Broadband Access and Virtual Care Infrastructure

Eric Brown
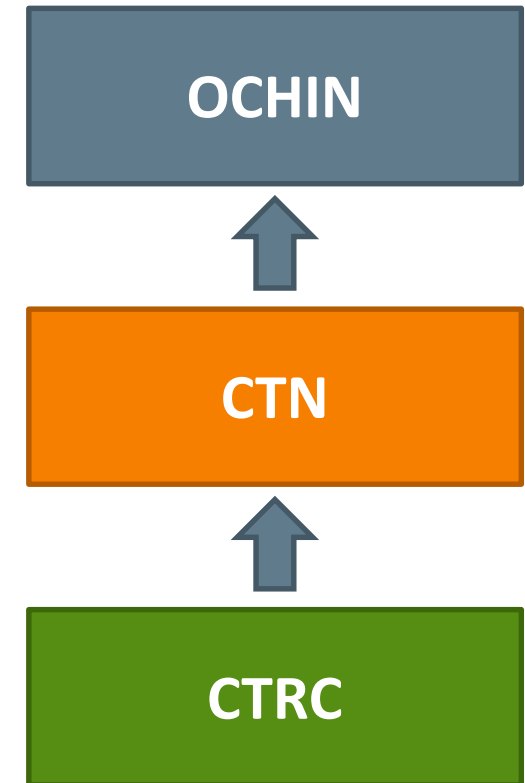
President CTN

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> Of all the forms of inequality, injustice in health care is the most shocking and inhumane.
>
> — *Martin Luther King* —
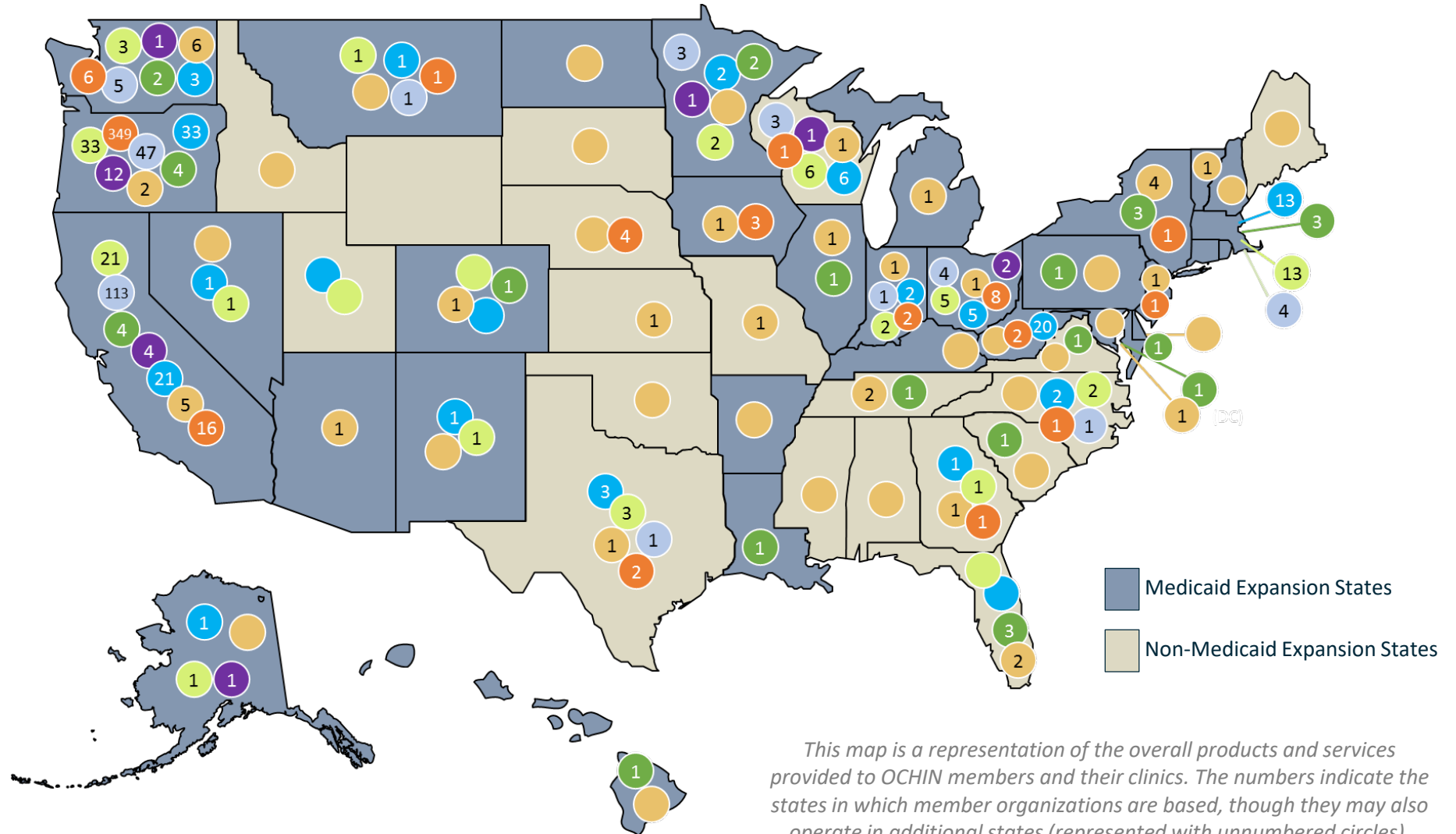
California Telehealth Network (CTN)

