

# How Technology Can Improve Behavioral Health

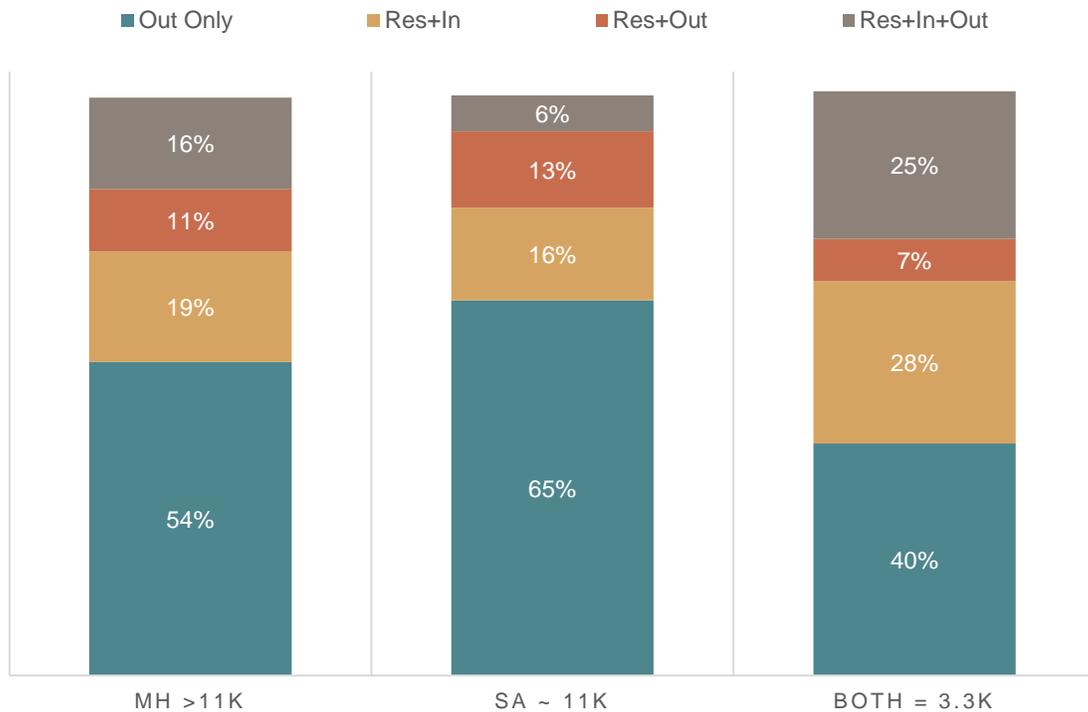
The Last Frontier

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NextGen Healthcare

# The BH Market

## Market by Number & Type of Facility

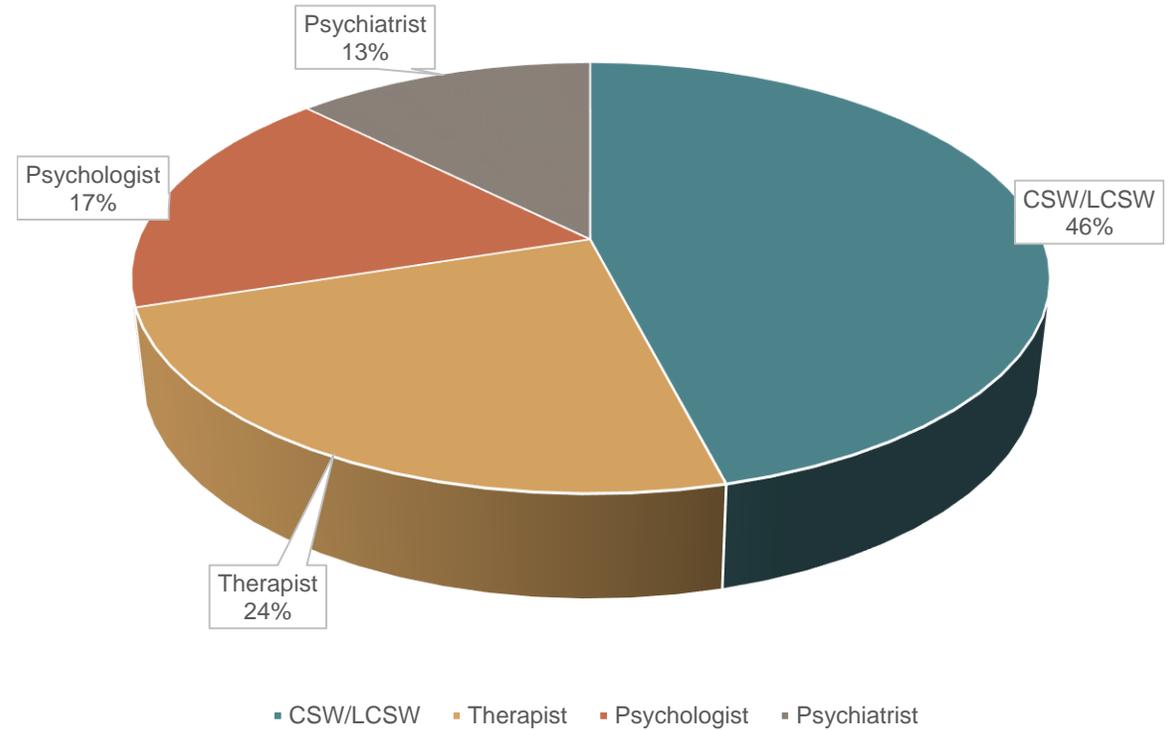
### 25,380 FACILITIES BY SERVICE MIX



Source – McDermott, Will & Emery

## Market by Number of Clinicians

### 410,000 BH CLINICIANS BY ROLE



Source – EY

# Market Adoption

410,000 Total Clinicians (SAMHSA)

172,200 42% Have an EHR (HIMSS Analytics)

237,800 58% Need an EHR (HIMSS Analytics)

172,200 66% Want Change in Next 3Yrs

56,826 22% Change Annually

