How COVID-19 led to the rise of Telemedicine VC11

A New Form Of Patient Care Is Emerging In the ED

Bernard W. Dannenberg, MD
Clinical Professor of Emergency Medicine and Pediatrics
Stanford University Health Care
Stanford Children's Health



I have no conflicts of interest

(unfortunately)

The Special Bond Between Patient and Physician



RADIO NEWS

25 Cents
April
1924
Over 200 Illustrations

Edited by H. GERNSBACK

THE RADIO DOCTOR—*Maybe!*



IN THIS ISSUE:

Sir Oliver Lodge, F.R.S.
Dr. J. A. Fleming, F.R.S.
F. W. Dunmore and
F. H. Engel of
Howard S. Pyle

THE 100% RADIO MAGAZINE

HIPAA

Health Insurance Portability and Accountability Act of 1996


The I.T. Department is
"working on it"

No problem









Problem







Babysteps

2005 iMac

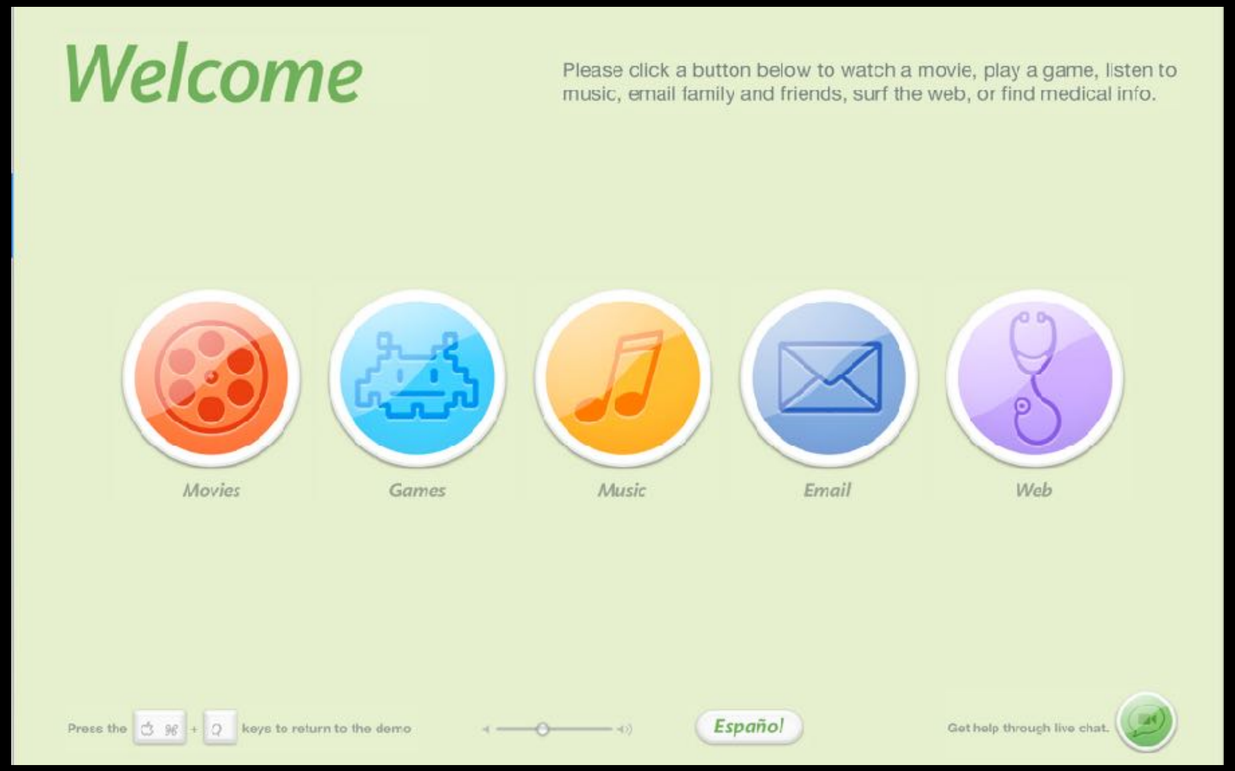
Live Chat via Text

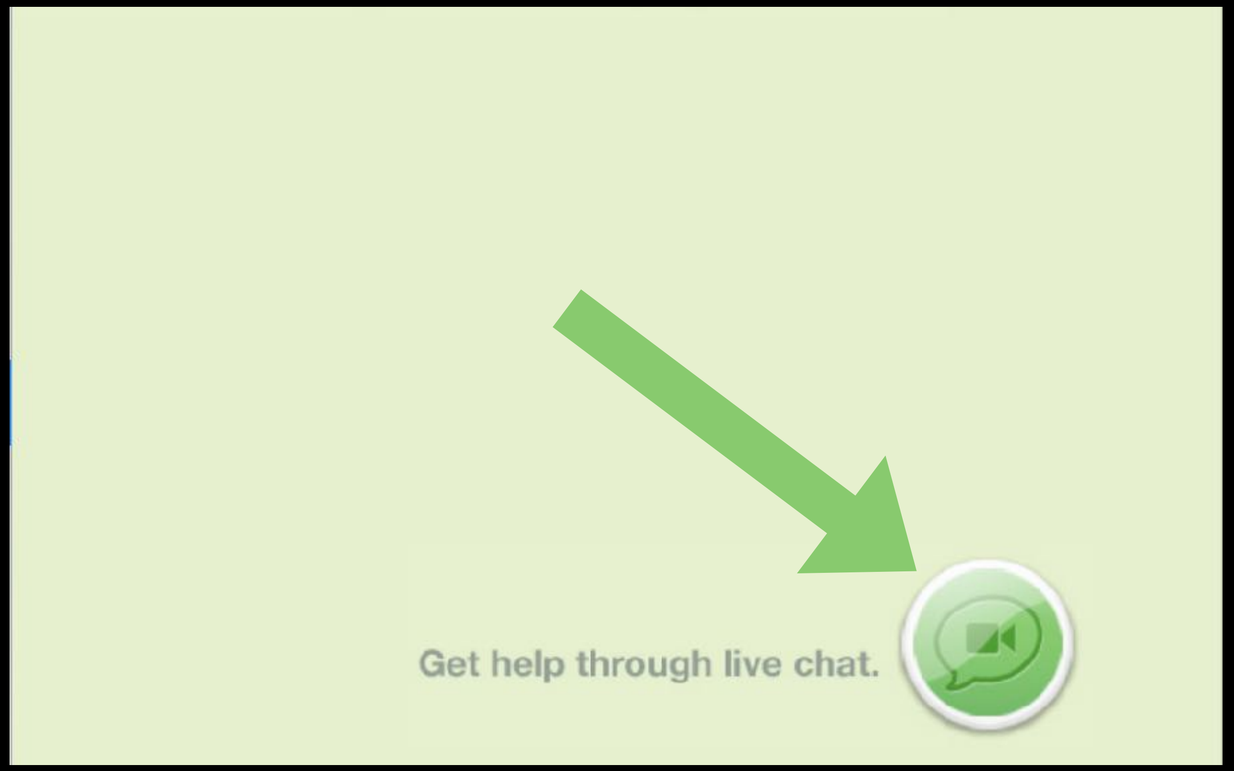




2005 iMac

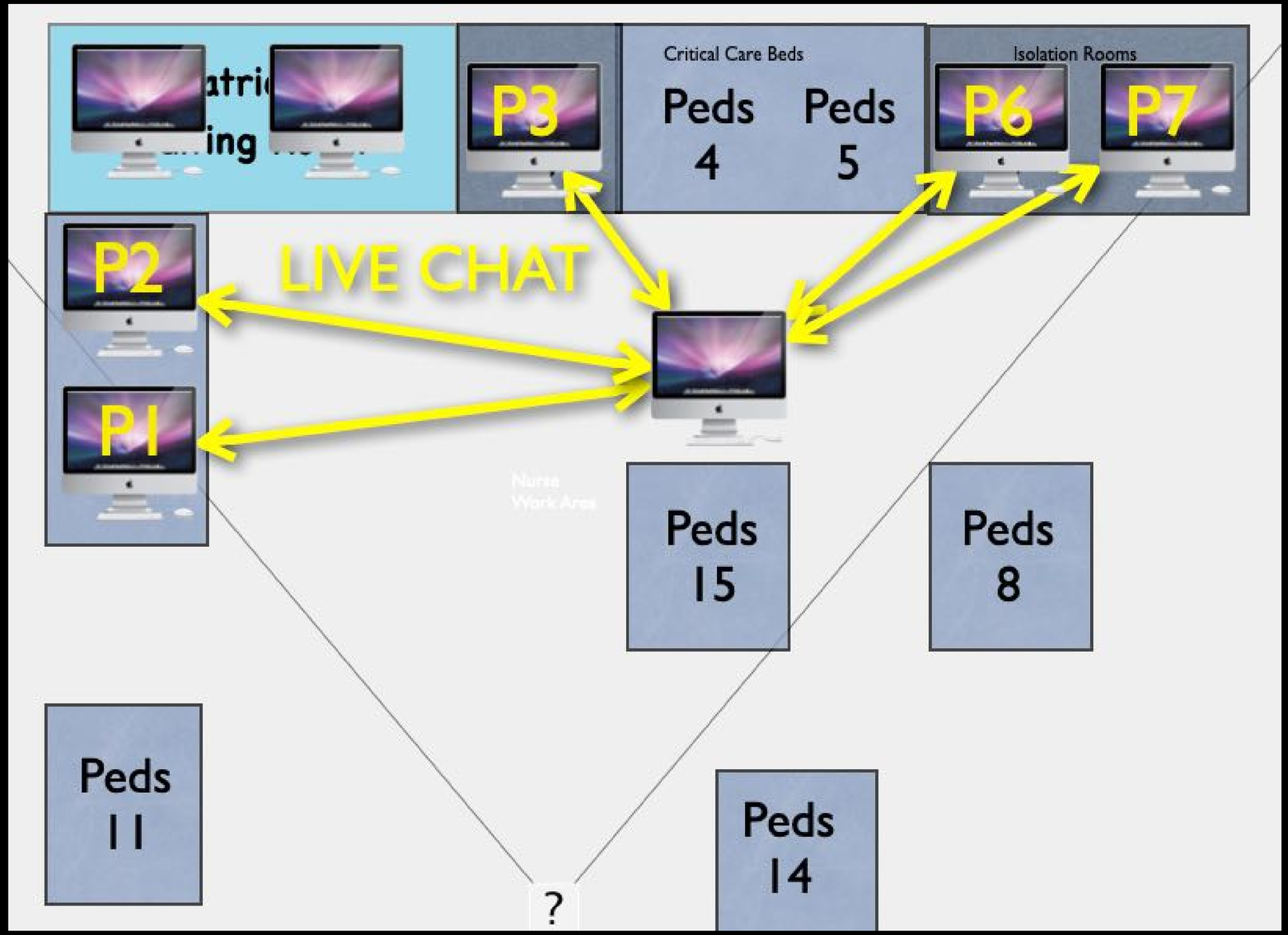
Live Chat via Text





2005 iMac

Live Chat

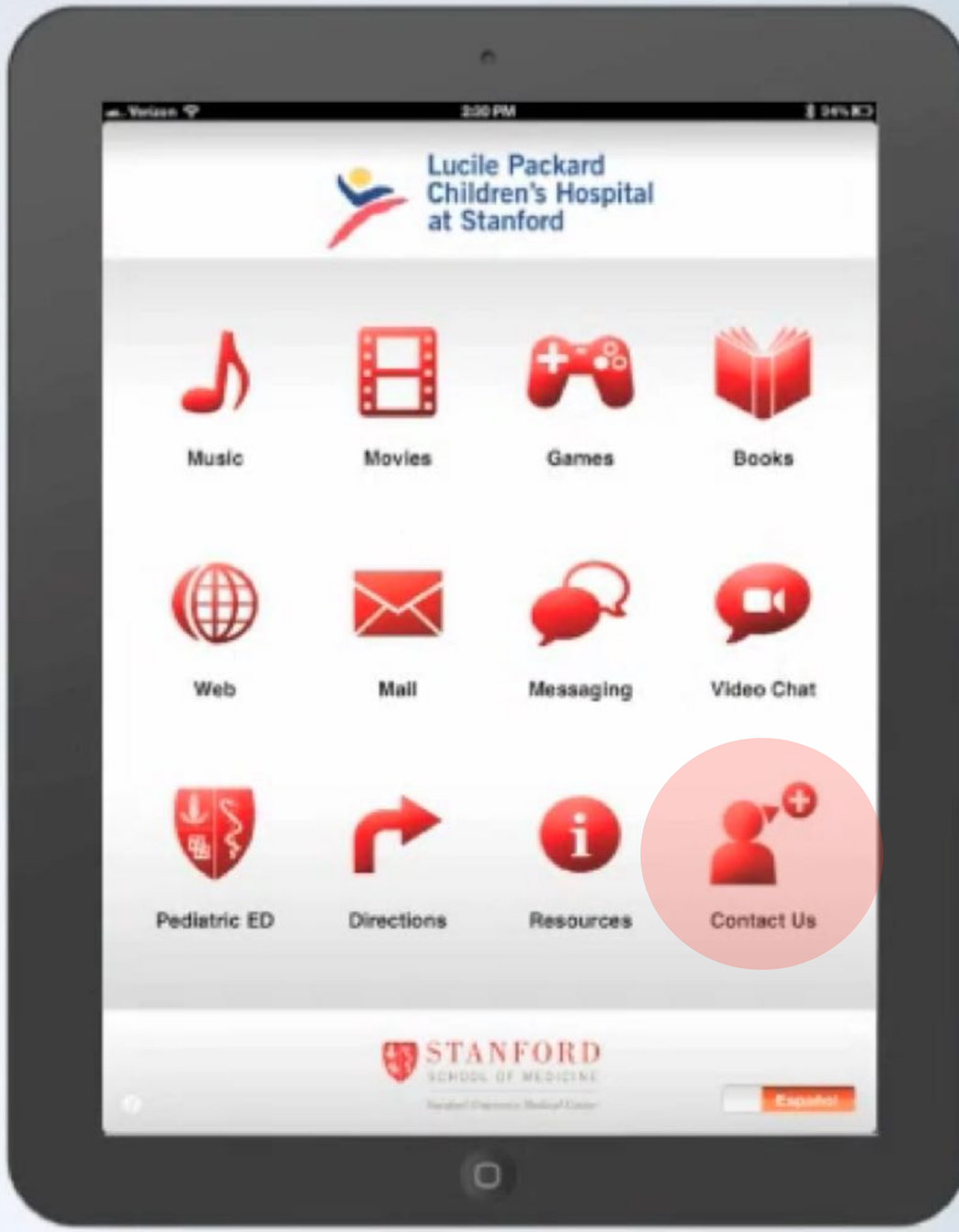


2012 iPads

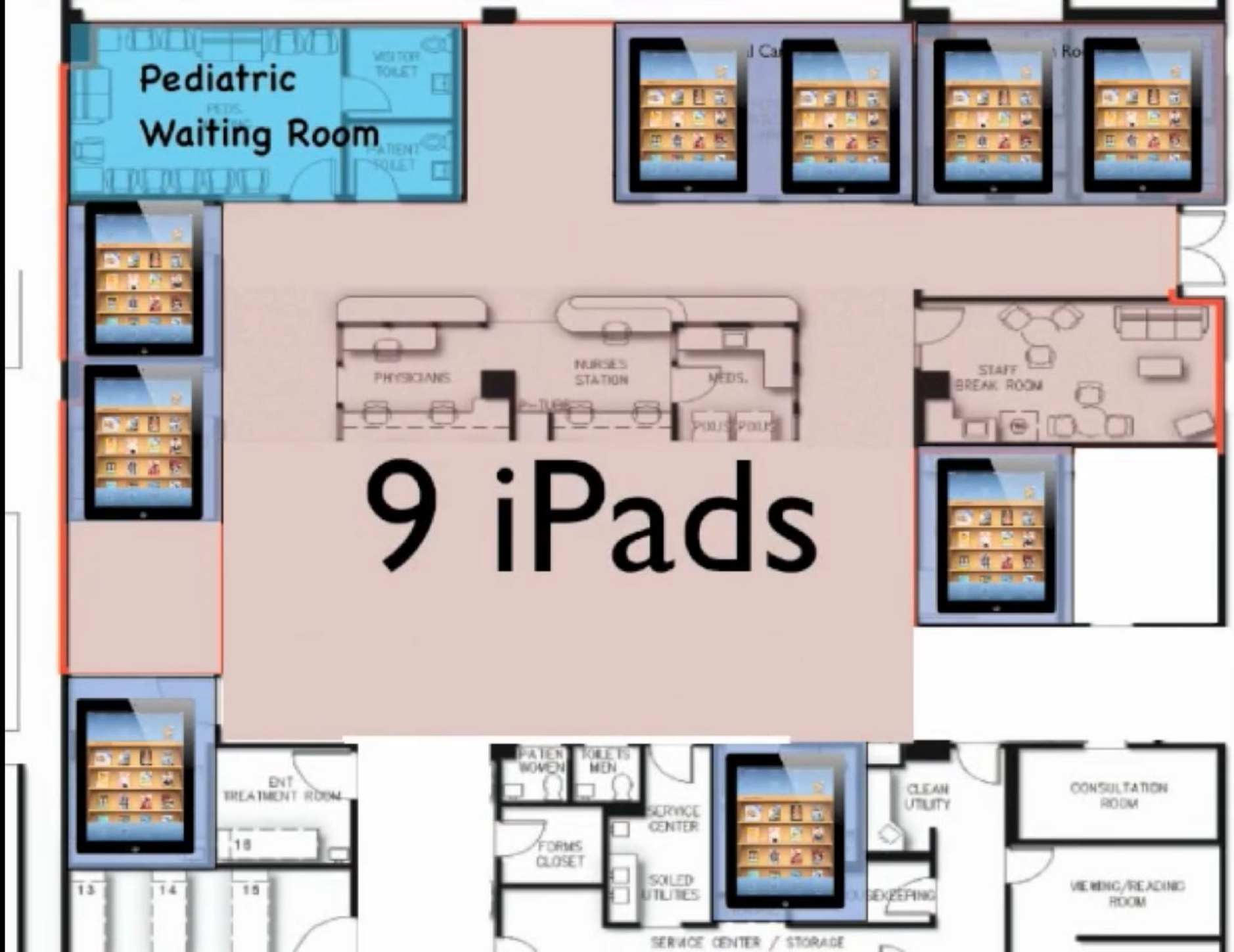