- FCC Healthcare Connect Fund (HCF) consortium

- Largest consortium of safety net providers on a statewide broadband network dedicated to health care

- Focus on digital infrastructure to support adoption of telehealth and hosted services
    - Broadband
    - Network Monitoring (24/7 Network Operations Center)
    - Cyber security risk assessments, penetration testing
    - Telehealth equipment, software, technical assistance
    - Grant writing assistance

- California Telehealth Resource Center (CTRC) – HRSA funded

- CTN merged with OCHIN in May, 2017

OCHIN

↑

CTN

↑

CTRC

OCHIN Supports Over 500 Organizations Nationwide and Growing

OCHIN Offerings

- **OCHIN Acuere** — 114 Organizations
- **OCHIN Billing** — 22 Organizations
- **OCHIN Broadband** — 183 Organizations
- **OCHIN Epic** — 94 Organizations
- **OCHIN NextGen** — 36 Organizations
- **OCHIN Research** — 32 Partners; 44 Clinics
- **OCHIN Services** — 398 Organizations

Medicaid Expansion States
Non-Medicaid Expansion States

This map is a representation of the overall products and services provided to OCHIN members and their clinics. The numbers indicate the states in which member organizations are based, though they may also operate in additional states (represented with unnumbered circles).

(April 2018)

What Is Broadband?

