.3
20–29	182,469 (13.8)	401.6
30–39	214,849 (16.3)	491.6
40–49	219,139 (16.6)	541.6
50–59	235,774 (17.9)	550.5
60–69	179,007 (13.6)	478.4
70–79	105,252 (8.0)	464.2
≥80	114,295 (8.7)	902.0
All ages	**1,320,488 (100.0)**	**403.6**

https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm#T1_down

Children *seem* less susceptible to COVID-19…

- 6% Iceland population tested[1]
- Jan 31-April 4, 2020
- qRT-PCR
- Pre-print meta-analysis of contact tracing studies[2]
  - children have 56% lower odds of being an infected contact

Age (years)	High-risk* N=9,199	Population screen N=10,797
0-9	6.7% (N=38)	0% (N=848)
10-19	13.7%	0.8%
All	13.3%	0.8%

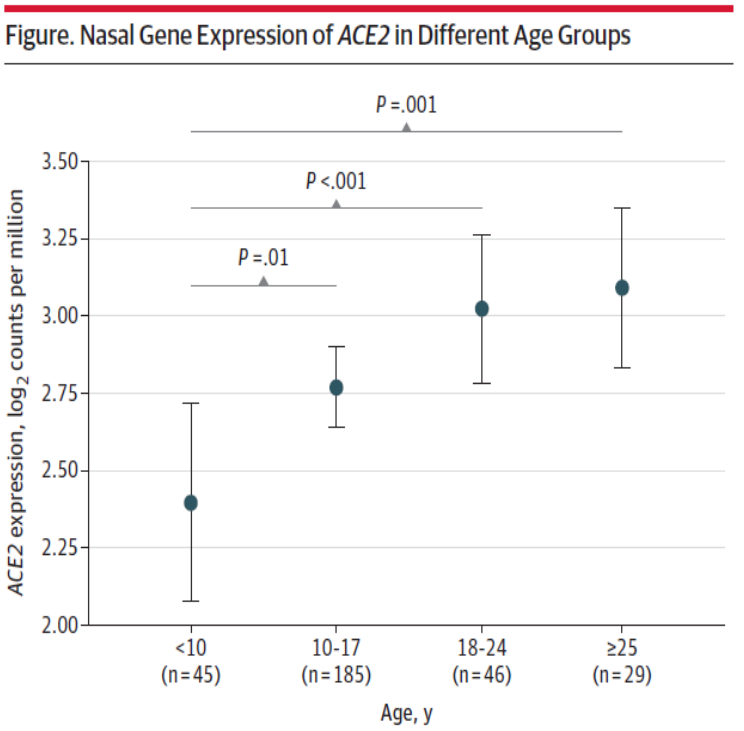
*mainly symptomatic, traveled from high risk countries, contacted with infected persons

1. Gudbjartsson DF, Helgason A, Jonsson H, et al. Spread of SARS-CoV-2 in the Icelandic Population. *N Engl J Med*. 2020;382(24):2302-2315. doi:10.1056/NEJMoa2006100
2. https://www.medrxiv.org/content/10.1101/2020.05.20.20108126v1.full.pdf

Young children *may* less likely transmit

https://images.app.goo.gl/Swskme6gA9gkt16d8

- Theories:
  - Children exhale less air (i.e. less viruses exhaled)
  - Children exhale air closer to the ground (plume less likely to be inhaled by adults)
  - Children less symptomatic (lower viral load and less respiratory symptoms)
  - ACE-2 gene expression in nasal epithelium significantly lower <10 y/o
    - ACE2 receptor is what SARS-CoV-2 uses for host entry



Bunyavanich S, Do A, Vicencio A. Nasal Gene Expression of Angiotensin-Converting Enzyme 2 in Children and Adults [published online ahead of print, 2020 May 20]. *JAMA*. 2020;323(23):2427-2429.