# Trends in Treatment

Many developments will impact how, where, why and by whom treatment is provided. The major factors which will influence change are;

1. Outmigration of Services
2. Home Services
3. Online Services & Tools
4. Focus on Opioids



**43 MILLION**

**Number of Americans who experience mental illness in a given year.**

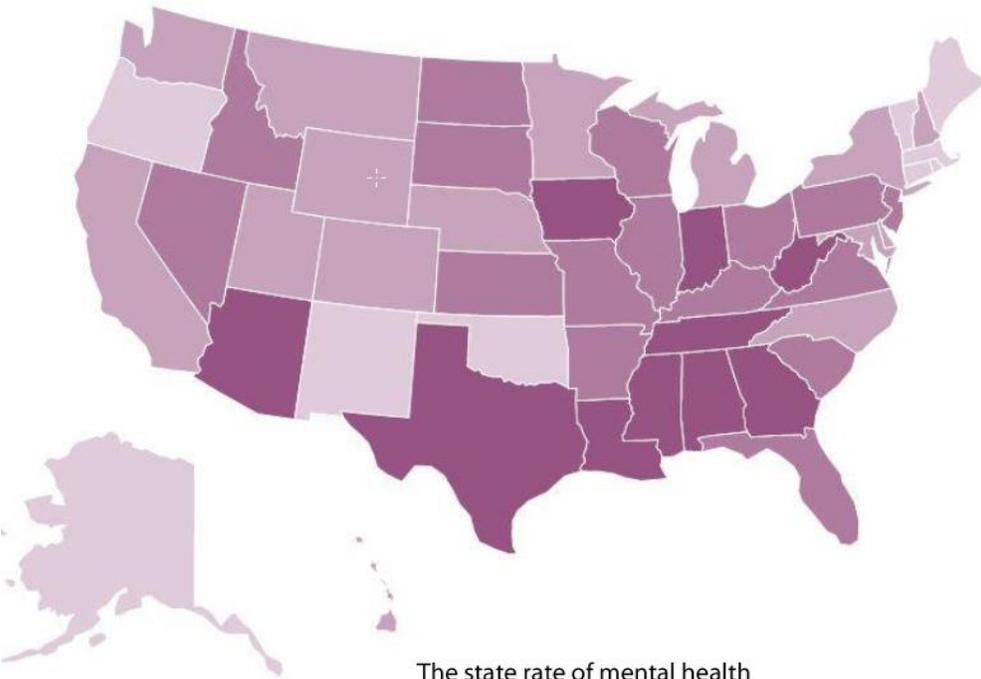
*Source: National Alliance on Mental Illness*

# Behavioral Health Workforce

Workforce shortages will worsen for the next 5-8 years due to low levels of graduating clinicians compounded by increasing levels of consumers.

This trend will drive up prices and reduce access until equilibrium is somehow reached.

