

# Indian Health Service

## Telehealth Modeling for Business Office and HIM (Revenue Cycle Management)

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TUESDAY, AUGUST 22, 2023



# Agenda



Introduction to Telehealth at IHS and WRAP



Telehealth Models



Telehealth: A System of Systems (CHAP, SUD)



Group Discussion of Telehealth Modeling for Business Office and HIM (Revenue Cycle Management)

# Telehealth at IHS: A Long History of Providing Access to Care in Rural and Frontier Areas

- In 1973, IHS partnered with NASA and Lockheed Martin to provide telehealth to the Tohono O'odham Nation
- The Indian Health Service finds telemedicine to be one of the best ways to get health care services to the people and places where they are needed most
- IHS collaborates with tribal leaders to deploy telemedicine services that respond to patient and community need.
- Telehealth service availability varies by location, but may include specialty services such as behavioral health, dermatology, endocrinology, wound management, and rheumatology.
- IHS facilities in the Great Plains Area and Billings Area also use telehealth in the emergency department to support on-site health care providers.
- Currently, IHS has two national telehealth programs and numerous regional telehealth programs.
  - The IHS-Joslin Vision Network Teleophthalmology Program is dedicated to preventing diabetes-related blindness.
  - The mission of the IHS Telebehavioral Health Center of Excellence (TBHCE) Telebehavioral Health Program is to provide, promote, and support the delivery of high-quality, culturally sensitive telebehavioral health services to American Indian/Alaska Native people



Source: <https://www.ihs.gov/telehealth/telehealthprograms/>

# Workflow Research Alignment Plan (WRAP)

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LEVERAGING SUBJECT MATTER EXPERTISE, DESIGN, MODELING AND COLLABORATION TO BUILD THE FUTURE STATE OF CONFIGURATION AND IMPLEMENTATION OF THE NEW EHR

# Federally Funded Research & Development Center (FFRDC)



## Key Attributes

- Created by government — a **federal entity**
- Addresses key challenges of considerable **complexity**
- Analyzes technical questions with a high degree of **objectivity**
- Provides **innovative and cost-effective** solutions to government problems
- **Does not compete with industry or develop commercial products**
- Can perform functions that are “**close to inherently governmental**”
- **Independent operator** enables broad stakeholder engagement

## Federal Acquisition Regulation 35.017

### **35.017 Federally Funded Research and Development Centers.**

(a) Policy. (1) This section sets forth Federal policy regarding the establishment, use, review, and termination of Federally Funded Research and Development Centers (FFRDC's) and related sponsoring agreements.

(2) An FFRDC meets some special long-term research or development need which cannot be met as effectively by existing in-house or contractor resources. FFRDC's enable agencies to use private sector resources to accomplish tasks that are integral to the mission and operation of the sponsoring agency. An FFRDC, in order to discharge its responsibilities to the sponsoring agency, has access, beyond that which is common to the normal contractual relationship, to Government and supplier data, including sensitive and proprietary data, and to employees and installations equipment and real property. The FFRDC is required to conduct its business in a manner befitting its special relationship with the Government, to operate in the public interest with objectivity and independence, to be free from organizational conflicts of interest, and to have full disclosure of its affairs to the sponsoring agency. It is not the Government's intent that an FFRDC use its privileged information or access to installations equipment and real property to compete with the private sector. However, an FFRDC may perform work for other than the sponsoring agency under the Economy Act, or other applicable legislation, when the work is not otherwise available from the private sector.

(3) FFRDC's are operated, managed, and/or administered by either a university or consortium of universities, other not-for-profit or nonprofit organization, or an industrial firm, as an autonomous organization or as an identifiable separate operating unit of a parent organization.

(4) Long-term relationships between the Government and FFRDC's are encouraged in order to provide the continuity that will attract high-quality personnel to the FFRDC. This relationship should be of a type to encourage the FFRDC to maintain currency in its field(s) of expertise, maintain its objectivity and independence, preserve its familiarity with the needs of its sponsor(s), and provide a quick response capability.

*Transforming the way we deliver care begins with realigning our processes*

Targeted configuration of unique high-risk, problem-prone, and high variability workflows



### **IMPROVING CARE DELIVERY**

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Seamless, consistent, rigorous processes across the field will drive efficiencies to deliver better care



### **ENHANCING PATIENT EXPERIENCE**

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Enhanced processes in telehealth, patient portal, and digital health applications expands our digital footprint and will enrich patient experiences and provide more seamless access to care



### **LEVERAGING DATA TO DRIVE OUTCOMES**

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Redesigned processes will improve data capture and data quality fostering innovative analytics to better understand our patient populations and drive improved outcomes

# WRAP: From Challenges to Opportunities

*With every challenge comes an opportunity*

## CHALLENGES



### **Mastery of the EHR by the User**

Inefficient and disparate processes can present a challenge to initial and ongoing training and compromise EHR mastery



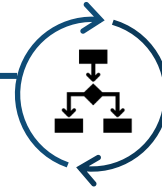
### **Configuring the EHR for the User**

Lack of consistent, rigorous models that do not meet the needs of the user can negatively impact the adoption of the EHR



### **Listening to the User in Decision Making**

Various clinical and business partners, dispersed across the country with unique needs, require consistent and deliberate engagement



## OPPORTUNITY



### **Using the Models for Configuring, Testing, and Training**

Use of models will be continuous and iterative, lasting through the EHR implementation and optimization



### **Leveraging the Models for Vendor Collaboration**

Comprehensive models based on SME engagement will help inform the EHR vendor's configuration efforts



### **Empowering the User Via Engagement**

Through consistent and deliberate engagement with user, models will ensure confidence and ownership in the new technology and form a more personalized EHR experience



# IHS Health Information Technology Modernization Preparation for Vendor

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“Too often clinics believe workflow should only be assessed after a vendor product has been selected and just before the health IT is implemented.”

- **Agency for Healthcare Research and Quality (AHRQ)**

By understanding workflows and preparing for changes to them throughout the planning and implementation process, a clinic is better prepared for the workflow changes postimplementation.