<10 y/o *seem* to less likely be vectors

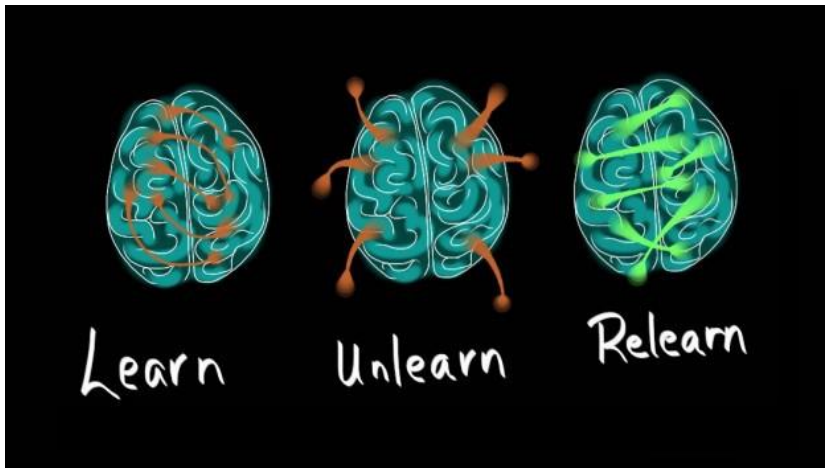
- South Korea, N = 5706 index cases
- Jan 20 – Mar 27, 2020 (schools closed)
- Traced 59,073 contacts of index cases
  - All household contacts of index cases tested, regardless of symptoms
  - All non-household contacts tested only if symptomatic
- <10 y/o about **half as likely** as adults to spread virus to others
- Highest COVID-19 rate household contacts of 10-19 y/o index cases

	Household	
Index patient age, y	No. contacts positive/no. contacts traced	% Positive (95% CI)
0–9	3/57	5.3 (1.3–13.7)
10–19	43/231	18.6 (14.0–24.0)
20–29	240/3,417	7.0 (6.2–7.9)
30–39	143/1,229	11.6 (9.9–13.5)
40–49	206/1,749	11.8 (10.3–13.4)
50–59	300/2,045	14.7 (13.2–16.3)
60–69	177/1,039	17.0 (14.8–19.4)
70–79	86/477	18.0 (14.8–21.7)
≥80	50/348	14.4 (11.0–18.4)
Total	1,248/10,592	11.8 (11.2–12.4)

https://wwwnc.cdc.gov/eid/article/26/10/20-1315_article

So kids are not a high-risk to get and transmit COVID-19 right?

"What you learned today you may need to unlearn tomorrow…"



So schools should reopen?

- Sweden (schools never closed) vs Finland (all schools closed)[1]
  - 5-fold higher incidence COVID-19 in Sweden
  - No difference COVID-19 incidence age 0-19 y/o between countries
  - No increase risk teachers compared to other professions
- Israel[2]
  - Highschool outbreak 10 days after school reopening
    - 13.2% student attack rate (153), 16.6% staff attack rate (25)
    - Cancellation of mask mandate due to heatwave, A/C continuously on
    - Crowded classrooms without adequate distancing
- Prediction models are mixed
  - Reopening without countermeasures could significantly increase transmission[3]
    - Lowering community mobility, classroom cohorting, symptoms screening, mask use, environmental modification could significantly mitigate this
  - Dependent on community incidence
  - Ability to swiftly identify and isolate

1. https://www.folkhalsomyndigheten.se/contentassets/c1b78bffbfde4a7899eb0d8ffdb57b09/covid-19-school-aged-children.pdf?fbclid=IwAR2JpjksKXti8-f_I6S9s9ud3ljs3bFDIM0jiTJ4oQolaSqP7QyPBsdJ0qc
2. Stein-Zamir Chen , Abramson Nitza , Shoob Hanna , Libal Erez , Bitan Menachem , Cardash Tanya , Cayam Refael , Miskin Ian . A large COVID-19 outbreak in a high school 10 days after schools' reopening, Israel, May 2020. Euro Surveill. 2020;25(29):pii=2001352. https://doi.org/10.2807/1560-7917.ES.2020.25.29.2001352
3. https://covid.idmod.org/data/Schools_are_not_islands_we_must_mitigate_community_transmission_to_reopen_schools.pdf

So how is the DOE preparing?