Mental Health Workforce Availability



The state rate of mental health workforce ranges from:

(Massachusetts) 200:01 Highest Ranked      1,200:1 (Alabama) Lowest Ranked



In states with the lowest workforce, there's only  
**1 mental health professional**  
**per 1,000 individuals**

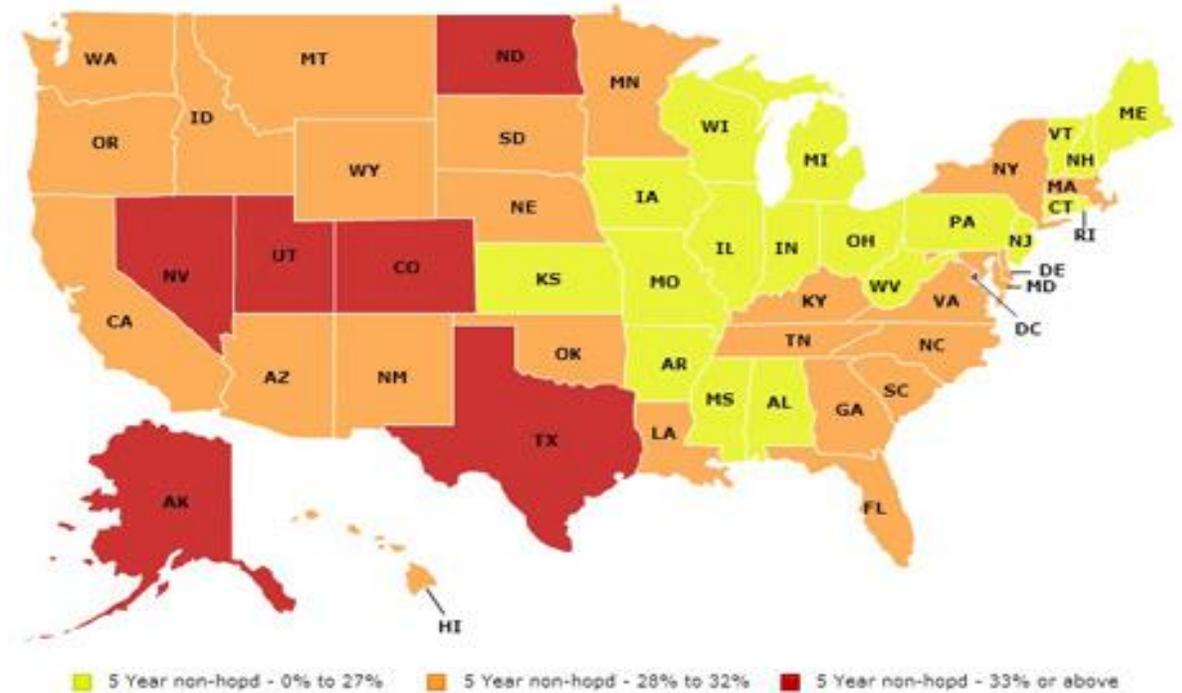


This includes psychiatrists, psychologists, social workers, counselors and psychiatric nurses **COMBINED.**

# Outmigration of Services

Changes to reimbursement models, innovations in screening and diagnosis and advances in care delivery models are all driving the outmigration of services. Three primary factors spur this outmigration forward;

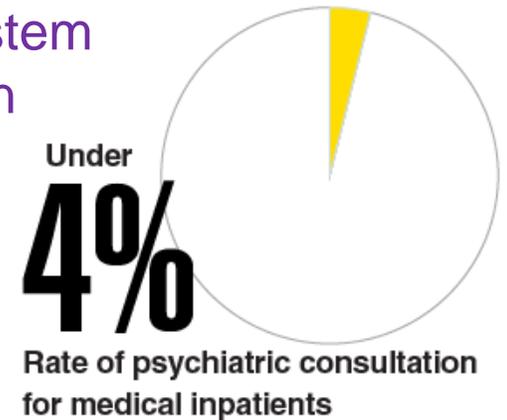
1. Changes in reimbursement that support outpatient treatment
2. Advances in screening/diagnosis that identify patients earlier
3. New care delivery models for BH consumers



# Home Services

Home care has many advantages heretofore overlooked or seen as negatives. With the increase in coverage, diagnosis and treatment new ways of providing care will have to include expansion of home-based care.