# Workflow Research Alignment Plan (WRAP) Overview

WRAP utilizes Business Process Modeling (BPM) to document shared best practice future-state workflows, supporting the configuration and implementation of the new EHR



## FIELD ENGAGEMENT

*Engage IHS, Tribal Health Programs, Urban Indian Organizations (I/T/U) clinicians, business, and technical experts*



## COMPREHENSIVE APPROACH

*Select specific and complex service lines (e.g., Emergency Department, inpatient care, primary care)*



## PARTNERSHIP

*Use models to inform system build with new EHR vendor*



Identify

*Gaps and Inefficiencies*



Model

*Future State*



Build

*Configured EHR*

# How WRAP Helps HIT Modernization

*WRAP is an ecosystem of tools and methods that allow for...*

## **Shareability:**

Models produced can be utilized and localized by another site or across multiple sites within the Indian Health ecosystem

## **Standardization:**

Rigorous, thorough models creates a common understanding across Indian Health

## **Re-usability:**

Models can be re-used depending on need, location, or uniqueness of site



## **Configurability:**

Models provides the foundation to configure, not customize, an EHR software

## **Interoperability:**

Models can help “connect the dots” between various systems and platforms

## **Extensibility:**

Models are expanded or enhanced through a modular approach, where new functionalities or components can be added incrementally

ULTIMATELY ENHANCING PROVIDER-PATIENT INTERACTIONS

# WRAP Summary

**Phase 1:**  
**Environmental Scan**  
*to collect internal and external information*



**Phase 2:**  
**Conceptual**  
*to form an overarching understanding of each process model*



**Phase 3:**  
**Design and Decide**  
*to map out the future state models with IHS SMEs*

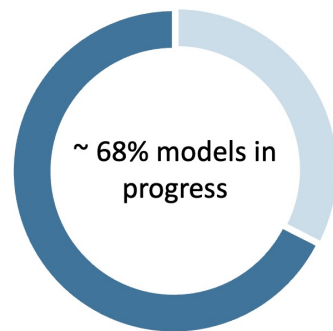


**Phase 4:**  
**Quality Review**  
*to final check process models for clinical and technical accuracy*

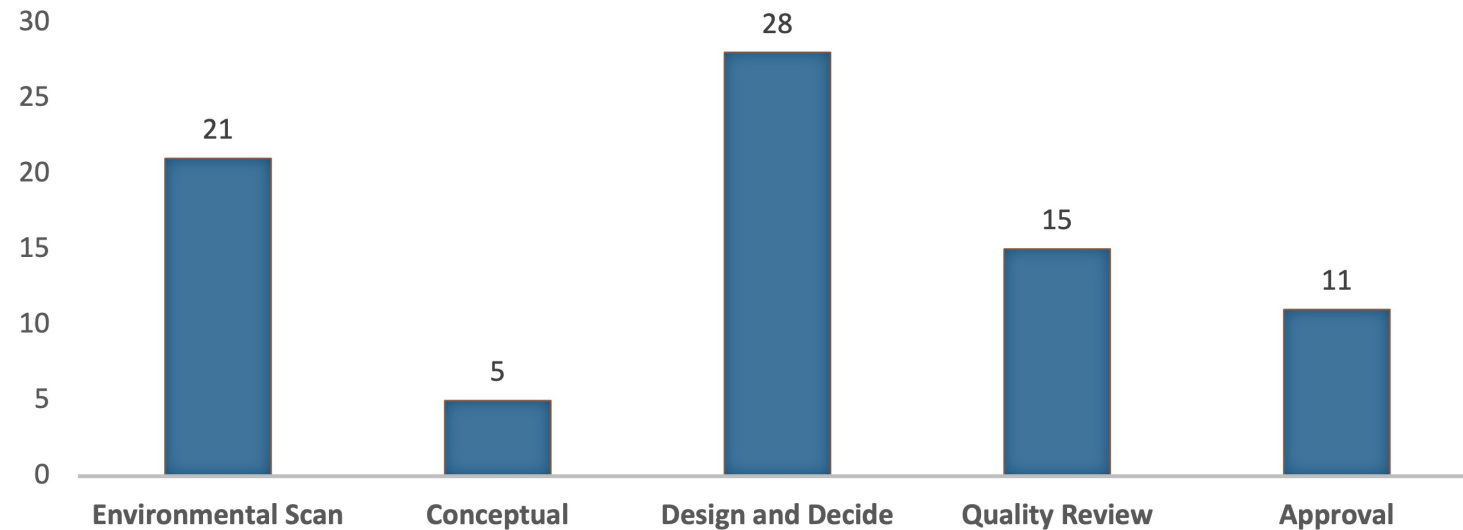


**Phase 5:**  
**Approval**  
*to approve models for Governance review and shared with EHR vendor*

## 80 Process Models Identified



## NUMBER OF MODELS IN PHASE



# Prioritization and Categorization of Process Models

Models are prioritized based on 4 distinct criteria, and categorized into 22 service lines, of which 16 are in progress

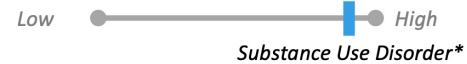
## Criteria for Prioritizing BPM Process Models (via Service Lines)

### 1 Core Functionality



- Essential service to the organization?
- Apart of the core business operations?
- Necessary to fulfill mission?

### 2 Uniqueness to IHS



- Specialized program or focus area?
- Special configuration required in the EHR?

### 3 Volume



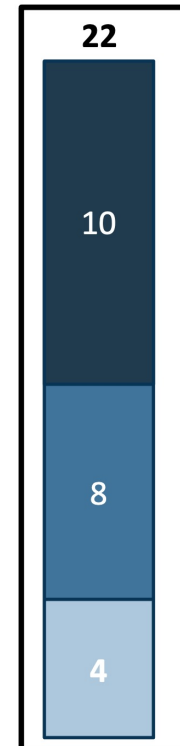
- Number of patients impacted?
- Processes that consume staff time?
- Frequently performed procedures or services?

### 4 High Risk



- Potential for harm to patient or impact to business operations?
- Increase of incidents or errors?
- Complexity of service?

## Total Service Lines



- 8 in progress
  - Emergency Department\*
  - Hospitalization\*
  - Labor Delivery Recovery Postpartum\*
  - Primary Care\*
  - Residential Treatment Centers\*
  - Swing Beds
  - Substance Use Disorder\*
  - Surgery\*
  - Telemedicine\*
  - Urgent Care
- 6 in progress
  - Community Health Aide Program\*
  - Employee Health\*
  - Imaging
  - Laboratory\*
  - Medication Management and Administration\*
  - Nutrition\*
  - PAMPI\*
  - Referral Management
- 2 in progress
  - Population Health
  - Public Health\*
  - Reporting
  - Revenue Cycle Management\*

# Currently Identified Models

The individual status of the 80 models in scope are listed below (Service Line not listed)

**Phase 1:  
Environmental Scan**  
*to collect internal and external information*

1. Admit to ICU from floor
2. Admit to Surgery from floor
3. Adult Follow up Visit
4. Adult Sick Visit
5. Allergies
6. ICU Medication Management
7. Imaging
8. Immunizations
9. Inpatient Medication Management
10. Medications
11. Pediatric Follow up Visit
12. Pediatric Sick Visit
13. Pediatric Well Child
14. Population Health
15. Procedures
16. Public Health Emergency
17. Referral Management
18. Reporting
19. Surgery Medication Management
20. Swing Beds
21. Transfer to another hospital from floor