2012 iPads

APP
DESIGNED FOR THE
PEDIATRIC ED

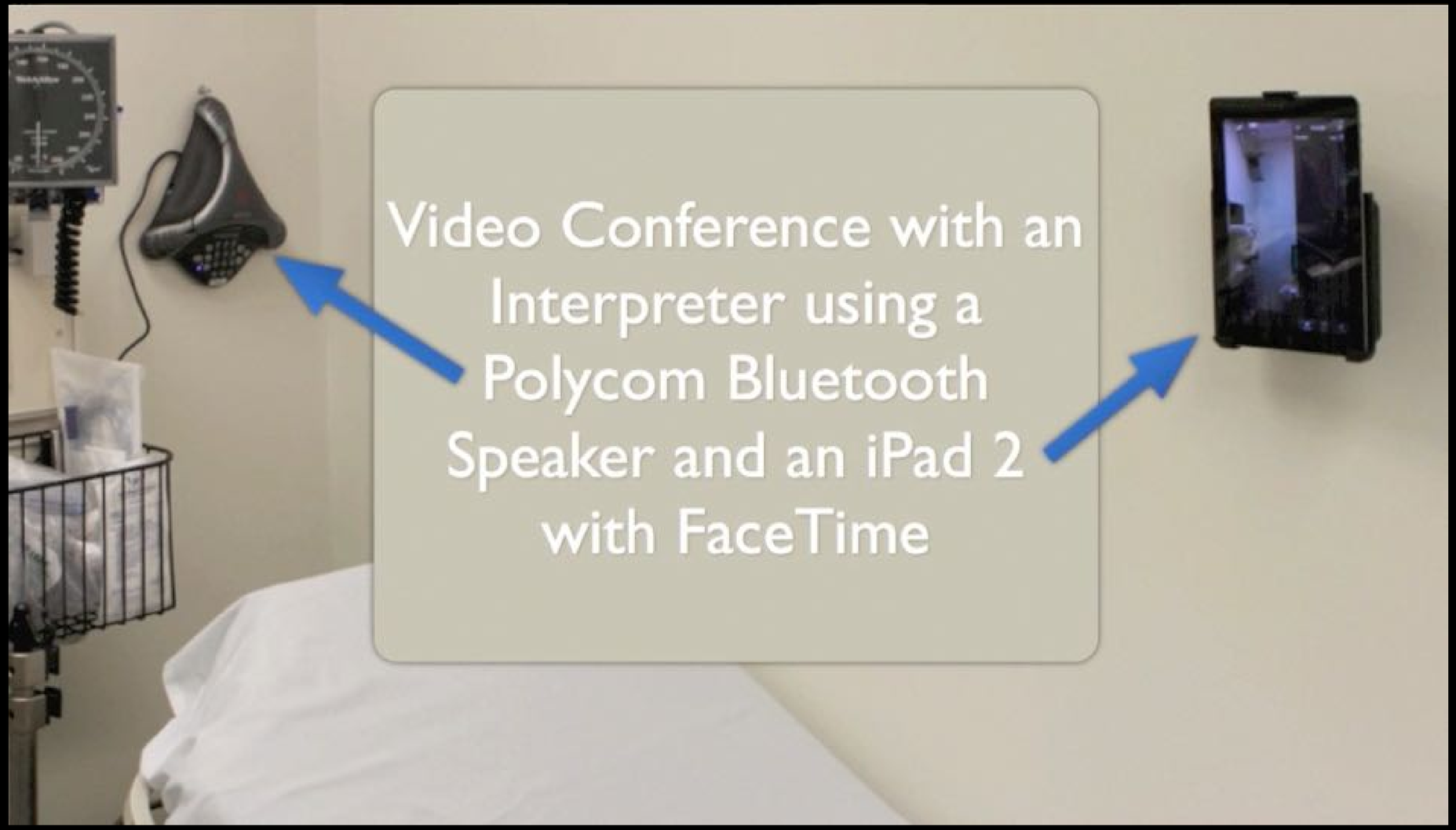


2012 iPads


Pediatric
Waiting Room
VISITOR TOILET
PATIENT TOILET
PHYSICIANS
NURSES STATION
MEDS.
STAFF BREAK ROOM
9 iPads
ENT TREATMENT ROOM
18
13
14
15
PATIENT WOMEN
TOILETS MEN
SERVICE CENTER
FORMS CLOSET
SOILED UTILITIES
HOUSEKEEPING
CLEAN UTILITY
CONSULTATION ROOM
VIEWING/READING ROOM
SERVICE CENTER / STORAGE

2014 iPad

Interpreter Service



2014 iPad

Interpreter Service



You never want
a serious crisis
to go to waste,
what I mean by
that
It is an
opportunity
to do things that
you
think you could
not do before

Governor's Executive Order Expands Telehealth Services

April 2, 2020



Consumers Applicants Licensees About Us

Governor's Executive Order Expands Telehealth Services

Governor Gavin Newsom today signed Executive Order N-43-20 (text) expanding protections to medical providers as they amplify the use of video chats and similar applications to provide routine and non-emergency medical appointments in an effort to minimize patient exposure to COVID-19.