- FCC Definition: The term broadband commonly refers to high-speed Internet access that is always on and faster than the traditional dial-up access. Broadband includes several high-speed transmission technologies such as:
    - Digital Subscriber Line (DSL)
    - Cable Modem
    - Fiber
    - Wireless
    - Satellite
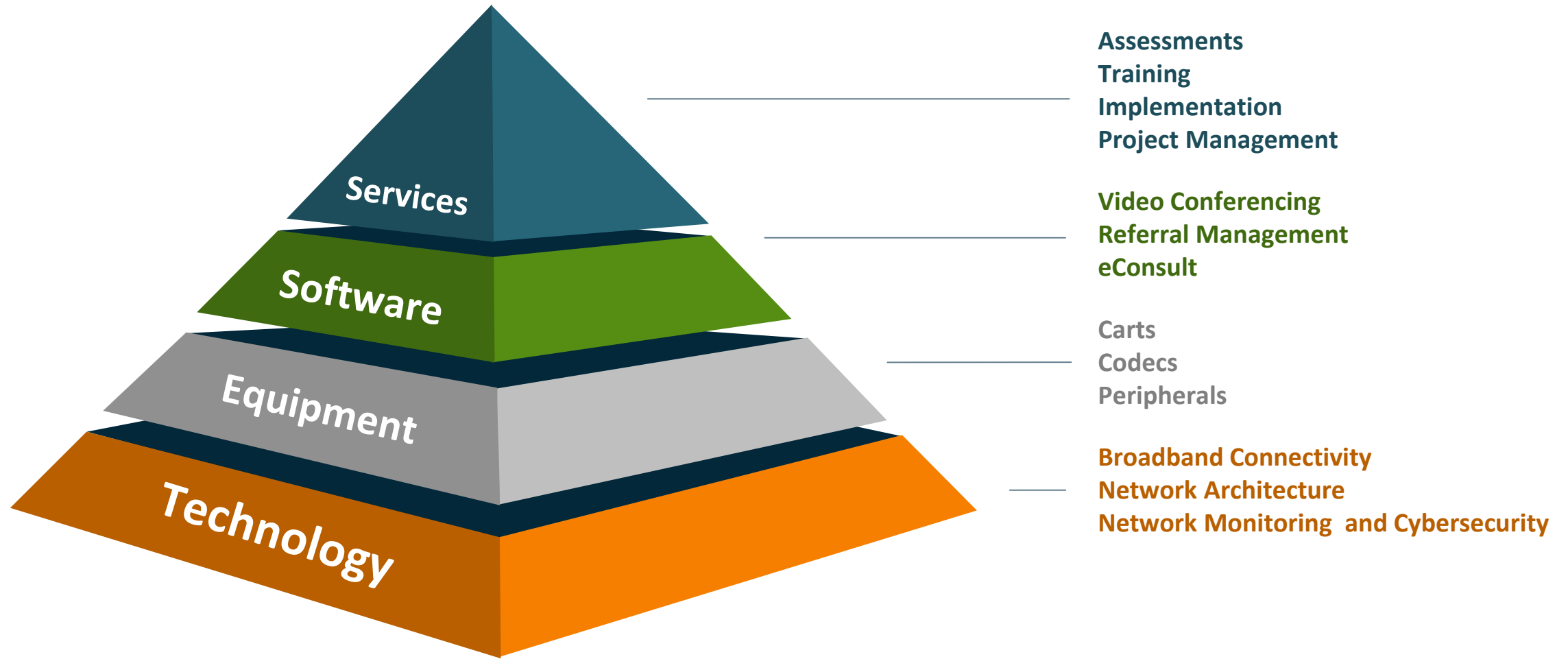   - Broadband over Powerlines (BPL)

Broadband Speed Thresholds

- <u>FCC Definition</u>: minimum 25 X 3 mbps

- <u>CA State Definition</u>: minimum 10 x 1 mbps

- <u>CTN Sites: (symmetrical speeds)</u>
  - Clinics: 45 mbps to 100 mbps
  - Hospitals: 100 mbps to 1 Gig

Current Landscape

- Secure, reliable, affordable broadband has become a basic requirement to our modern health care delivery system today

- Efforts to expand electronic health records, "Meaningful Use", coordinated care, ACO's, HIE's, etc. all require secure, reliable, affordable broadband connectivity

- Urban and suburban communities have seen significant improvements in broadband access and affordability

- Broadband access continues to be a challenge for many rural health care providers in California

Broadband Is The Foundation For Virtual Care Delivery

Services
- Assessments
- Training
- Implementation
- Project Management

Software
- Video Conferencing
- Referral Management
- eConsult

Equipment
- Carts
- Codecs
- Peripherals

Technology
- Broadband Connectivity
- Network Architecture
- Network Monitoring and Cybersecurity