**Phase 2:  
Conceptual**  
*to form an overarching understanding of each process model*

1. Blood Bank
2. Day Surgery, Post-op
3. Inpatient Revenue Cycle Management
4. Inpatient Surgery
5. Pathology

**Phase 3:  
Design and Decide**  
*to map out the future state models with IHS SMEs*

1. Administration Medication and Dispensation
2. Ambulatory Medication Management
3. Behavioral Health Aide
4. Chemistry / Hematology
5. Day Surgery, Day of Surgery
6. Day Surgery, Pre-op (Anesthesia)
7. Drug Dependency Unit
8. ED Boarding
9. ED Observation
10. ED Fast Track
11. ED Transition of Care
12. ED Treatment Decision
13. Fulfill Medication Order
14. Hospitalization
15. Labor and Delivery
16. Microbiology
17. OB Triage
18. Outpatient Revenue Cycle Management
19. Public Health Nurse
20. Public Health Threat
21. Postpartum
22. Problem List
23. Process Medication Order
24. Recovery Post Labor and Delivery
25. Refill Authorization Denial
26. Resolve Adverse Drug Event
27. Urgent Care
28. Youth Regional Treatment Centers

**Phase 4:  
Quality Review**  
*to final check process models for clinical and technical accuracy*

1. Adult New Patient
2. Community Health Representative
3. Day Surgery, Pre-op Clinic
4. Dental Health Aide Therapist
5. Emergency Department Medication Management
6. Emergency Department Point of Care Ultrasound (POCUS)
7. Home Telemedicine
8. Home with Assistance Telemedicine
9. In Clinic Telehealth
10. Inpatient RDN Screening and Consult
11. Medical Management of Inpatient Detoxification
12. Medication Review
13. Remote Telehealth
14. Remote Telehealth with Assistance
15. Substance Use Disorder, Primary Care

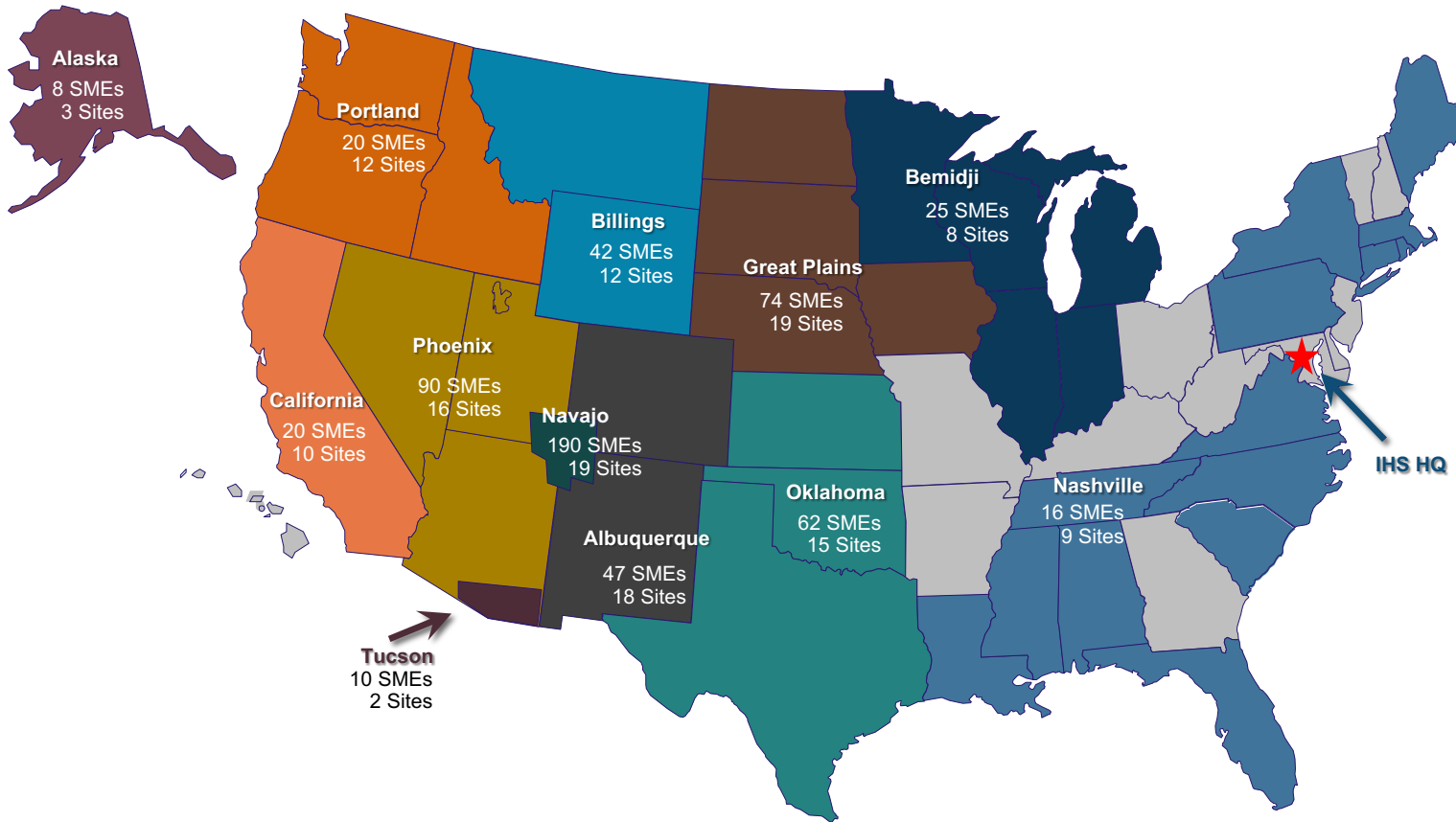
**Phase 5:  
Approval**  
*to approve models for Governance review and shared with EHR vendor*

1. Advanced Practice Pharmacist
2. Ambulatory Nutrition
3. Buprenorphine Bridge Program, Emergency Department
4. Community Health Aide
5. Employee Health Exposure – Emergency Department
6. Employee Health Exposure – Primary Care
7. Employee Health Immunizations
8. Employee Health Mass Wellness
9. Group / School Nutrition Event
10. Occupational Health
11. Public Health / Community Nutrition Home Visit