The order relaxes certain state privacy and security laws for medical providers, so they can provide telehealth services without the risk of being penalized. This action is similar to the federal HHS Office for Civil Rights waiver issued on March 17, 2020 regarding federal privacy and security laws.

Please visit the Board's website for changes to requirements in response to COVID-19.

California continues to issue guidance on preparing and protecting California from COVID-19. Consolidated guidance is available on the California Department of Public Health's Guidance website and the California Coronavirus (COVID-19) Response website.

All health professionals are encouraged to visit California Health Corps for more information and to register for the California Health Corps.

Attention: Please do NOT reply to this email. If you have any questions or require further assistance, please contact the Board at webmaster@mbc.ca.gov.

Governor's Executive Order Expands Telehealth Services

April 2, 2020

WHEREAS on March 17, 2020, the Office for Civil Rights in the U.S. Department of Health and Human Services issued guidance ("Notification of Enforcement Discretion for Telehealth Remote Communications During the COVID-19 Nationwide Public Health Emergency," available at https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html) announcing that the Office, in the exercise of its enforcement discretion, will not impose penalties for noncompliance with regulatory requirements imposed under the HIPAA Rules, as to covered health care providers in connection with the good faith provision of telehealth during the COVID-19 nationwide public health emergency; and

SARS-CoV-2

Telehealth Services

- 1. Preserve Personal Protective Equipment (PPE) stock
- 2. Reduce exposure risk to health care providers
- 3. Allow patients to get virtual medical care instead of a personal visit

iPad

Telemedicine using Zoom

Preservation of PPE



iPad

Telemedicine using Zoom



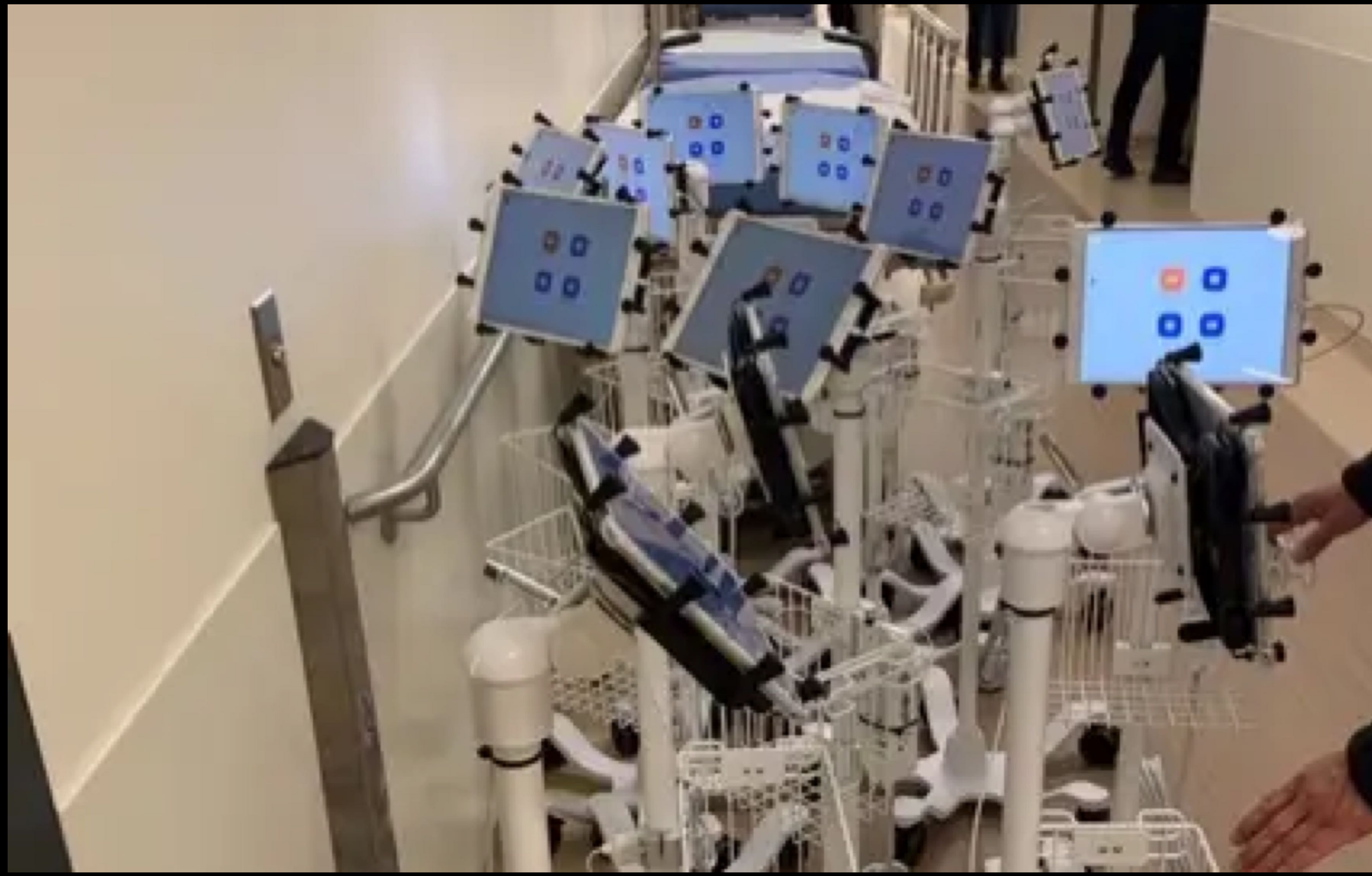
iPad

Telemedicine using Zoom



iPad

Telemedicine using Zoom



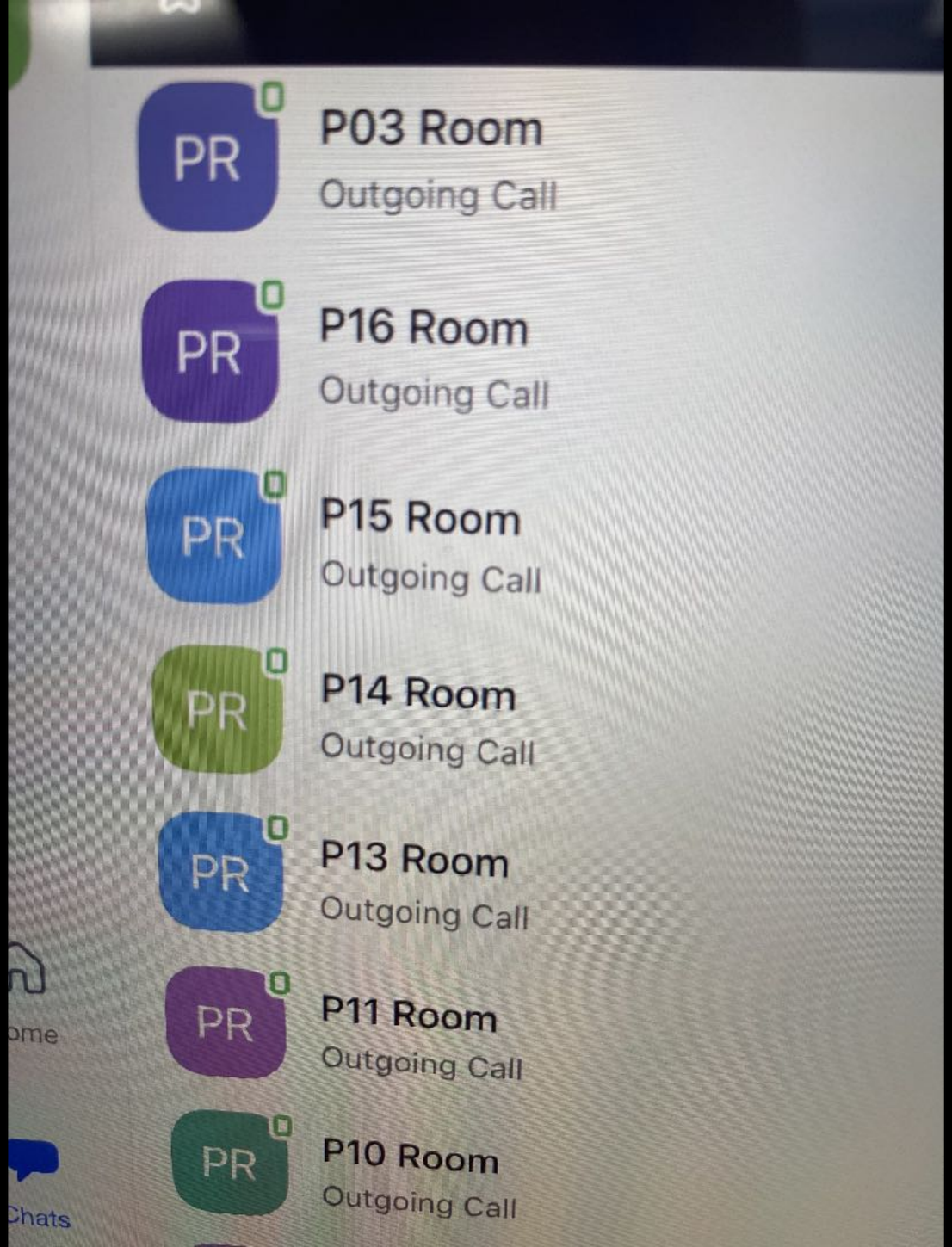
iPad

Telemedicine using Zoom



iPad

Telemedicine using Zoom



iPad

Telemedicine using Zoom



2. Reduce exposure risk to health care providers

Drive Through Covid-19 Testing: SCREENING





What are you here for?
Fever, cough, sore throat or shortness of breath?
O2 Sat if short of breath