1. Use of alternative and complimentary medicine (yoga, nutraceuticals, meditation, etc.)
2. Families acting as the most enduring form of support, and early warning system
3. Serves to help keep adults employed or on path to employment and youth in school
4. Less stigmatizing
5. Greatly lowers cost
6. More humane and patient-centered
7. Least restrictive environment for patient

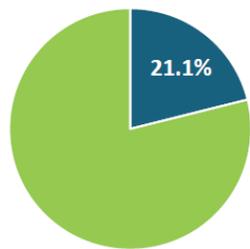


Source: *The Joint Commission Journal on Quality and Safety*

# Focus On Opioids

The government's relatively new focus on the opioid crisis will spur action within the BH community. It is already impacting the process of prescribing.

2.1 MILLION with OUD



1 IN 5 INDIVIDUALS WITH OPIOID USE DISORDERS (OUD) RECEIVED SPECIALTY TREATMENT FOR ILLICIT DRUGS

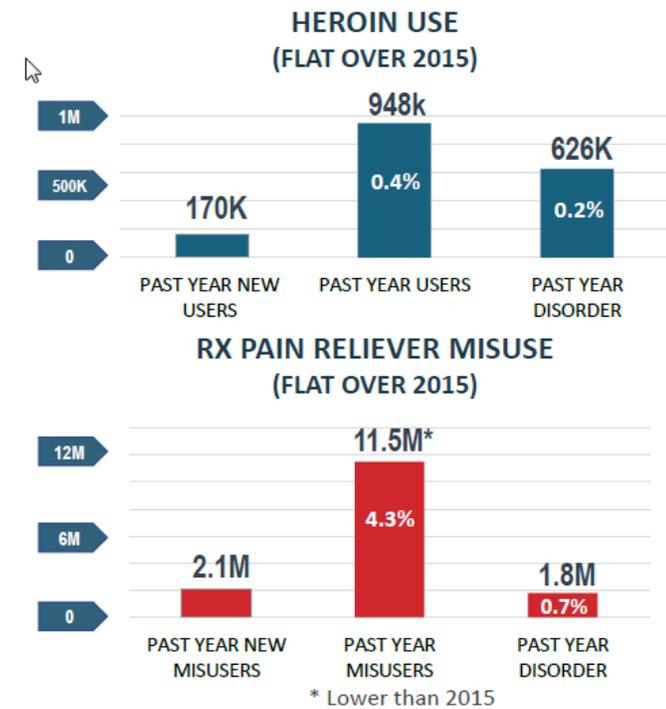
PAST YEAR, 2016, 12+



37.5% OF PEOPLE WITH HEROIN USE DISORDERS RECEIVED TREATMENT



17.5% OF PEOPLE WITH RX PAIN RELIEVER USE DISORDERS RECEIVED TREATMENT



Opioid Use Disorder has grown significantly larger than heroine use, and will cause new investment in treatment facilities, staff and treatment protocols over the next few years.

# Types of Hardware Technology Available

## Platform Technology

1. Tablet Platforms
2. Mobile Phone Platforms
3. Kiosks
4. Laptops
5. Touch Screens
6. Telemedicine

## Device Technology

1. Web-enabled Cameras
2. Signature Capture Pads
3. Fingerprint Readers (other biometrics)
4. OCR Pens
5. Card Scanners
6. Medication Dispensing Cabinets
7. Telemedicine

# Types of Software Technology Available

## External Software Technology

1. Internet
2. IoT (Internet of Things)
3. Self-Help Applets
4. HISPs
5. National Record Locator Service NRLS
6. ASAM Continuum

## Internal Software Technology

1. Tasking
2. Alerts
3. Dashboards
4. Reporting
5. Health Maintenance
6. Health Monitoring
7. Assessment Tools
8. Billing Compliance Tools
9. Billing Productivity Tools

# Practical Considerations Regarding New Tech

1. Asynchronous tools versus synchronous tools
  - Email versus chat room – both have application
2. Does use of online tools or practice require new ethics models?
  - Is using encryption the same as ensuring a sound-proof room?
3. Do online services/tools replace aspects of your programs or augment them?
  - Does this decision expand your group's services/access or lower FTE needs?
4. How do you measure results for value-based payments?
  - Can you bring results into your EHR? Billing system?
5. Does enough of your consumer base have internet access?
  - Home based, phone based and can you measure this?
6. Does integrating online services/tools change your needed skill mix?
  - Do you have a platform? Hosted or self-hosted?
  - What skills does your staff need to manage/improve/expand these services?
7. Can you make online tools or services sustainable? How?
  - Are these billable services/tools?
  - What does your consumer base need
  - What if this expands your consumer base?