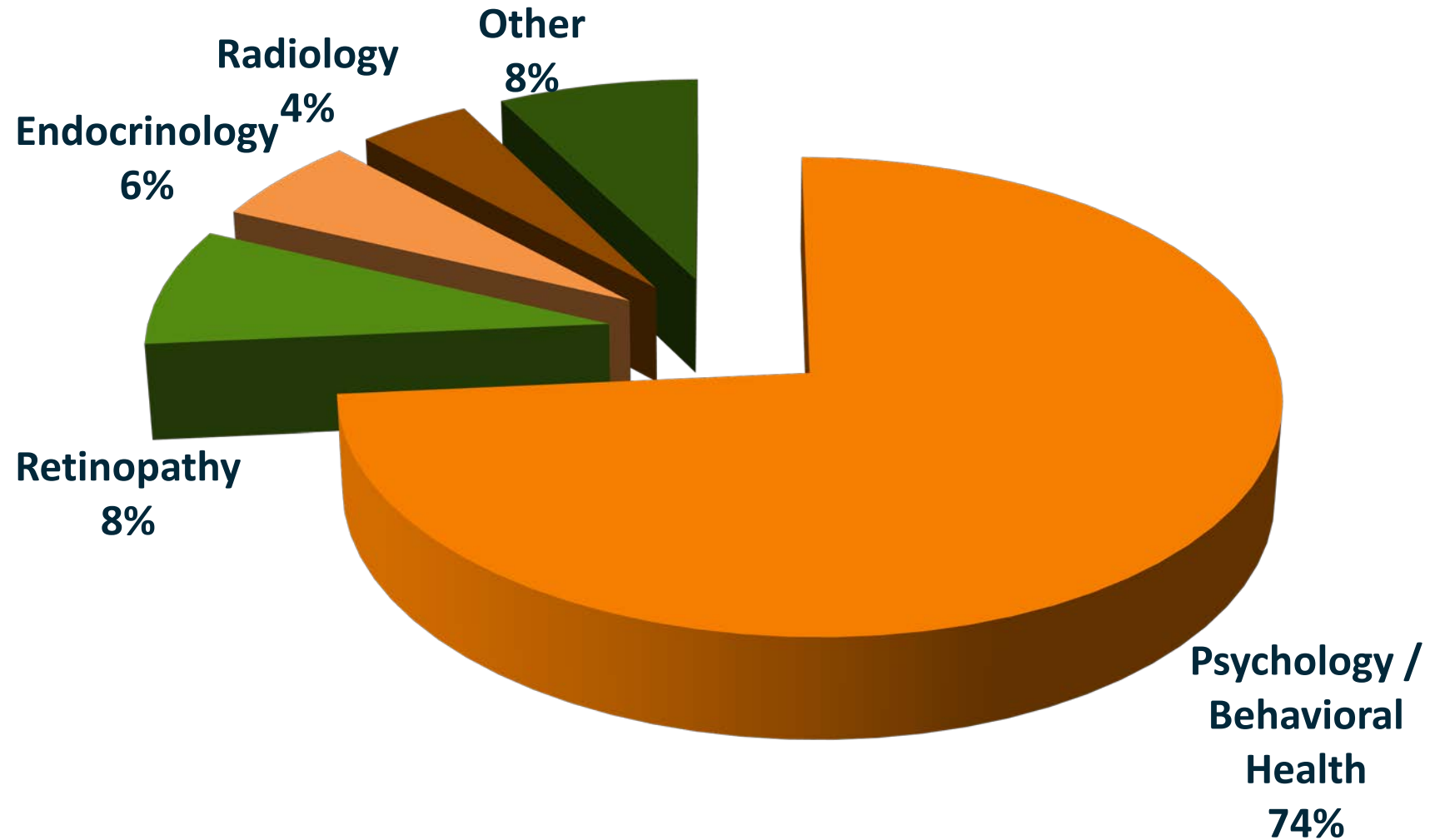WE ARE OCHIN

Current Landscape

- The Affordable Care Act and MediCal expansion have increased demand for telehealth services to address physician access issues in rural and underserved communities

- Continuing increases in demand for behavioral health services is also driving additional demand for virtual care consultations

- Demand for telehealth delivered Opioid treatment therapy in rural and underserved communities is also increasing

Telehealth Industry Trends

- **$2.8B** market in 2016 (~$9.35B by 2021)

- **27.5%** compound annual growth rate

- **< 20%** of patients have used telehealth solutions

- **> 75%** would consider using virtual consultations
  Among 5,000 respondents to June 2017 Modern Healthcare Magazine national survey

- **Over 60% growth** of virtual visit consultations vs. prior year
  CTN telehealth specialty care partners

Source: *Modern Healthcare Magazine*, June 2017, MarketsandMarkets Study

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CTN Site Telehealth Specialties

- Other 8%
- Radiology 4%
- Endocrinology 6%
- Retinopathy 8%
- Psychology / Behavioral Health 74%

FCC Rural Health Care Program (RHC)

- Part of the Federal Universal Service Fund developed to provide telecommunications funding for rural and underserved communities

- RHC was launched in 1997 initially with "the Telecom Program" that allowed rural safety net hospitals and clinics to take advantage of telecom rates available in the nearest urban community

- In 2007 the Rural Health Care Pilot Program (RHCPP) was launched as a demonstration project to enable consortia of rural and urban safety net clinics and hospitals to engage in competitive bidding for broadband services and receive an 85% subsidy

Healthcare Connect Fund (HCF)

- Launched in 2012 to leverage the learnings from RHCPP

- Provides up to a 65% subsidy on broadband services initially for rural and urban safety net clinics and hospitals. Later urban clinics were ruled ineligible unless part of a consortia.