- Pulse < 110
- Age < 65
- Temp < 38.5
- O2 Sat > 93%

Emergency Department Early Response

Drive Through Covid-19 Testing: REGISTRATION



If patient qualified:

Screener texts picture to registration

Quick registration

Arm band prints in garage

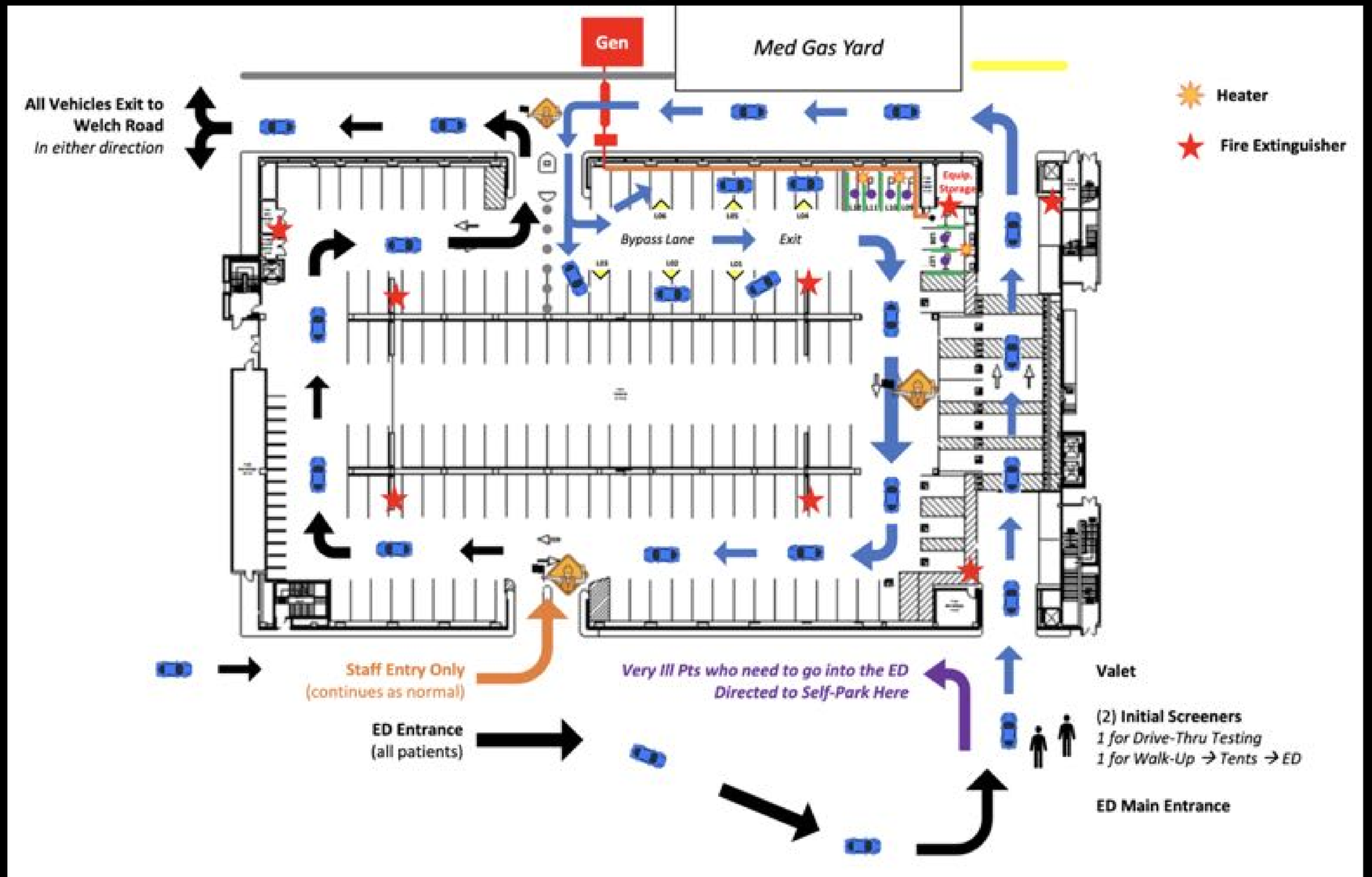
Garage RN also prepared

Screener may also type vehicle model/color



Emergency Department Early Response

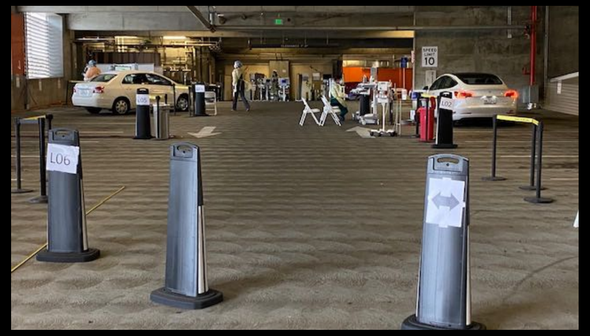
Drive Through Covid-19 Testing: PATIENT FLOW

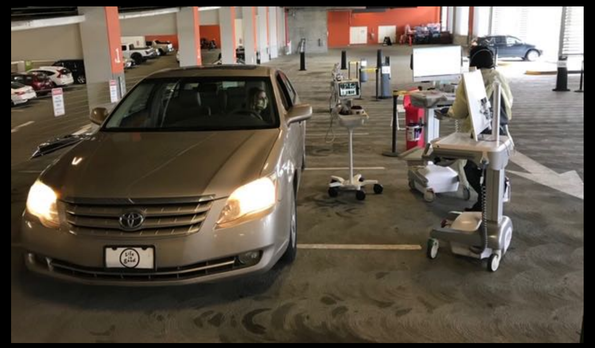


Emergency Department Early Response

Drive Through Covid-19 Testing: EQUIPMENT

Wi-Fi
Generator/heaters
Printer, arm band printer,
Computers on wheels w/label printer
Signs, barriers & traffic person
Hot and Cold PPE zone
Handwashing station
Vital Sign Equipment: O2 Sat, Thermometer
Covid-19 swab
Discharge instructions







Emergency Department Early Response

Drive Through Covid-19 Testing: RN AND TELEMEDICINE ASSESSMENT



Patient view from car



Physician Work Area

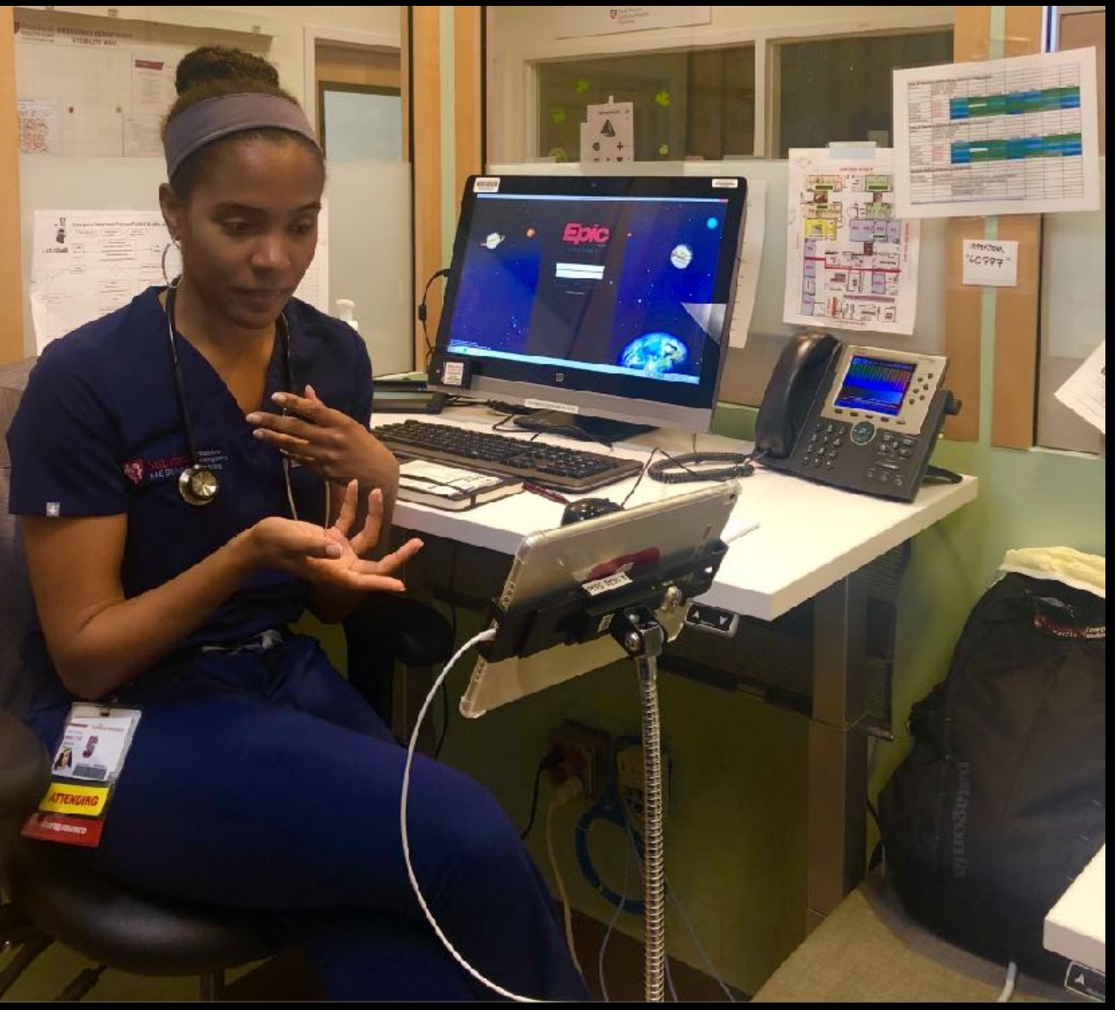
3. Allow patients to get virtual medical care instead of a personal visit

Where did all the patients go?