- School starts Aug 4 (TBD….)
  - Priority face-to-face for K-2
  - Also prioritize vulnerable students (disabilities, English learners, economically disadvantaged) for face-to-face or online learning as appropriate(?)
- Schools could select from various models (face-to-face, blended, hybrid, etc)
- "Ohana bubble" (i.e cohort)
  - Difficult in middle/high school to keep students in same cohort
  - Dependent on maintaining "bubbles" outside school

http://www.hawaiipublicschools.org/ConnectWithUs/MediaRoom/PressReleases/Pages/School-Models.aspx

DOE (cont.)

- Schools will screen all for general symptoms of illness (though these overlap with COVID-19 symptoms) and if present sent home
- 6 feet distancing in classrooms
  - For <6 ft, requires approval via submission of a contract exception no later than July 21
- Masks outdoors: required for all (unless not safe)
- Masks indoors:
  - Recommended for all students and adults, *required* if <3 ft
    - For students sitting 3 feet apart, not required if facing the same way
    - DOH recommended against using while playing at recess
    - Difficult for pre-K to 2nd grade, disabilities, underlying medical conditions

Would you recommend my child go to school? Should schools even reopen?

Let's get kids back to school

- Education, social/emotional skills, nutrition, etc
- Economic devastation due to school closures >(?) illness burden in children
- Anxiety/depression in students and adults[1]
- Risk factors teachers same as general US workforce [2]
- Signs of increased child abuse, domestic/intimate partner violence

Keep kids home

- Are schools ready to reopen safely?
  - Infection control
  - Staff preparedness
  - Ventilation
- Children bringing home virus (esp if household adults high risk)
- Risk to children and school staff

1. https://pediatrics.aappublications.org/content/pediatrics/early/2020/07/22/peds.2020-016824.full.pdf
2. https://www.kff.org/coronavirus-covid-19/issue-brief/how-many-teachers-are-at-risk-of-serious-illness-if-infected-with-coronavirus/

Child Welfare Services (CWS)

CWS Intakes

2020	Total	Teacher (2020)	(2019)
Jan	274	40	(35)
Feb	263	45	(31)
March	260	27	(29)
April	179 (down 33%)	0	(41)
May	238 (down 11%)	4	(34)
June	203 (up 35%)	2	(4)

Family Strengthening and Support, Child Protection, Foster, Adoption
Allowing for increased flexibility in the evaluation process and partial evals.
Medical Diagnosis with high prob delay are presumptive eligible.

Would you recommend my child go to school? Should schools even reopen?

Let's get kids back to school

- Economic devastation due to school closures >(?) illness burden in children
- Education, social/emotional skills, nutrition, etc
- Anxiety/depression in students and adults
- Risk factors teachers same as general US workforce
- Signs of increased child abuse, domestic/intimate partner violence

Keep kids home

- Children bringing home virus (esp if household adults high risk)
- Are schools ready to reopen safely?
  - Staff preparations
  - Infection control
  - Ventilation
  - Screening
- Risk to children and school staff

CHECKLIST: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/back-to-school-decision-checklist.pdf

Which children are at risk for severe COVID-19 illness? **We don't know**

- CDC: Children with Certain Underlying Conditions
  - While children have been less affected by COVID-19 compared to adults, children with certain conditions may be at increased risk for severe illness. Children who are medically complex, who have serious genetic, neurologic, metabolic disorders, and with congenital (since birth) heart disease might be at increased risk for severe illness from COVID-19. Similar to adults, children with obesity, diabetes, asthma and chronic lung disease, or immunosuppression might be at increased risk for severe illness from COVID-19. CDC is investigating a rare but serious complication associated with COVID-19 in children called Multisystem Inflammatory Syndrome in Children (MIS-C). We do not yet know what causes MIS-C and who is at increased risk for developing it. Learn about MIS-C.

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%2Fgroups-at-higher-risk.html#children-underlying-conditions

What can you do?