- Allows individual health care providers to apply for funding

- Consortia participants (like CTN) must have a majority (50% plus 1) rural sites within 3 years of the first funding date

Recent FCC RHC Developments

- FCC Rural Health Care Program/Healthcare Connect Fund (HCF) exceeded $400 million annual funding cap for first time in 2016

- In March 2018 the FCC announced a reduction in the HCF subsidy rate from 65% to 48% effective retroactively to July 2017

- CTN immediately notified our members of the change and began invoicing them retroactively for the increased match payments

- CTN/OCHIN and Schools Healthcare Libraries (SHLB) Coalition began advocacy efforts at the FCC to increase HCF funding to preserve the 65% discount

- SHLB Coalition filed emergency petition requesting the FCC use underutilization of other Universal Service Fund programs to fully fund HCF until the program can be reformed

Good News! FCC RHC Funding Restored

- Last week the FCC approved:
  - Increasing the RHC annual funding to preserve the 65% discount for this funding year (7/1/17 thru 6/30/18)
  - Indexing the annual allocation for inflation in future years

- RHC discount can be used in conjunction with the California Teleconnect Fund (CTF) discount which pays 50% of the match payment

- CTN sites can receive over 80% reductions on monthly recurring broadband costs using both HCF and CTF discounts

Other Broadband Access Funding

- **<u>FCC Connect America Fund</u>** – Provides funding to telecommunications carriers to fund broadband deployments to 23 million Americans in unserved areas. AT&T, Frontier and Consolidated are the participating carriers in CA.

- **<u>California Teleconnect Fund</u>** - reimburses 50% of monthly recurring cost for broadband connections for California nonprofit organizations

- **<u>California Advanced Services Fund</u>** - $330 million for broadband access projects in **<u>*unserved*</u>** broadband communities. Funding goes to telecom providers. Applications due July 1, 2018 thru August 30, 2018

- **<u>USDA Rural Utilities Services (RUS) Grants</u>** - Targeted for rural communities with populations of 20k or less. Can be used for broadband deployments, telemedicine equipment to enable distance learning or telemedicine activities.

Evolving Rural Broadband Service Options

- CTN/OCHIN testing new "hybrid" broadband providers that offer a mixture of wireline (fiber) and wireless in their networks to serve rural communities with gigabit speeds and high reliability

- TV White Space uses unused broadcast spectrum, initial field tests indicate limited bandwidth performance for medical/virtual care purposes
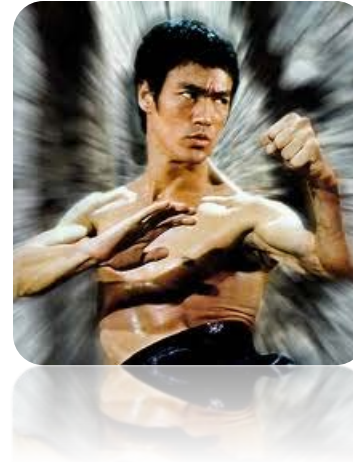
Issues with Using the Public Internet

- No one controls the speed of the Internet

- Calls can drop at any time

- Major delays in transferring large medical videos or images, etc.

- Lip Sync

- Pixilation

On Going Cyber Security Risks - Hollywood hospital pays $17,000 in bitcoin to hackers

Source: www.latimes.com/business/technology/la-me-ln-hollywood-hospital-bitcoin-20160217-story.html

CTN/OCHIN Broadband Offerings

- MPLS network for clinics and hospitals doing telehealth activities

- Direct Internet Access connections for smaller physician practices or health care locations