2020	Jan	Feb	March	April	May	June
Total ED Visits	7,639	7,176	6,512	3,818	4,869	5,469
% increase over last year's volume	11.2%	12.8%	-9.7%	-43.4%	-26.4%	-16.5%

3. Allow patients to get virtual medical care instead of a personal visit

Virtual visits on all ESI 4 & 5 older than 2 years in the Pediatric ED

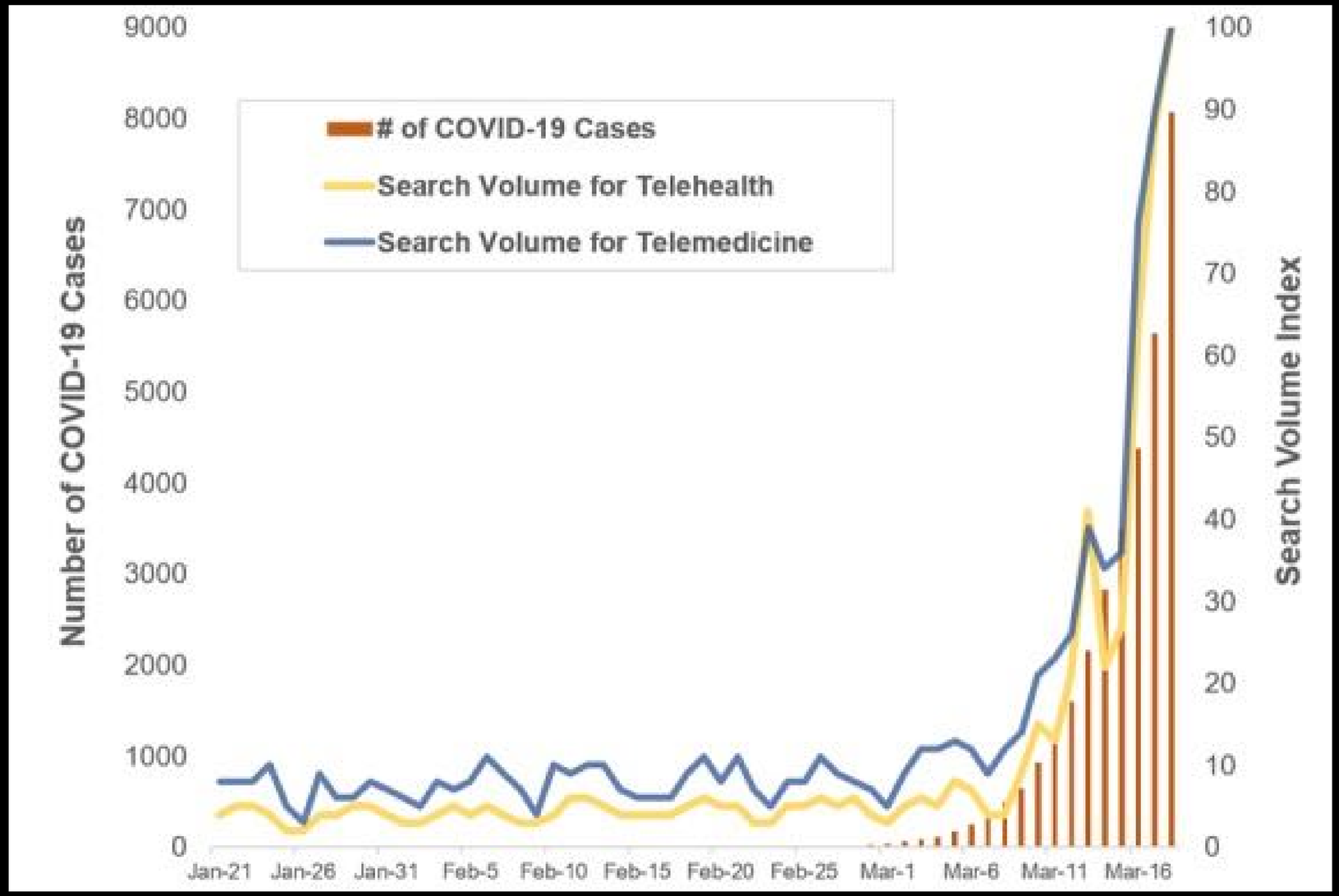






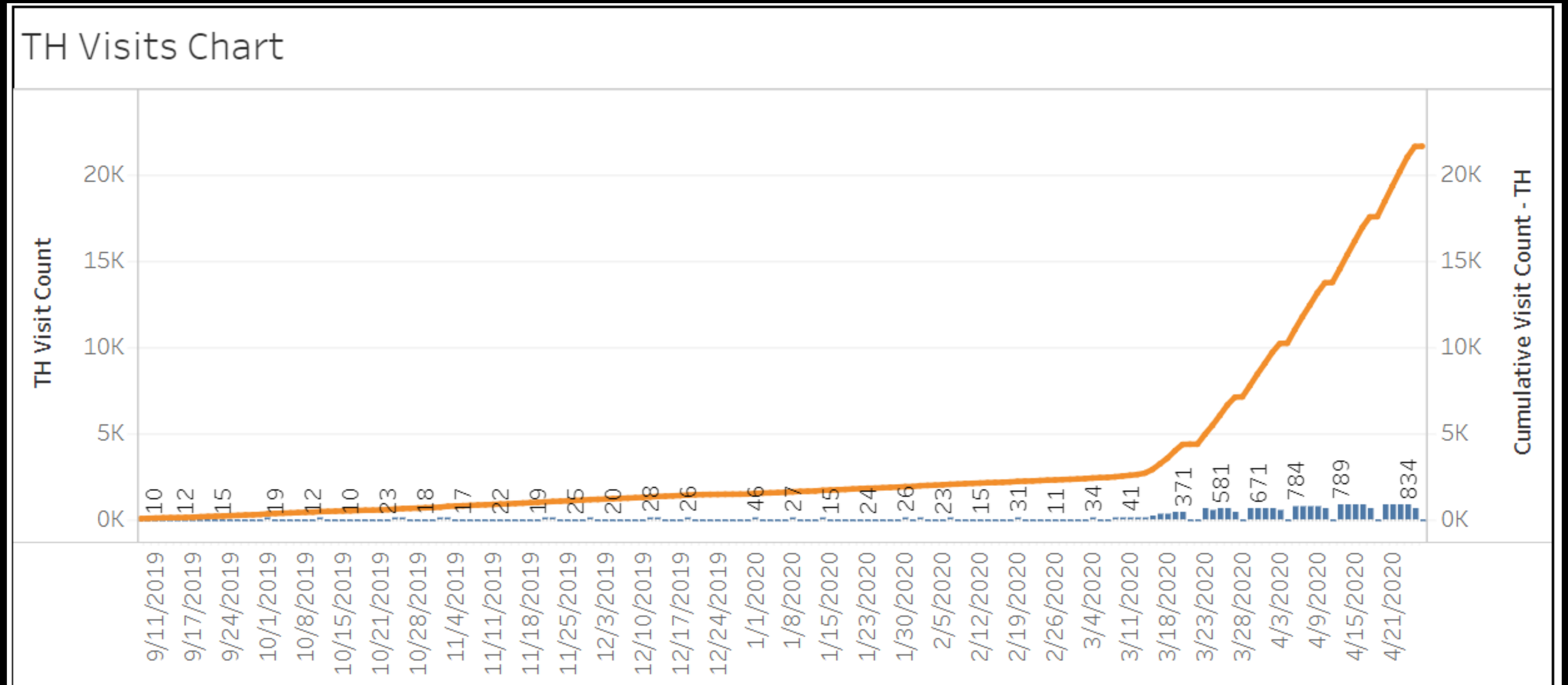
3. Allow patients to get virtual medical care instead of a personal visit

US Population interest in telehealth



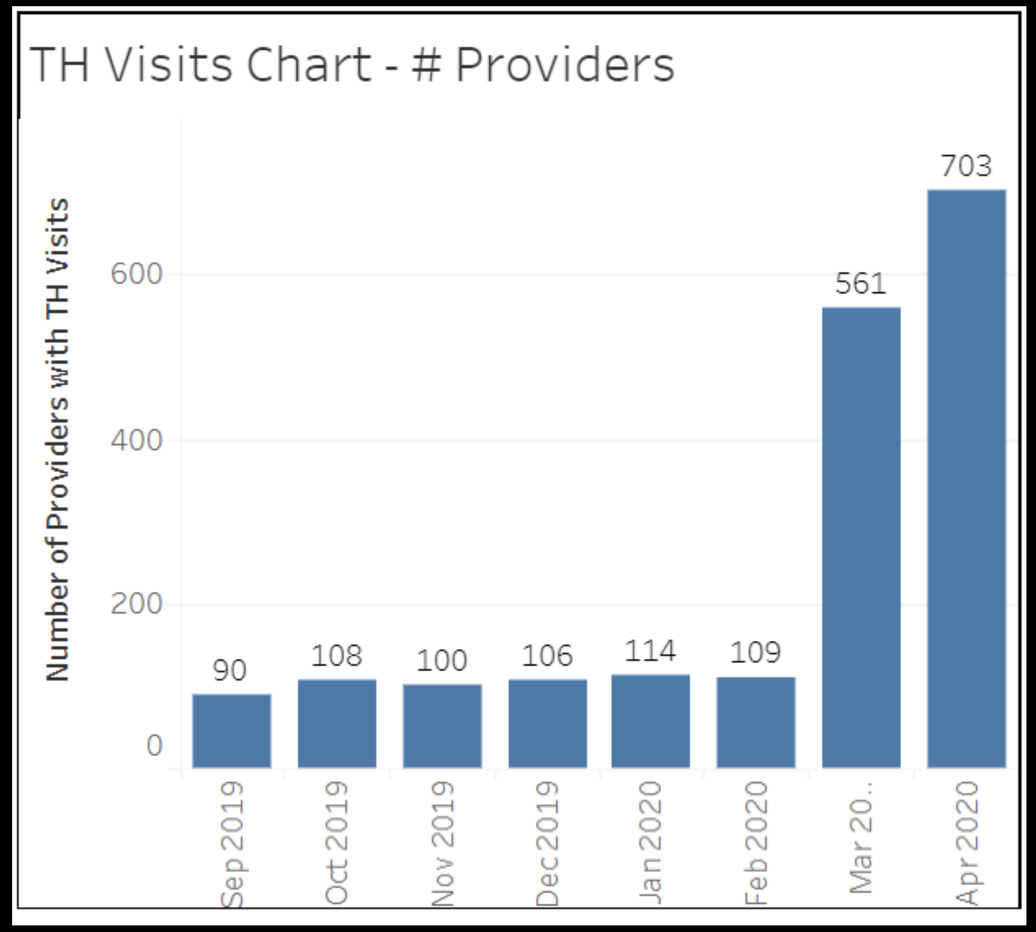
3. Allow patients to get virtual medical care instead of a personal visit