- AAP strongly advocates that all policy considerations for the coming school year should start with a goal of having students physically present in school

- "**There are leaders, and there are those who lead**"
  - AAP Hawaii Chapter convening workgroup to connect DOE w/ pediatric expertise to help foster scientific approach to school policy development

https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/

10 Risk Communication Strategies

Societal Experts Action Network: Encouraging Adoption of Protective Behaviors to Mitigate the Spread of COVID-19

- Use Clear, Consistent, and Transparent Messaging
- Avoid Undue Attention to the Frequency of Socially Undesirable Behaviors
- Foster a Sense of Efficacy and Avoid Fatalism
- Appeal to the Collective Good of One's Community
- Use Messengers Trusted by the Target Audience
- Tailor the Framing of the Message to the Audience
- Link Prevention Behaviors to People's Identities
- Highlight Social Disapproval of a Target Audience Member's Failure to Comply When It Occurs
- Highlight the Growing Prevalence of Behavior Change within the Target Audience
- When It Occurs
- Avoid Repeating Misinformation, Even to Debunk It

https://www.nap.edu/catalog/25881/encouraging-adoption-of-protective-behaviors-to-mitigate-the-spread-of-covid-19

Resources

- Resources for clinicians advising schools and community groups on strategies to prevent and manage COVID-19 (Massachusetts General Hospital): https://bit.ly/mghcovidlibrary

- Curated COVID-19 medical literature by pediatricians: https://dontforgetthebubbles.com/

- AAP COVID-19 Planning considerations for School re-entry: https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/

Asthma & COVID-19

- Still a lot of unknowns to date:
  - Evidence is mixed regarding pre-existing asthma condition and impact on COVID-19 severity
  - Unclear if COVID-19 triggers viral-induced asthma exacerbation.

- What is known:
  - It is difficult to differentiate an asthma exacerbation from COVID-19
    - Dry cough and shortness of breath are among the most common presenting symptoms of COVID-19
    - Fever can be found in both COVID-19 and non-COVID-19 infections that can trigger asthma

https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/evidence-table.html
Van Bever HP, Chng SY, Goh DY. Childhood severe acute respiratory syndrome, coronavirus infections and asthma. Pediatr Allergy Immunol 2004;15:206-9.
Thumerelle C, Deschildre A, Bouquillon C, Santos C, Sardet A, Scalbert M, et al. Role of viruses and atypical bacteria in exacerbations of asthma in hospitalized children: a prospective study in the Nord- Pas de Calais region (France). Pediatr Pulmonol 2003;35:75-82.

Treat your uncontrolled asthmatics

- Schools will send home students with respiratory symptoms

- **Now may be the best time to assess need for, or reinforce adherence to, controllers for those who have persistent asthma**
  - (Resources on asthma control assessment end of this section)

Asthma meds during COVID-19

- Nebulizers may be aerosolized generating procedure[1,2,3]
  - Converting to inhalers is possible for vast majority of children
- Alternative: meter-dose inhalers (MDIs) with valved-holding chambers
  - Large amount of evidence that MDIs are effective, efficient, and potentially less costly than nebulizers (J of hospital medicine summary), used even in older infants
- But albuterol nebulized *just* works better than MDI?
  - 2 puffs MDI (90 mcg x 2) ≠ 1 nebulized vial (2500 mcg)
  - Lung deposition properly using MDIs with holding chambers is ~6 times greater than jet nebulizer[4]
  - That "satisfying" mist you see is wasted medicine not depositing in lower airways

1.) https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-faq.html
2.) Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J. Aerosol generating procedures and risk of transmission of acute respiratory infections to healthcare workers: a systematic review. *PLoS One*. 2012;7(4):e35797.
3.) Amirav I, Newhouse MT. Transmission of coronavirus by nebulizer: a serious, underappreciated risk. CMAJ. 2020;192(13):E346.
4.) Rubin BK. Air and soul: the science and application of aerosol therapy. Respir Care. 2010;55(7):911-921.

What do I have to do for asthmatics going to DOE school?