# Impact of Social Media

“Overconnectedness” is becoming a social norm, and with it are coming newly heightened issues

## 1. Impact on Mental Health (iDisorder)

- Narcissism
- Depression
- Social Skills
- Isolation
- Addiction
- ADHD
- OCD
- Internet Addiction Disorder (IAD)
- Instant Gratification/Feedback
- Sleep

## 2. Impact on Physical Health (iMalady)

- Sitting
- Neck Strain
- Carpal Tunnel
- Vision
- Hearing Loss
- Radiation
- Reproduction
- Back/Spinal
- Sleep

### RATES OF YOUTH DEPRESSION



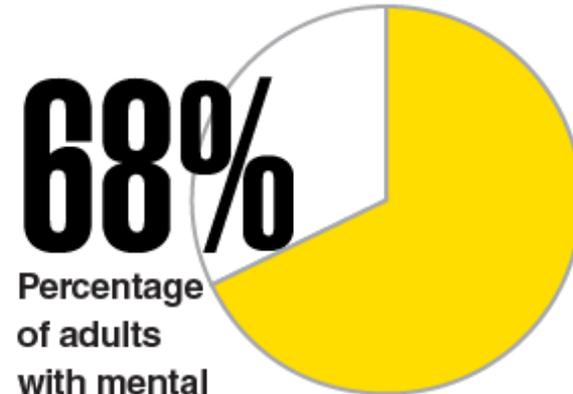
.....  
**EVEN WITH SEVERE DEPRESSION,  
80% ARE LEFT WITH NO  
OR INSUFFICIENT TREATMENT.**

# The Internet of Things

- IoT promises to make healthcare more available, less expensive and smarter than ever before
- The global market for IoT healthcare is forecast to reach \$163B by 2020 from its size of \$41B in 2017 – a CAGR of 38.8%

## Four primary ways IoT will revolutionize behavioral health

1. Remote care
  - Wearable technology
  - Wireless technology
2. Advanced Preventative Care
  - Artificial Intelligence
  - Mobile applications
3. Ambient Consumer Care
  - Connected care platforms
  - Room sensors
4. AI-enhanced Disease Management
  - Big data
  - Cloud computing



Percentage  
of adults  
with mental  
disorders who have medical  
conditions

*Source: Robert Wood Johnson  
Foundation*

# Telehealth

Virtual behavioral health services are just as effective, and in some cases more effective than face-to-face care delivery.

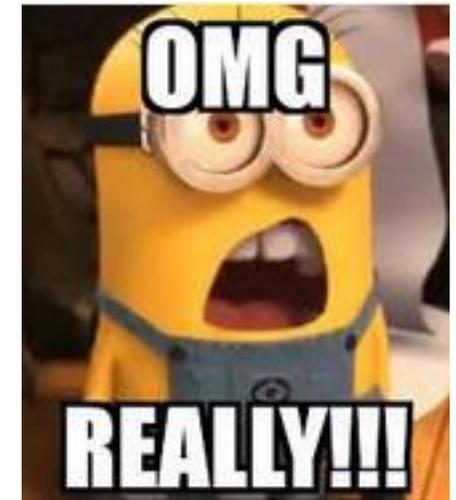
- Four year Johns Hopkins study of ~100,000 veterans found that the number of hospital days was 25% lower among vets who chose online counseling
- University of Zurich study divided a group of 63 consumers into online and in-person depression counseling. Found that 53% of online and 50% of in-person consumers had positive results. Three months later 57% of online and 42% of in-person consumers remained free of depression

Positive perceptions among clinicians and clients alike, including;

- Improved Access to Care
- Fewer Missed Appointments
- Convenience of Care
- Tailored Care
- Increased Client Base