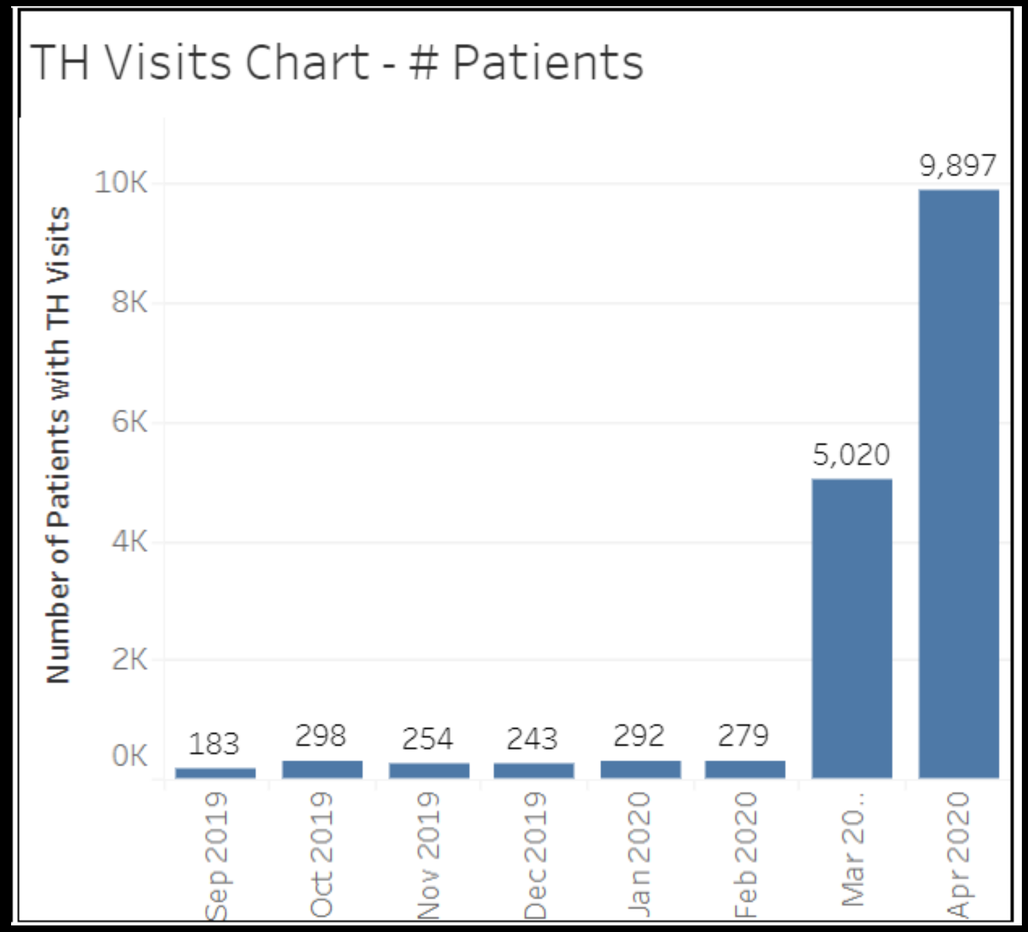
LPCH: 27,000 Telehealth visits in the last 5 years



3. Allow patients to get virtual medical care instead of a personal visit

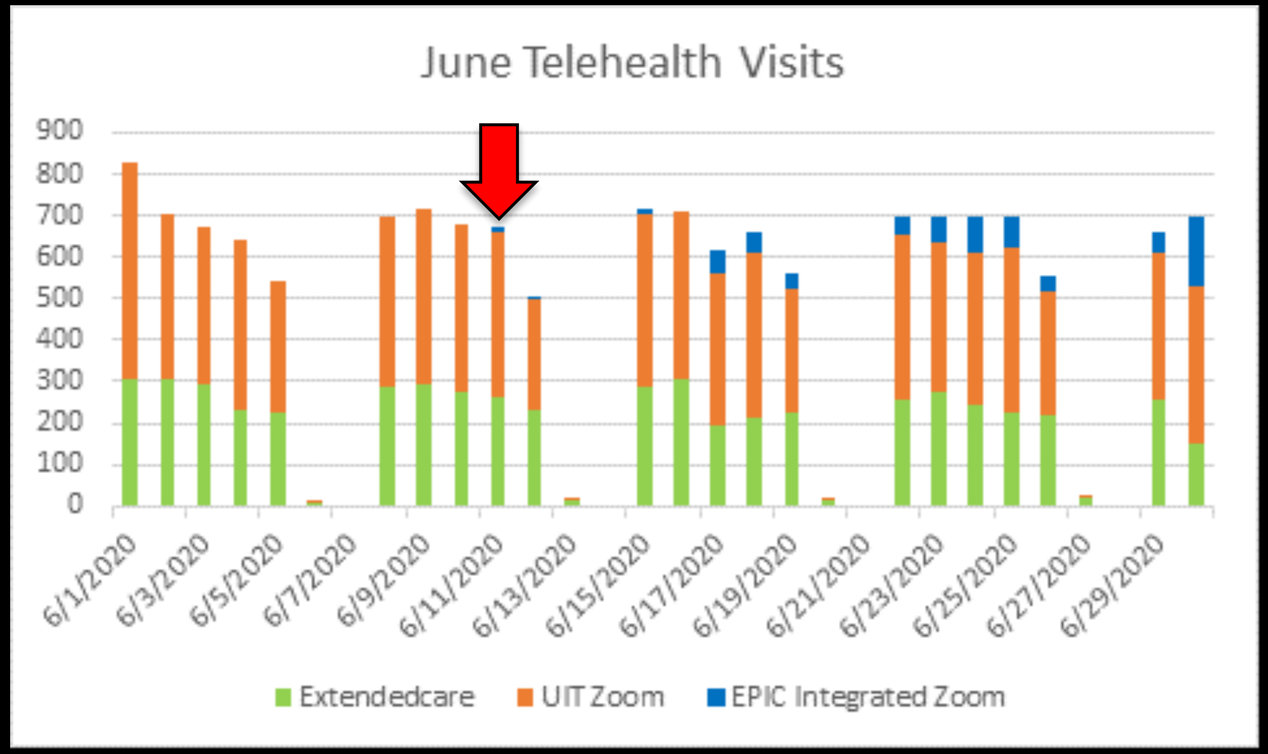
LPCH: Trend Providers and Patients

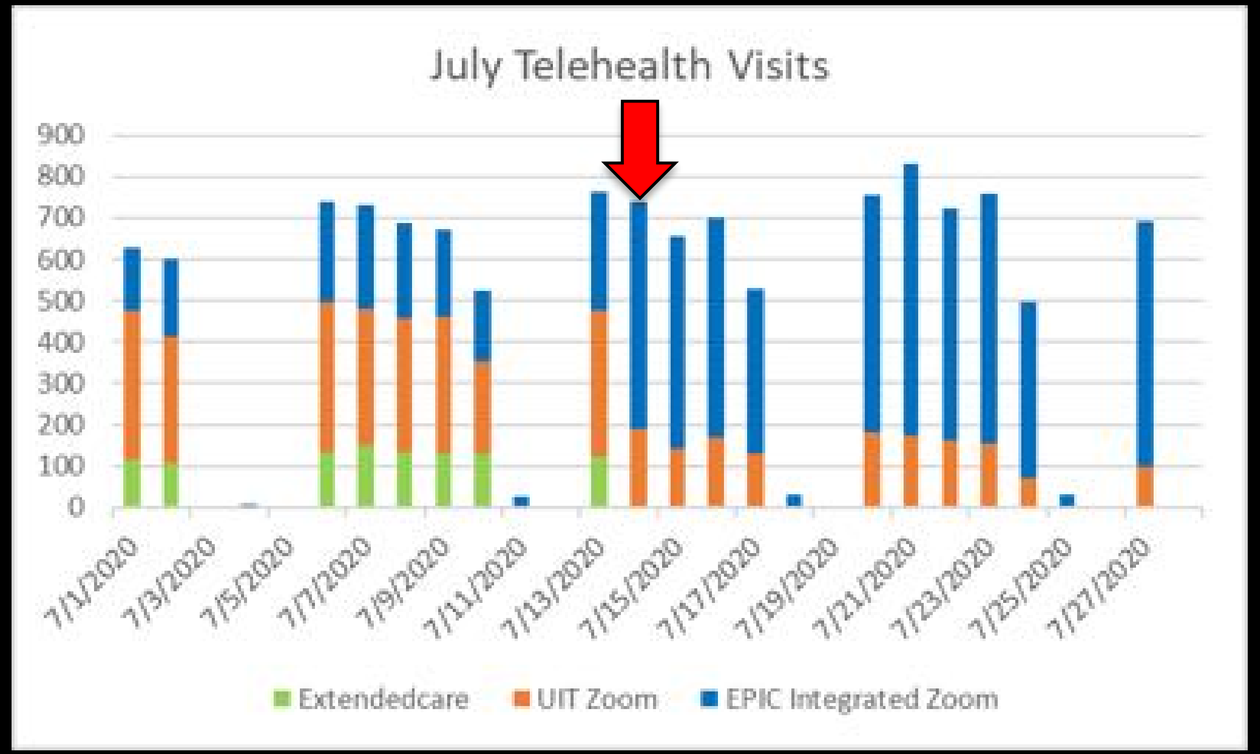




3. Allow patients to get virtual medical care instead of a personal visit

Telehealth Technology Distribution: One login to rule them all





ZOOM Integration into EHR EPIC

3. Allow patients to get virtual medical care instead of a personal visit

Patient and Family Impact



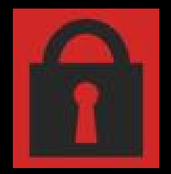
Less missed work and school



Improved quality of life



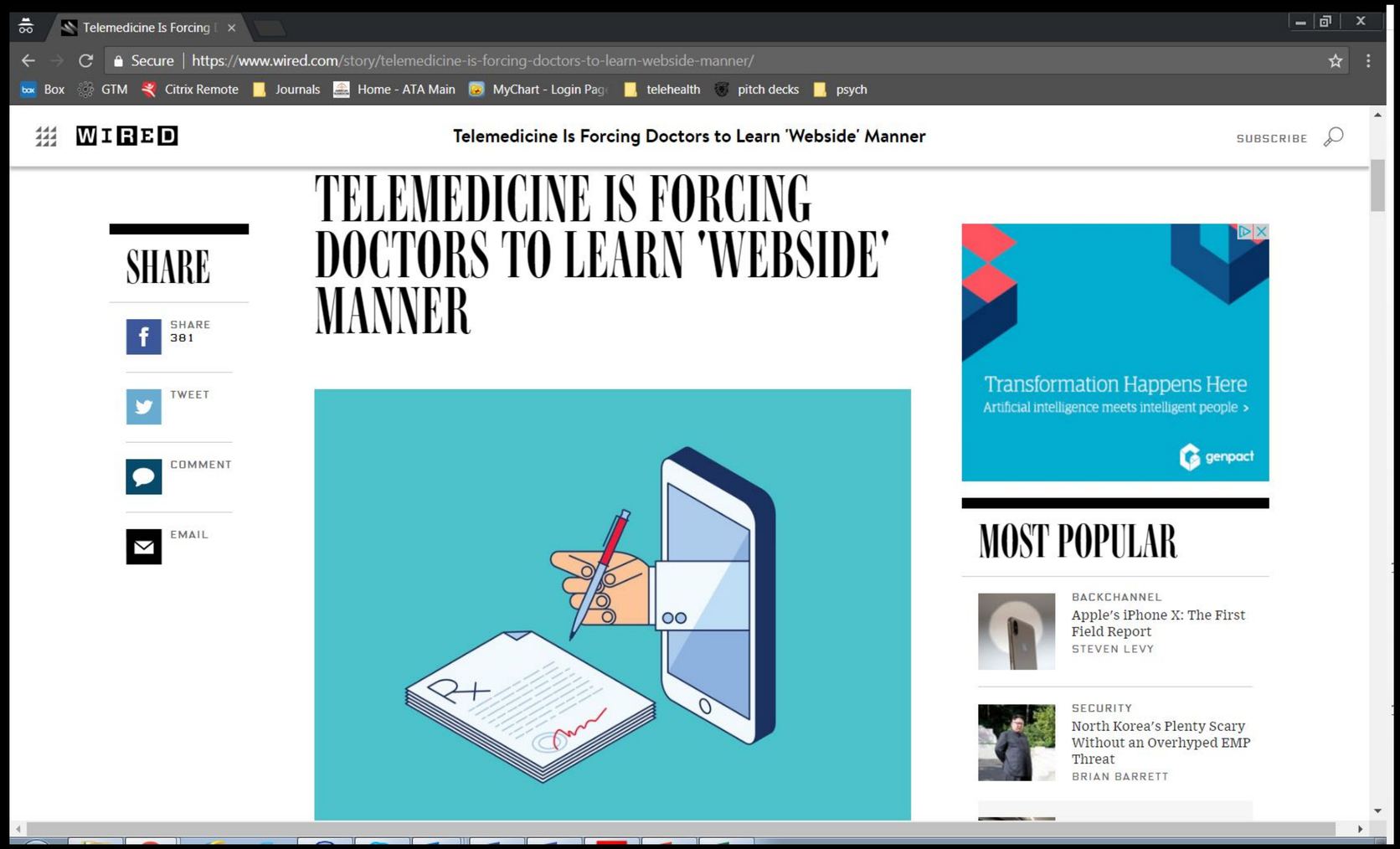
Enhanced autonomy for transition to adult hood