- Complete form SH-36 for school administration, or 4-9A for self-administration
  - Private schools will have their own forms and regulations
  - Nebulizers require nursing (requiring N95, etc)

- Prescribe inhaler and valved-holding chamber. DOE requires "FOR SCHOOL USE" labeled on medication prescription

EMERGENCY RESCUE MEDICATION (Name/Dosage/Route)	TIME TO BE GIVEN	DESCRIPTION OF	OTHER ADMNISTRATION INFORMATION Rescue Medications
EMERGENCY RESCUE MEDICATION -- Epinephrine: ☐ **Epinephrine auto-injector,** Premeasured dose of **0.15 mg**, IM (33-66 lbs) ☐ **Epinephrine auto injector,** Premeasured dose of **0.3 mg**, IM (>66 lbs)	**First administration:** immediately **upon onset** of life-threatening symptoms. **Second administration:** Repeat dose in ___ minutes of first administration.	**Life threatening SYMPTOMS:** (any one or more) ☐ Hives, itching, and flushed or pale skin ☐ Swelling of the face, eyes, lips, or throat ☐ Wheezing and trouble breathing ☐ Weak and rapid pulse ☐ Nausea, vomiting, or diarrhea ☐ Dizziness, fainting, or unconsciousness ☐ Other (fill in):	**Actions for Epinephrine:** The school shall call 911 immediately after first administration. The school shall notify the parent/legal guardian after calling 911.
EMERGENCY RESCUE MEDICATION -- Inhaler: ☐ **Inhaler (Name):** ☐ Albuterol (90 mcg/puff) ☐ Levalbuterol (45 mcg/puff) _____ **Dosage**_____**/#puffs:**_____ (6 puffs can be used for >/=5 year olds. Do NOT prescribe a range of puffs such as 4 to 6) ☐ Use with valved-holding chamber (will need to be prescribed one for school, make sure prescribe with or without facemask as appropriate)	**Upon onset of Asthma Symptoms.** ☐ Repeat dose in 15 minutes of first administration if continues to have asthma symptoms as described in next column	**Asthma SYMPTOMS:** (any one or more) ☐ Shortness of breath ☐ Chest tightness ☐ Wheezing ☐ Frequent coughing ☐ Other: (fill in)	**Action for Inhaler:** If assigned nurse is available, nurse can assist, assess student for decision on disposition. If no nurse is available, call parent to pick up student after administration of medication per SHA Manual procedure. Call 911 if indicated in student's Emergency Action Plan.

Are facemasks contraindicated in all asthmatics?

- No! (not necessarily)
- If a **school-aged** asthmatic is having difficulty breathing because of a facemask, consider the following:
  - Their asthma may not be well controlled.
    - They already have airway obstruction, thus may feel even more uncomfortable with facemask
  - Their mask fabric may be too occlusive. The WHO recommends using fabric that allows you to breathe while talking and walking quickly.
  - They are wearing is while exercising. The WHO recommends people should NOT wear masks while exercising (they should maintain physical distancing)

Resources for asthma control assessment

- There are various resources for assessing/managing asthma control
  - AAP "Key points for asthma guideline implementation" (based on EPR3)
  - GINA (Global Initiative for Asthma)
  - NIH Asthma Care Quick Reference (based on EPR3)
  - Asthma Control test (>11 y/o) and Childhood Asthma Control Test (4-11 y/o)
  - Rules of Two® (Baylor College of Medicine)
    - Do you have asthma symptoms or use your quick-relief inhaler more than 2 times/week?
    - Do you awaken at night with asthma symptoms more than 2 times/month?
    - Do you refill your quick-relief inhaler more than 2 times/year

Q&A

HAWAIʻI PACIFIC HEALTH | HAWAIʻI HEALTH PARTNERS

CREATING A HEALTHIER HAWAIʻI

Thank you!

- A recording of the meeting will be available afterwards.
- Unanswered question?
  - Contact us at Covid19Bulletin@hawaiipacifichealth.org

HAWAIʻI PACIFIC HEALTH | HAWAIʻI HEALTH PARTNERS