# WRAP by the Numbers

As of August 1, 2023

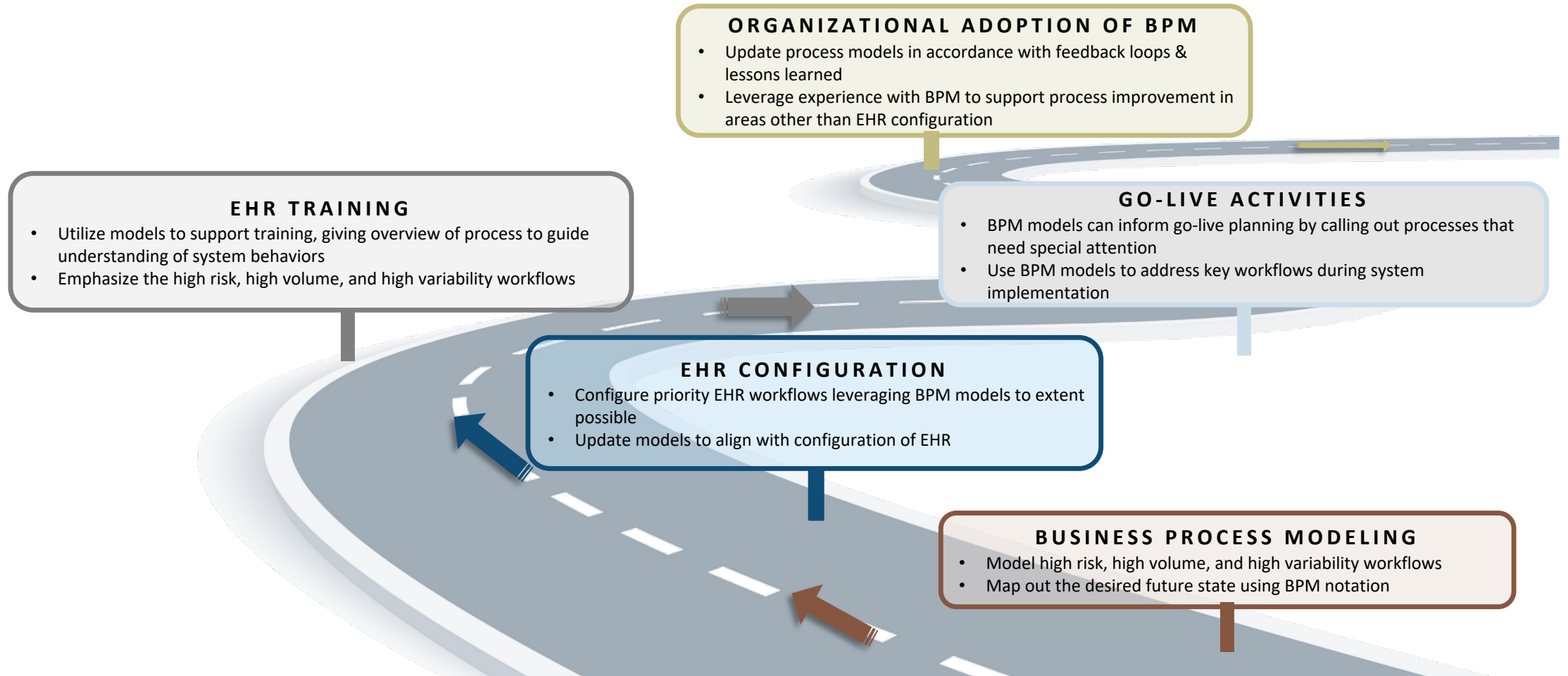


I/T/U SME engagement throughout the sessions

- 201** WRAP Work - Sessions held between Sept. 2021 and July 2023
- 22** Service Lines
- 12** Areas Participating (plus IHS HQ)
- 204** Sites of Care Participating (Station, Center, Clinic, Hospital)
- 1300+** Unique SMEs Participating
- 5300+** Participant Encounters

# The Path Ahead with WRAP

*WRAP lays the groundwork for configuration, training, implementation, and optimization of the new EHR*



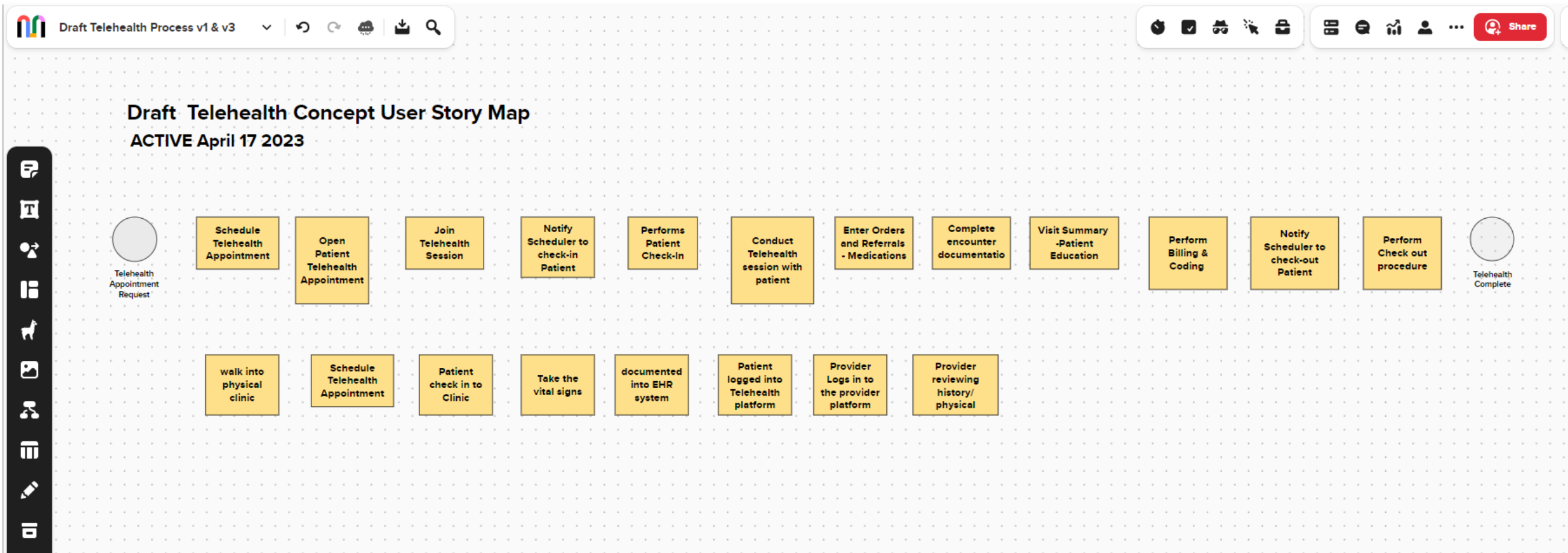


# Telehealth Models

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A UNIQUE AND INNOVATIVE APPROACH AT IHS TO LEVERAGING  
TELEHEALTH TO BRING PRIMARY AND SPECIALTY CARE TO PATIENTS  
FROM THE ARTIC SLOPE TO THE SOUTHERN BORDER