Confidentiality issues

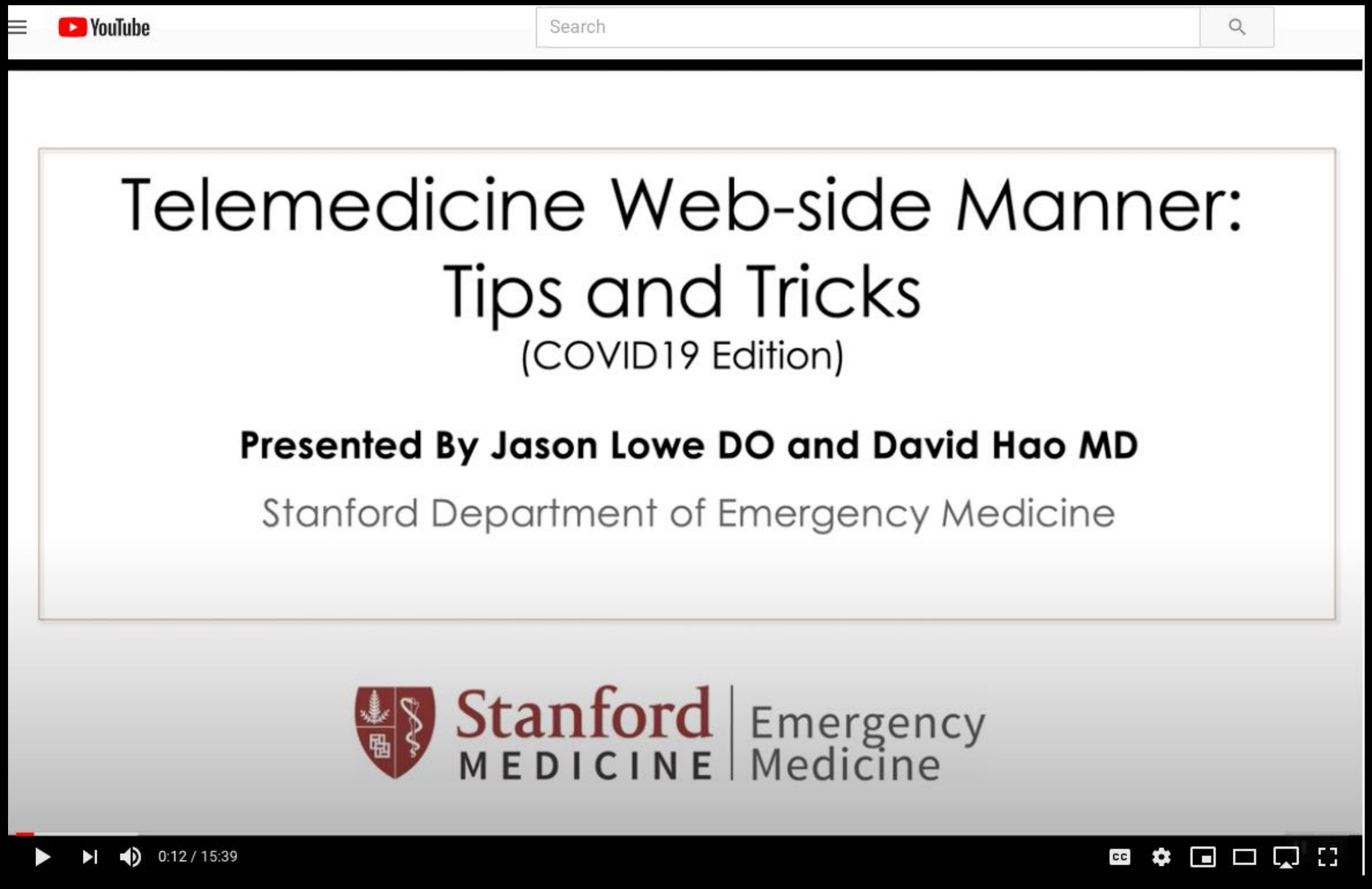
3. Allow patients to get virtual medical care instead of a personal visit

Webside manners



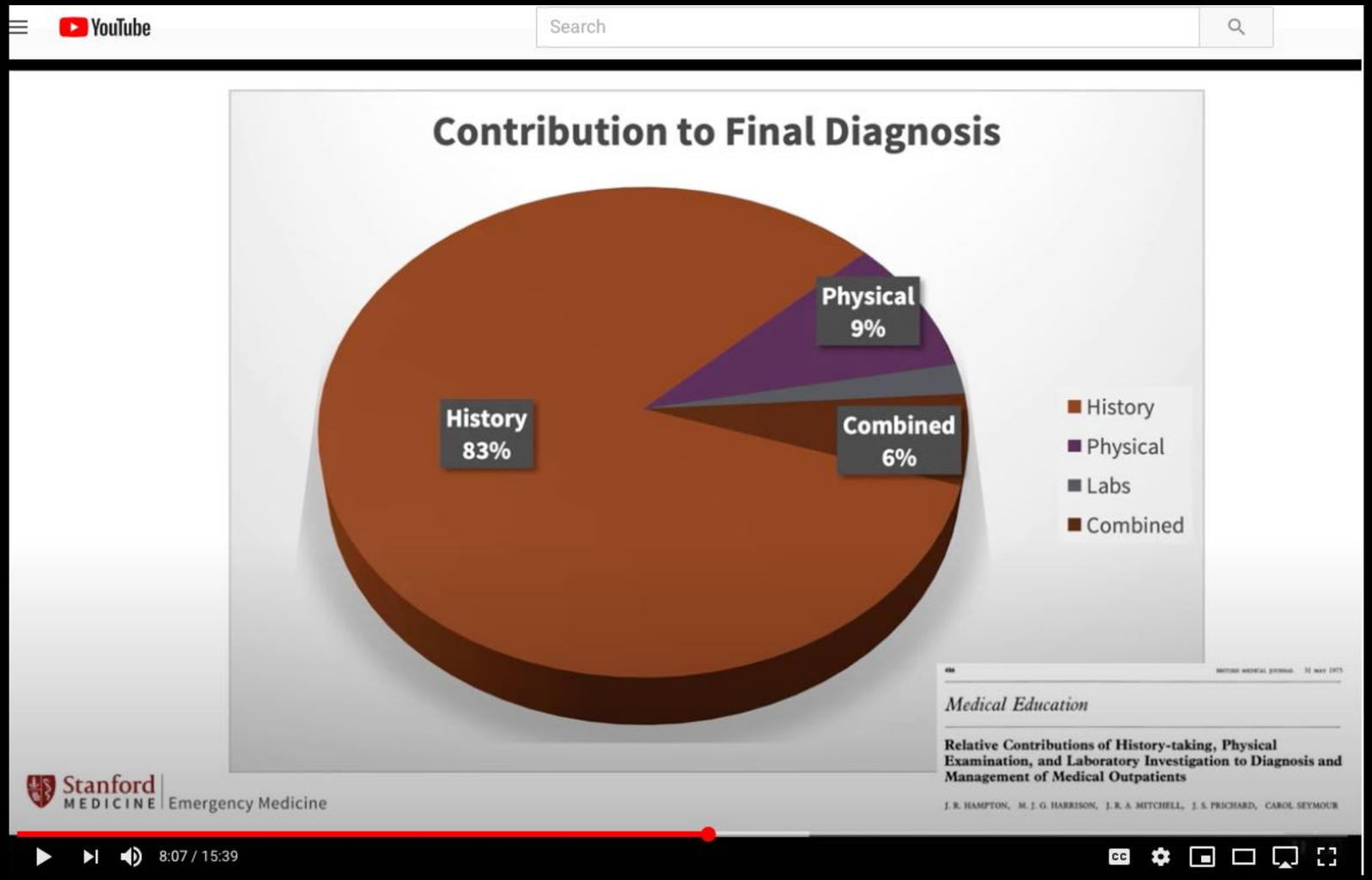
3. Allow patients to get virtual medical care instead of a personal visit

Webside manners, tips & tricks



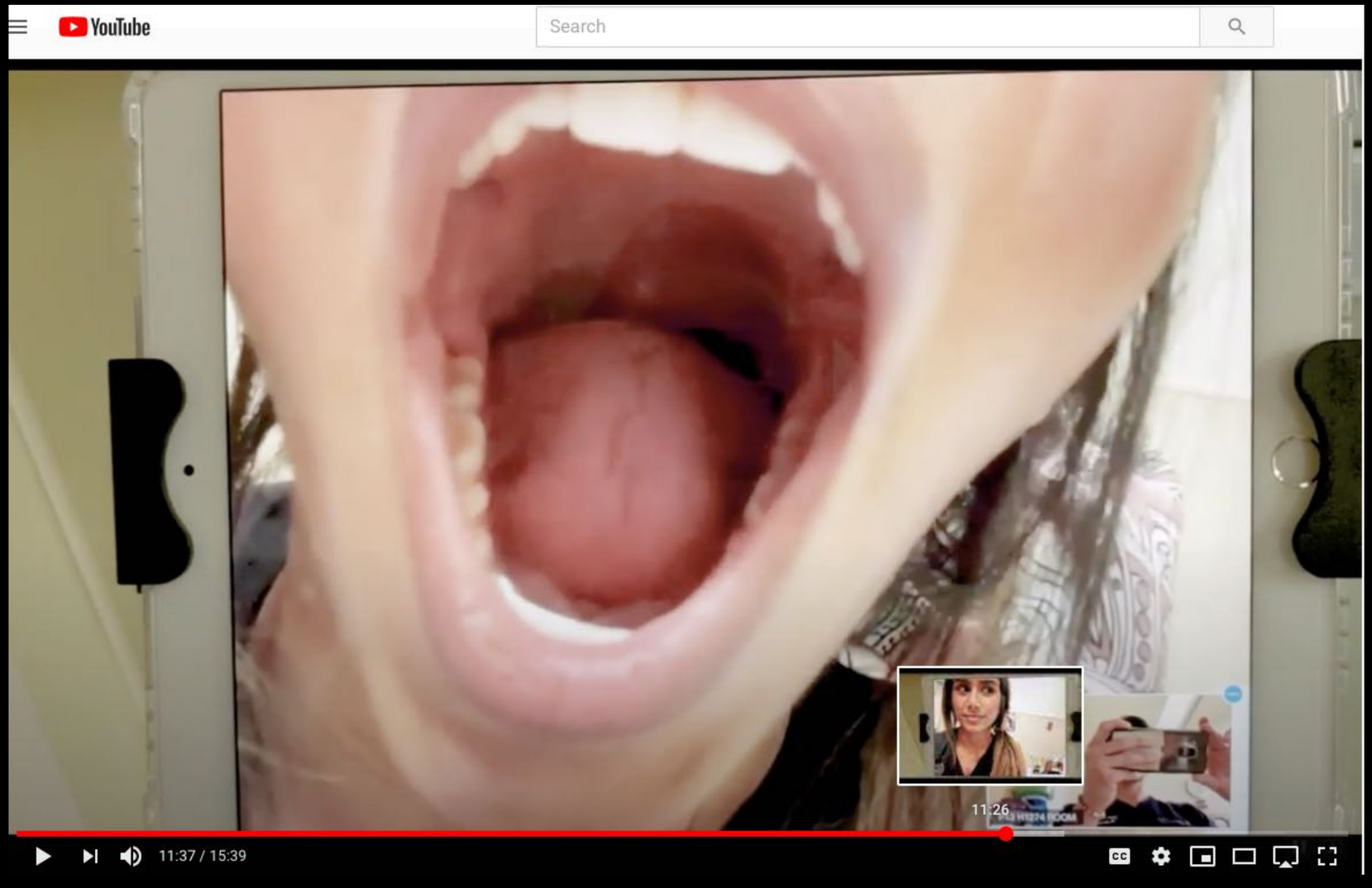
3. Allow patients to get virtual medical care instead of a personal visit