- Network monitoring for outages and cyber security activity

- Network engineering services for multi-site health care organizations

Web Based Video Conferencing

- Fastest growing segment of CTN telehealth services
- Convenient, affordable tool to provide virtual behavioral health services and direct clinician to patient follow up care
- Encrypted, HIPAA compliant
- CTN offers Zoom, Vidyo, Polycom-Realpresence
- Works with any web enabled device (desktop computer, laptop, tablet, smart phone)
- Compatible with legacy telemedicine hardware (codecs, carts, etc.)
- CTN/OCHIN currently integrating Zoom into OCHIN Epic MyChart
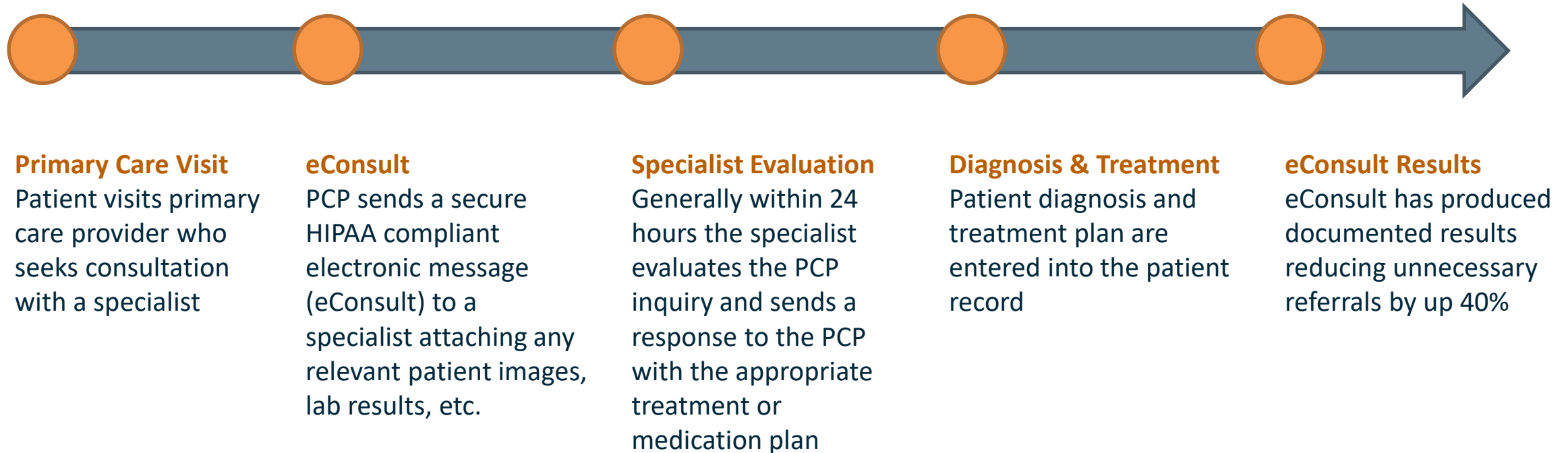
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eConsult

- Electronic Consultations or "eConsult" refers to encrypted electronic messaging platforms that allow clinicians to asynchronously consult with one another to diagnose and address patient treatment

- Health plans and health systems are using eConsult in underserved and rural communities to provide access to specialty care not available in those communities

eConsult Background

- Initially deployed in 2008 as "eReferral" encrypted email platform at UCSF to support UCSF primary care providers with asynchronous electronic specialty care diagnosis

- Later launched as "eConsult" in LA County in 2012 by LA Care funded by UC Davis Health Systems/CTN BTOP grant award

- Initial LA Care analysis documented 40% reduction in unnecessary referrals

- Long term sustaining value proposition is reduced cost of care from eliminating unnecessary referral related procedures (lab work, patient imaging, etc.)

Common eConsult Use Case

Primary Care Visit
Patient visits primary care provider who seeks consultation with a specialist

eConsult
PCP sends a secure HIPAA compliant electronic message (eConsult) to a specialist attaching any relevant patient images, lab results, etc.

Specialist Evaluation
Generally within 24 hours the specialist evaluates the PCP inquiry and sends a response to the PCP with the appropriate treatment or medication plan

Diagnosis & Treatment
Patient diagnosis and treatment plan are entered into the patient record

eConsult Results
eConsult has produced documented results reducing unnecessary referrals by up 40%

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Leading eConsult Platform Providers

- Safety Net Connect (SNC)
- RubiconMD

- CTN/OCHIN clients have requested integrations with these eConsult providers
  - SNC user base includes LA County CHC's, Partnership Health clinics in Northeast California (Chapcare, Saban), California Health & Wellness Health Plan, and Inland Empire Health Plan
  - RubiconMD user base includes CHCN in the Bay Area, Athena Health, and is funded by the California Health Care Foundation

Thank You!

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