# Developing Telehealth Models: User Story Maps



# Developing Telehealth Models: User Story Maps

**Draft Telehealth Process v1 & v3**

**Draft Telehealth Concept User Story Map v2**  
ACTIVE April 17 2023

Telehealth Appointment Request

Schedule Telehealth Appointment

Open Patient Telehealth Appointment

walk into physical clinic

Schedule Telehealth Appointment

Perform Billing & Coding

Notify Scheduler to check-out Patient

Perform Check out procedure

Telehealth Complete

**Key Clients:**

- Telehealth Appointment
- Appointment/Consent
- Notifications
- Medical Record
- Physician Notes
- Medication Notes
- Patient Notification
- Consent
- Schedule
- Telehealth Template
- Queue Order Template
- Physician
- Appointment
- Appointment Rescheduling
- Consult
- Referral
- Visit Note
- Patient Referral
- Billing Codes

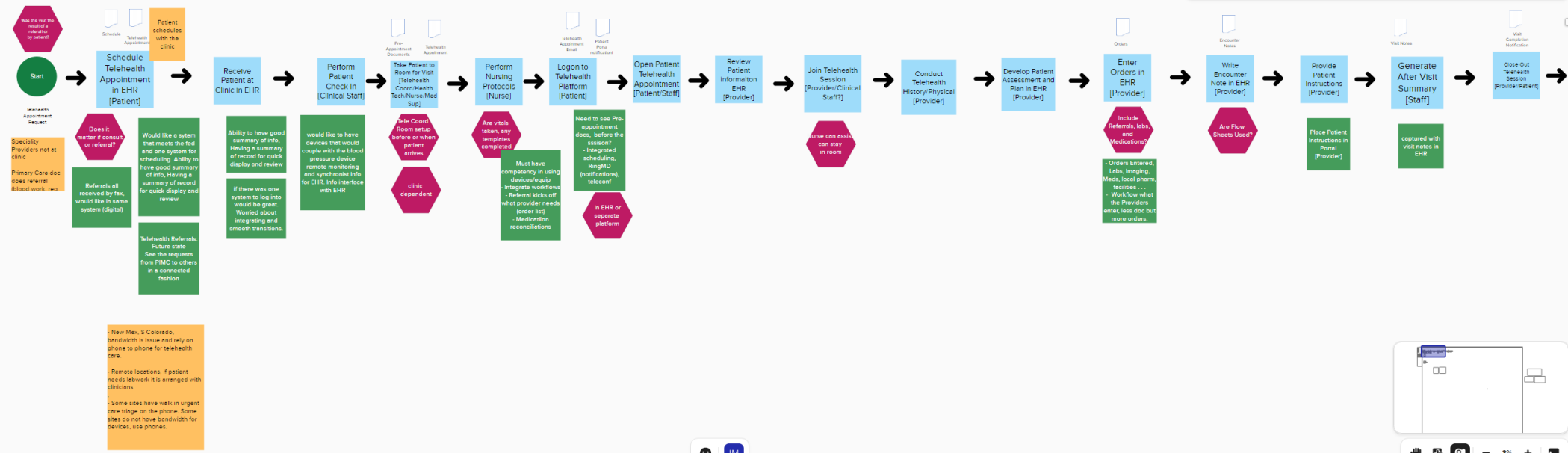
**Roles:**

- Patient
- Physician
- Scheduler
- Certified Medical Assistant (CMA)
- Physician
- Health Technician (same as CMA)
- CMPT
- Nurse
- Specialty Provider
- Specialty Provider Consultant
- Center Code (Billing)

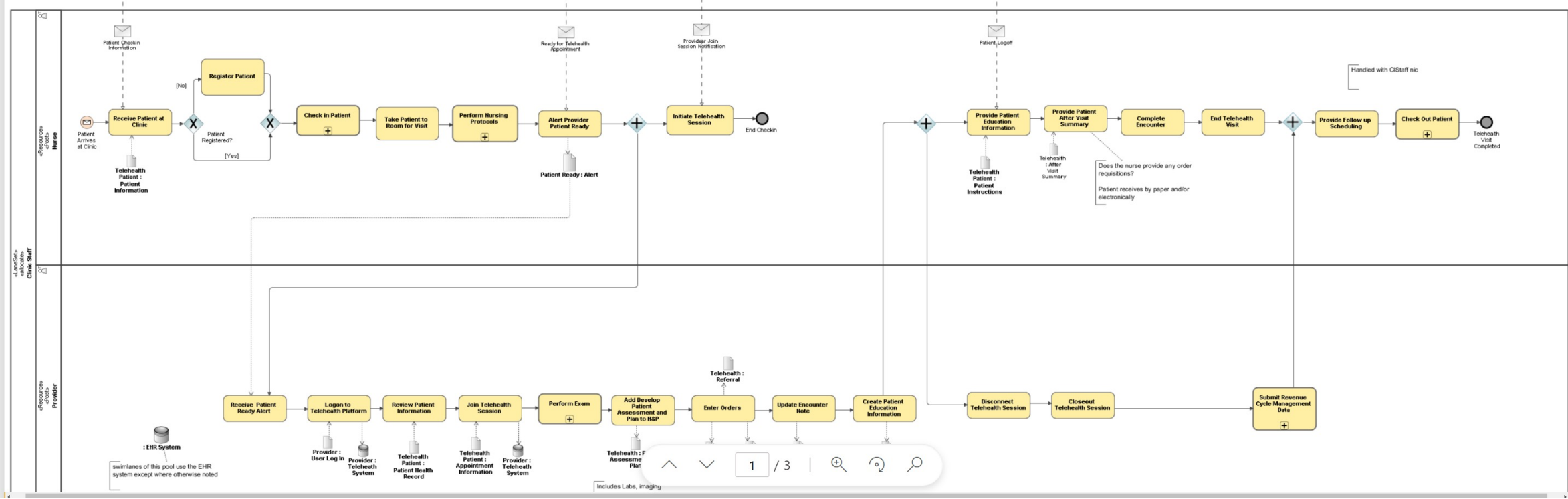
# Developing the Telehealth Models: Workflows

## Telehealth In-Clinic Work Flow DRAFT

Scenario - Patient is at the clinic, Provider is remote.