Webside manners, tips & tricks



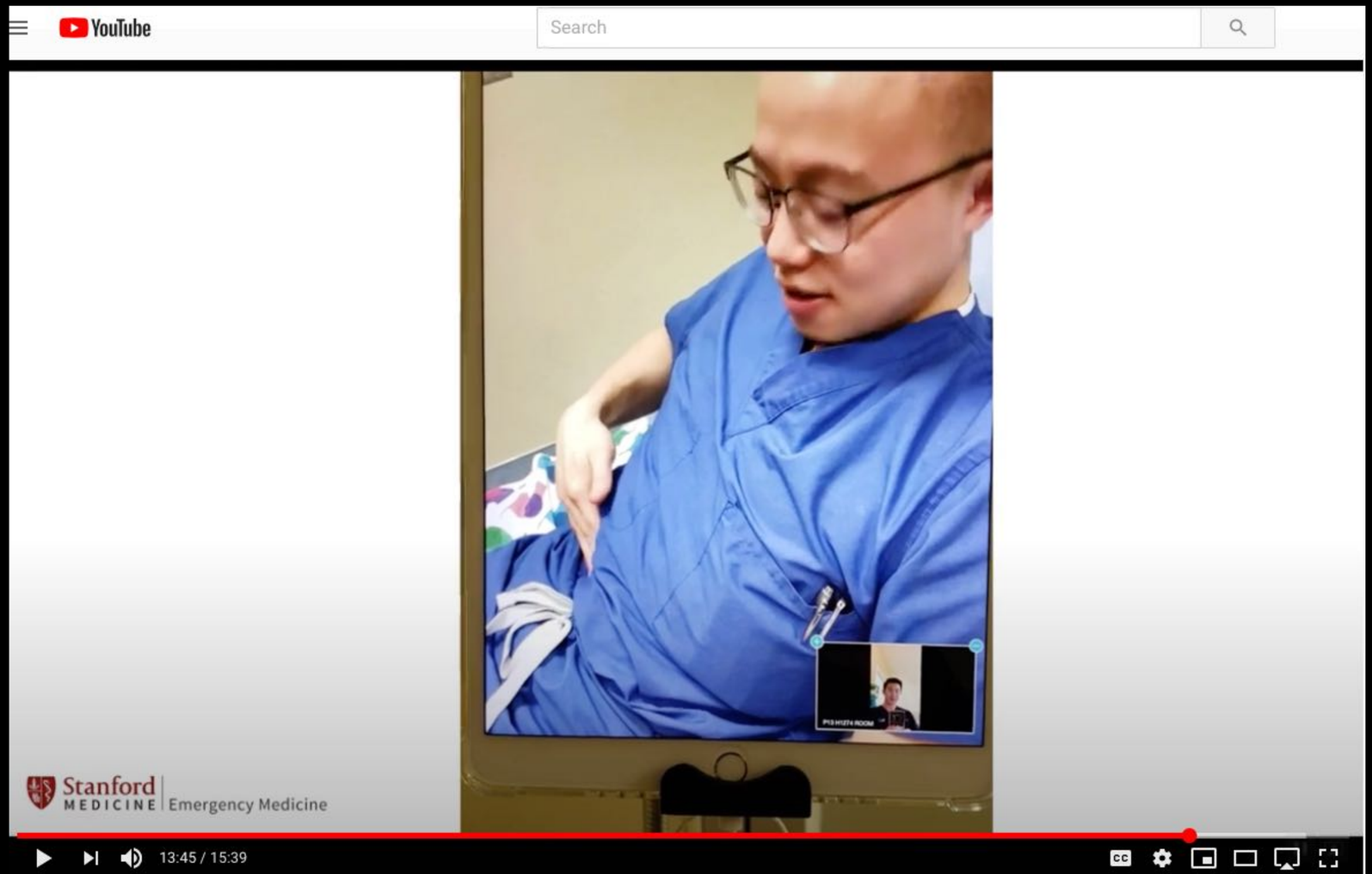
3. Allow patients to get virtual medical care instead of a personal visit

Webside manners, tips & tricks



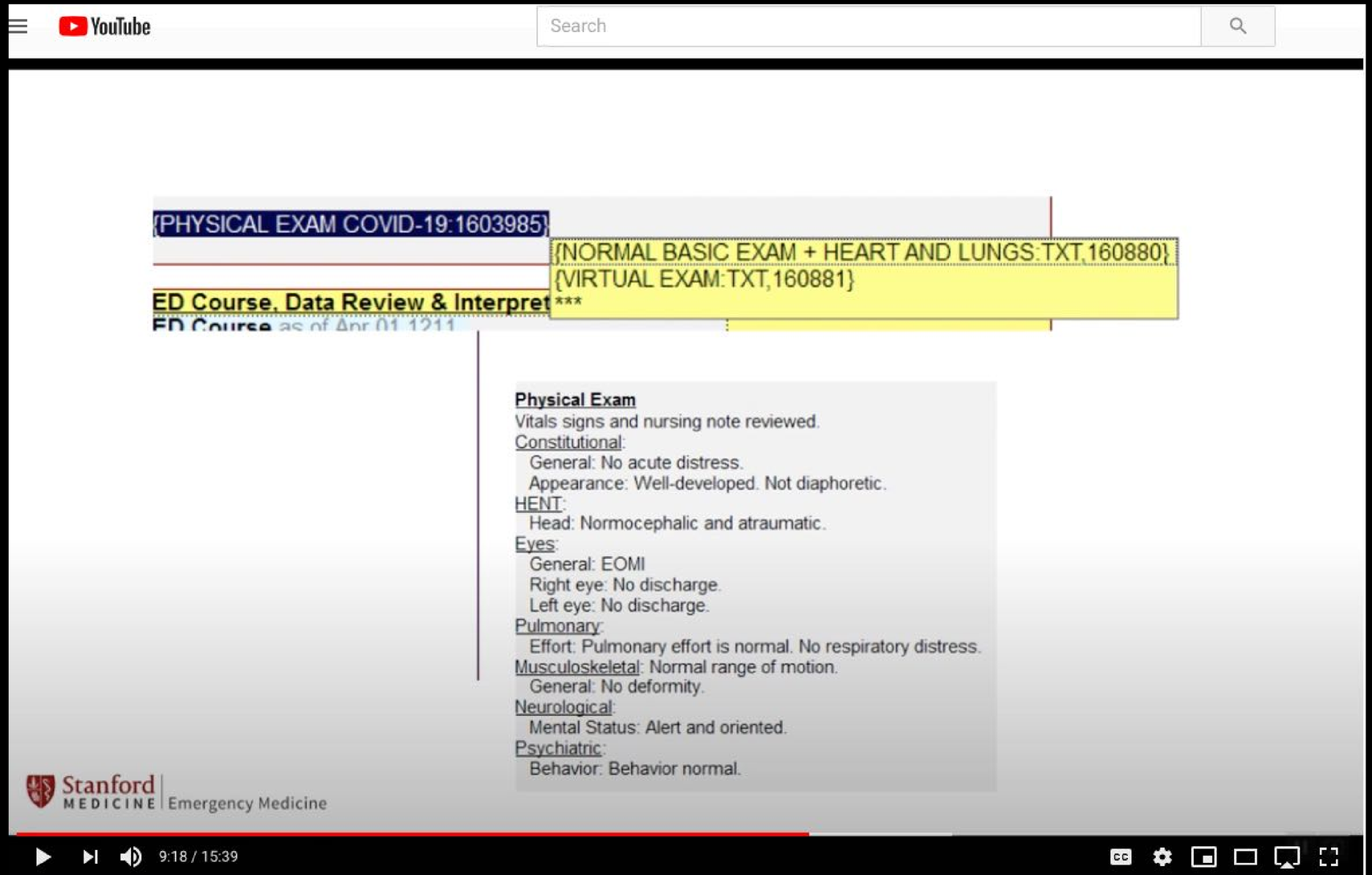
3. Allow patients to get virtual medical care instead of a personal visit

Webside manners, tips & tricks



3. Allow patients to get virtual medical care instead of a personal visit

Webside manners, tips & tricks



3. Allow patients to get virtual medical care instead of a personal visit

Webside manners, tips & tricks

https://www.youtube.com/watch?v=z22bcy-ItAM&t=107s

3. Allow patients to get virtual medical care instead of a personal visit

Clinical Research about Telehealth at Stanford

- •Provider experience with ambulatory telehealth during COVID pandemic
- •Inpatient telehealth deployment during COVID pandemic
- •Health disparities in telehealth
- •Impact of PICU/ED telehealth on mortality
- •4T Study - Teamwork, targets, technology & tight control in newly diagnosed T1D
- •Virtual PrEP clinic for adolescents
- •Virtual discharge F/U for eating disorders
- •Greenlight plus study – childhood obesity

Telemedicine and Telehealth

Where do we go Post-Pandemic Recovery

- Re-assess telehealth regulations
- Reimbursement
- Licensing Requirements
- Re-assess technology platforms and investment
- Where is telehealth suboptimal / equivalent / better than traditional care models?
- How can we overcome socio-economic barriers to telehealth?

Acknowledgment

Contributors to this presentation

Jason Lowe, DO

Natalie Pageler, MD

Stanford IT

Patrice Callagy, RN

Karen Stuart, RN

Sam Shen, MD

David Hao, MD

Thank you

dannenberg@stanford.edu