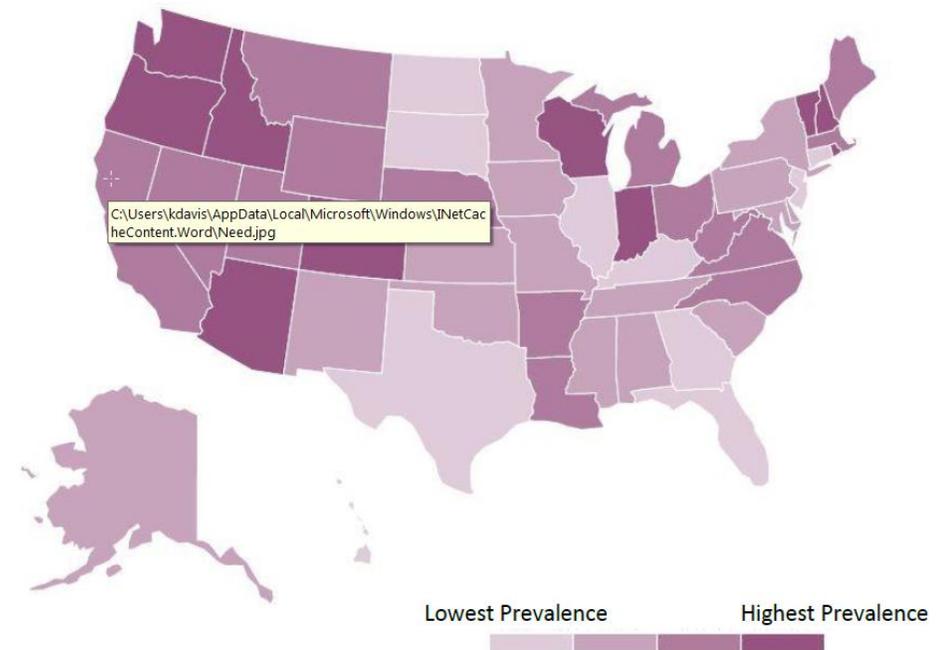
Further Expansion Necessary

- HR 2550 Medicare Telehealth Parity Act of 2017
- In committee
- Third attempt since 2015



# Telehealth In BH

1. Buried in 1,200 page 2015 Medicare provisions were 7 new telehealth codes for newly covered BH services including;
  - Wellness visits
  - Psychotherapy services
  - Prolonged services in the office
2. Further Expansion Necessary
  - HR 2550 Medicare Telehealth Parity Act
  - Third attempt since 2015



# There's An App For That

## Apps

1. IntelliCare
2. Big White Wall
3. Code Blue
4. Breathe2Relax
5. Lantern
6. PTSD Coach
7. Optimism
8. Talkspace
9. Equanimity

## Targeted Disorders

1. Depression
2. Anxiety
3. Bullying
4. Stress Management
5. Cognitive Behavioral Therapy (CBT)
6. PTSD
7. Bipolar Disorder
8. Group Therapy
9. Meditation

# Are Apps Appropriate For You?

## Advantages/Uses

- a. People Unwilling/Unable to Attend Face-to-face
- b. Teens & Young Adults Comfortable With Apps
- c. Support Between Sessions
- d. Convenience
- e. Fewer Missed Appointments
- f. Lower Cost
- g. Wider Access to Care
- h. (Supposed) Anonymity/Privacy
- i. Introduction to Care

## Disadvantages/Misuses

- a. Façade of Care
- b. No Oversight/Regulations
- c. Anyone Can Build/Publish
- d. Overselling
- e. Measures of Effectiveness
- f. Mis-diagnosing/Self-diagnosing
- g. No Assessment Necessary
- h. Sustainable Model?
- i. Data Collection/Integration?

# Hosting

Self hosting is rapidly becoming less prevalent among behavioral health groups as EHR vendors' products mature and as options for high-quality hosting sites expand and become more affordable. The steady reduction in cost of broadband services, and increased availability in remote areas of the country also fuels the viability of hosted solutions.

Hosting is an option uniquely suited for the structure of most behavioral health groups. It is uncommon for BH groups to have sufficient IT staff or the breadth of skill sets necessary to provide adequate care and feeding for a modern EHR. Hosting allows groups to rent a share of the hardware and IT skill sets needed to properly manage an EHR server-side. This includes various servers, the database, interfaces and DBR activities, as well as all the security needs that cis the Pilot Fish of modern technology.

# Software as a Service

SaaS is not new in BH, however it is becoming more widely accepted as more vendors offer a SaaS option. The difference between SaaS and traditional license purchases is akin to the difference between renting a home, and buying one.

The main advantage of SaaS is that it lowers the upfront cost of implementing an EHR. Rather than paying for licenses at the onset of the purchase that cost is spread over years.

The primary drawback is that a group never owns their licenses, and must pay in perpetuity to use the software.

# Summary

The right mix of hardware and software tools can make your clinicians more productive, and improve your patient's experience while also helping you bill more efficiently thereby improving your revenue stream.