# Developing the Telehealth Models: Business Process Models



# Introduction to Revenue Cycle Management (RCM)

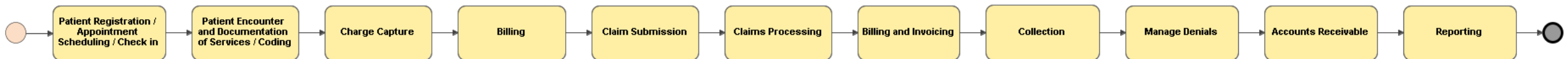
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RCM IS THE PROCESS USED BY HEALTHCARE SYSTEMS TO TRACK REVENUE FROM PATIENTS, FROM THEIR INITIAL APPOINTMENT OR ENCOUNTER WITH THE HEALTHCARE SYSTEM TO THEIR FINAL PAYMENT OF BALANCE

# Introduction to Revenue Cycle Management (RCM)

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RCM is the financial management of the patient care services provided by healthcare professionals, from patient registration and appointment scheduling to the final collection of payments for the services provided.





# Patient Registration and Charge Capture Challenges and Opportunities

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## Patient Registration (Unique)

- Tribal Affiliation
- Unique Patient Identification
- Law - Forms and documentation related to eligibility
- Prioritization of Native American Patients
- Culturally Sensitive Practices

## Charge Capture

- Limited Resources
- Document Integrity
- Coder - Provider Communication
- Education in the documentation of services provided

# Revenue Cycle Management and Charge Capture

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Documentation of Services



Charge Validation



Code Assignment



Charge Reconciliation



Code Verification



Compliance



Charge Entry



Submission



# Telehealth: A System of Systems

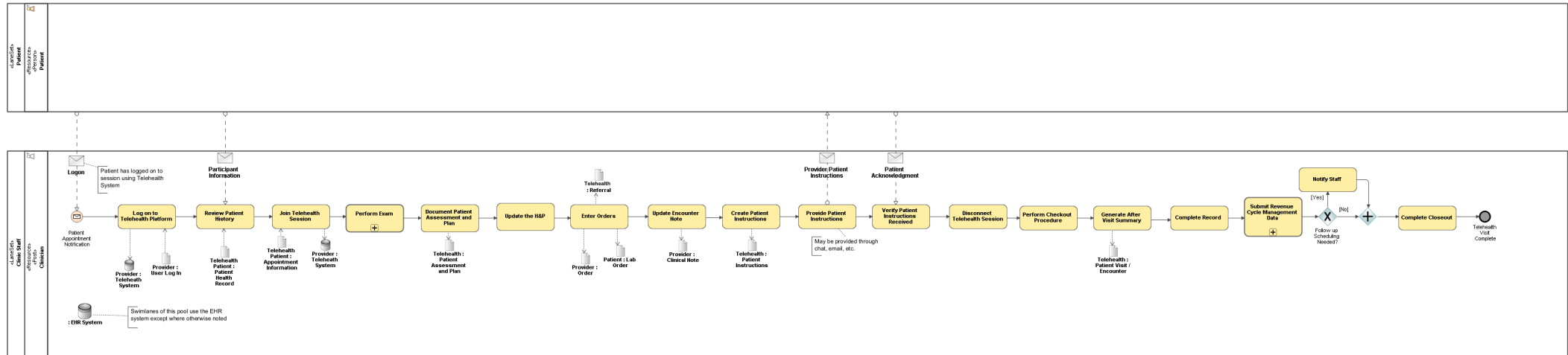
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TELEHEALTH COMBINES WITH A COLLECTION OF OTHER SERVICE LINES TO CREATE A NEW, MORE COMPLEX SYSTEM WHICH OFFERS MORE FUNCTIONALITY, POTENTIAL FOR SCALED IMPACT IN REMOTE PLACES, AND OPPORTUNITIES FOR REVENUE CYCLE MANAGEMENT THAN SIMPLY THE SUM OF THE CONSTITUENT SERVICE LINES

# Telehealth, Remote Visit

**DRAFT MODEL – For Informational Purposes Only**

Diagram name	Perform Remote Telehealth Visit
Author	ckendrick
Creation date	8/10/23, 10:50 AM
Modification date	8/14/23, 1:05 PM
Documentation	This model depicts the process of a patient who is at a remote location and has a virtual appointment with a provider.
Completion status	

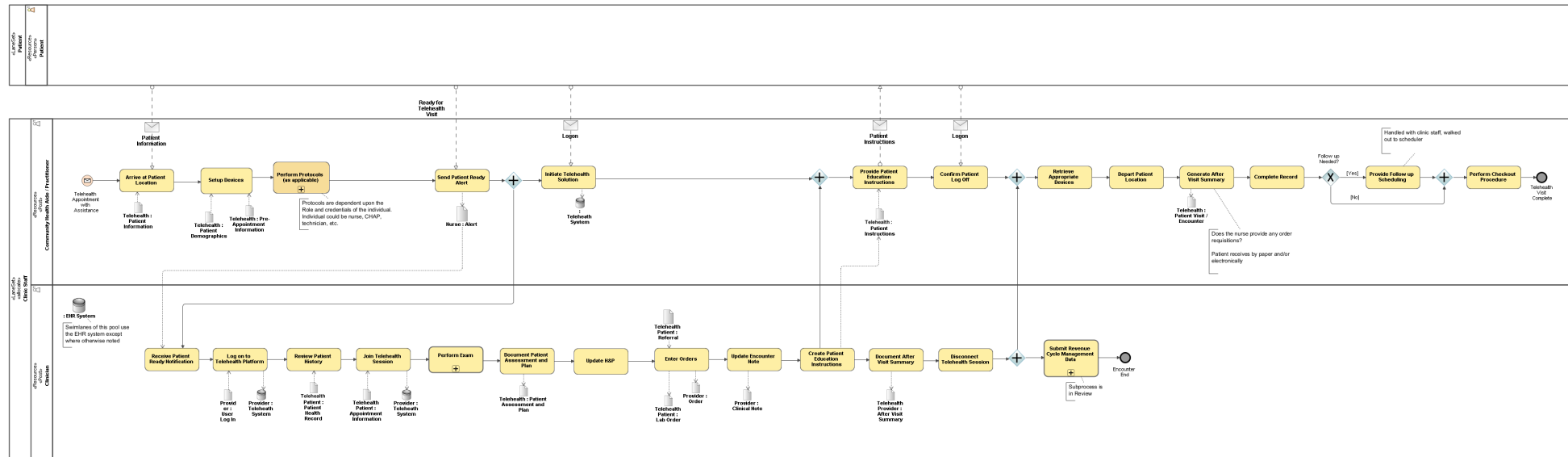


Perform Remote Telehealth Visit DRAFT 14 Aug 2023.png

# Telehealth, Remote with Assistance

DRAFT MODEL – For Informational Purposes Only

Diagram name	Perform Remote Telehealth Visit with Assistance
Author	ckendrick
Creation date	8/10/23, 10:50 AM
Modification date	8/17/23, 8:43 AM
Documentation	This model depicts the process of a patient who is at a remote location and needs assistance with connecting with the provider for a virtual appointment.
Completion status	

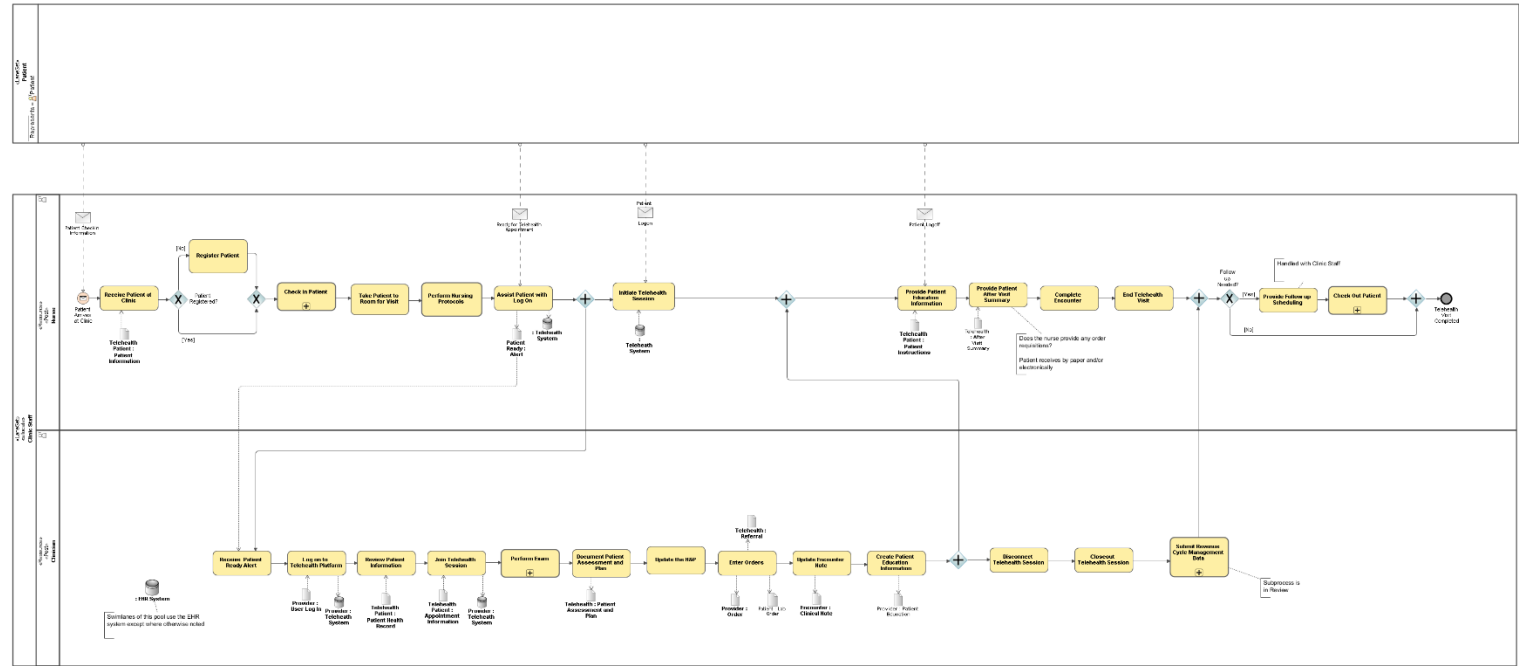


Perform Remote Telehealth Visit with Assistance DRAFT 17 Aug 2023.png

# Telehealth, In Clinic

**DRAFT MODEL – For Informational Purposes Only**

Diagram name	Perform In-Clinic Telehealth Visit
Author	00000000
Creation date	8/10/23, 10:59 AM
Modification date	8/10/23, 1:06 PM
Documentation	This model depicts the process of a patient arriving at a clinic for an appointment with a provider who is at a remote location.
Completion status	



Perform In-Clinic Telehealth Visit DRAFT 14 Aug 2023.png

# Community Health Aide Program Models

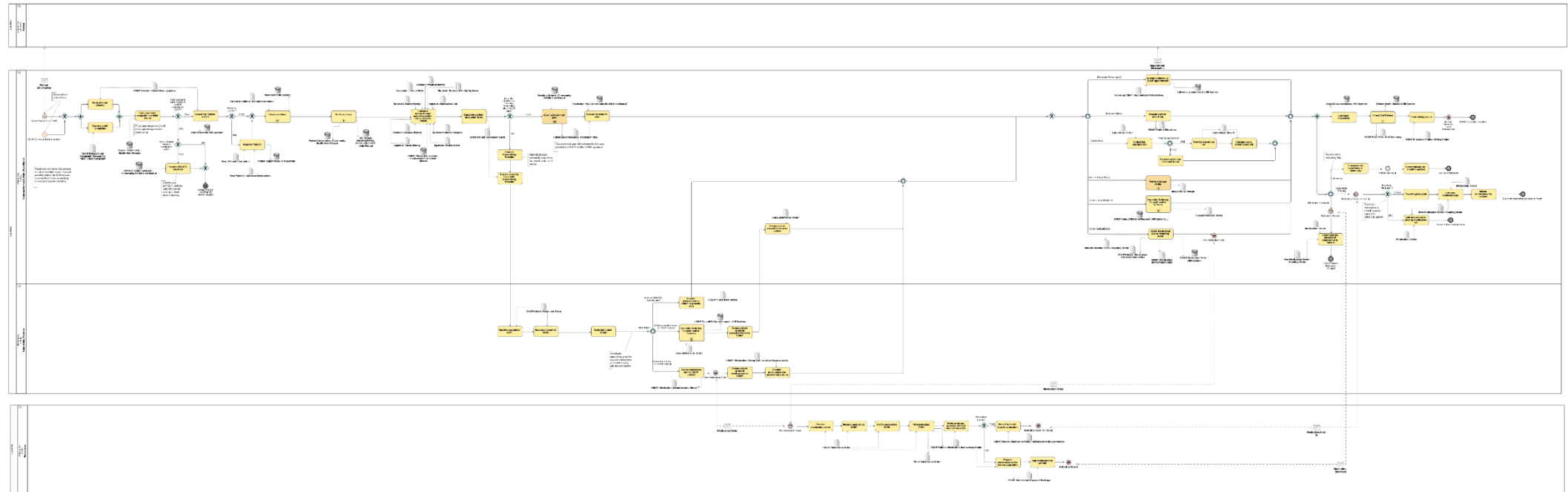
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# Community Health Aide Practitioner (CHAP)

DRAFT MODEL – For Informational Purposes Only

Version:	1.0
Date:	15/05/2018
Author:	CHAP Working Group
Approved by:	CHAP Working Group
Approved on:	15/05/2018
Approved by:	CHAP Working Group
Approved on:	15/05/2018

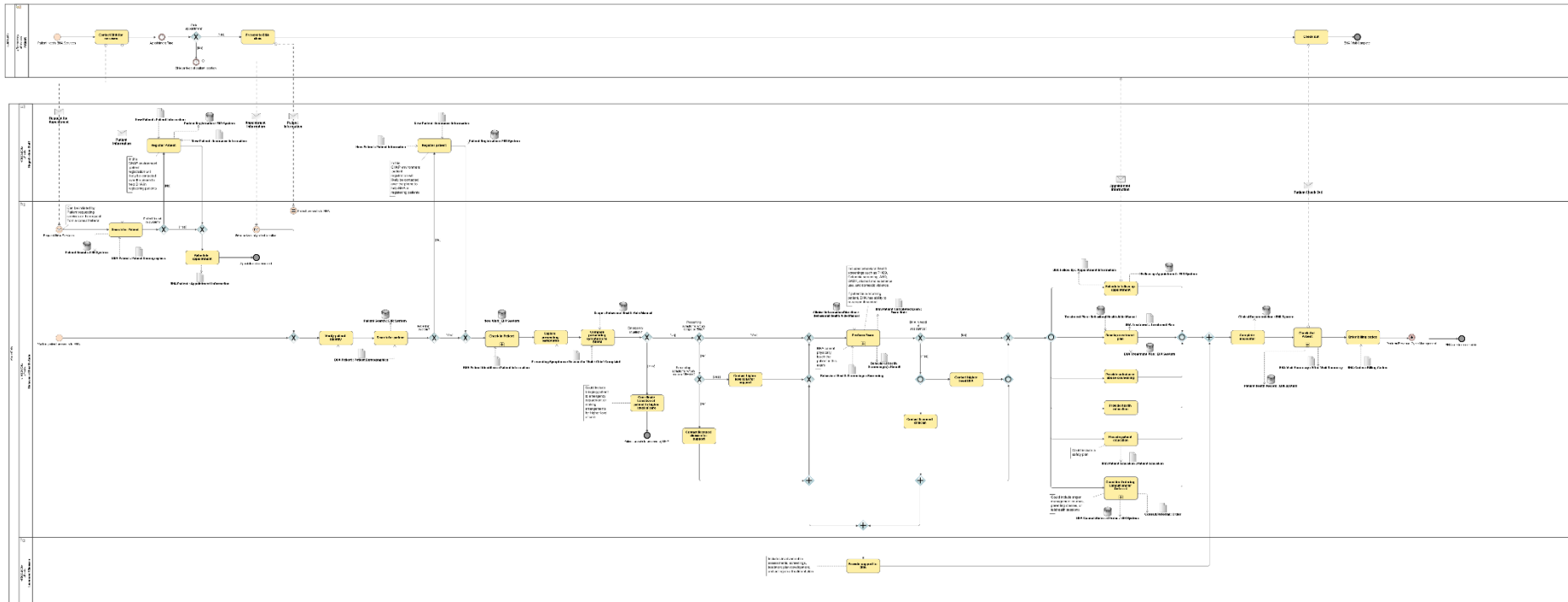


Community Health Aide \_ Practitioner.png

# CHAP – Behavioral Health Aide (BHA)

DRAFT MODEL – For Informational Purposes Only

Project Name	Behavioral Health Aide
Client	CHAP
Version	1.0
Author	CHAP
Reviewer	CHAP
Approval	CHAP
Comments	
Revision	

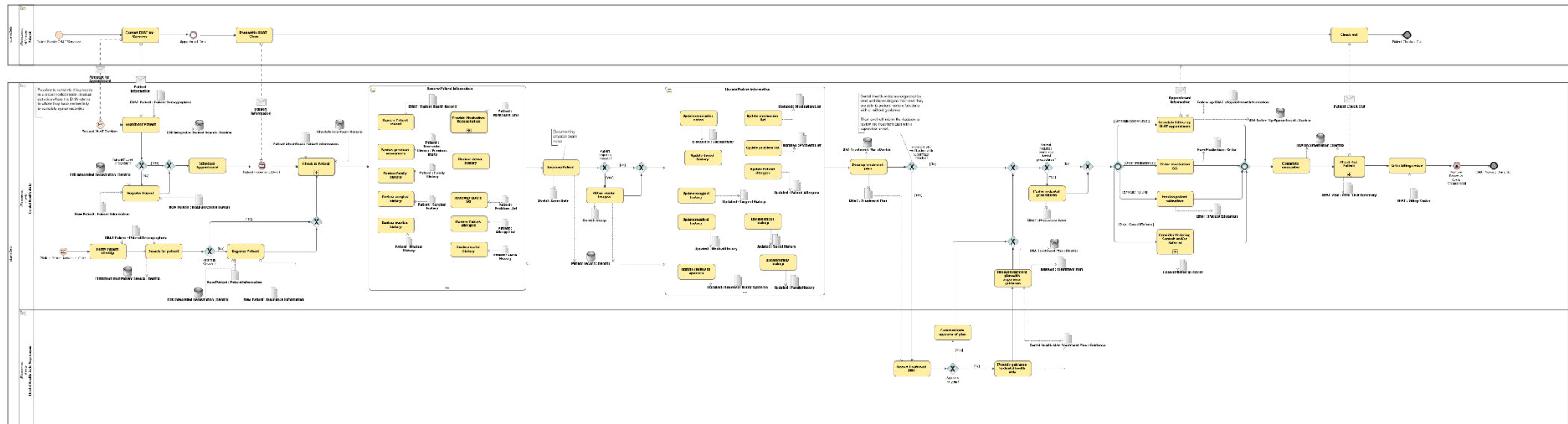


Behavioral Health Aide.png

# CHAP – Dental Health Aide Technician (DHAT)

DRAFT MODEL – For Informational Purposes Only

Department name	Dental Health Aide
Unit	CHAP
Version date	02/20/2015
Created by	CHAP
Modified by	CHAP
Documentation	This model depicts the process of patient care being rendered by a Dental Health Aide. The model assumes consistency in workflow. It is recommended that the process be reviewed and revised before the Dental Health Aide is input the information when implemented. Includes a list of activities, patient flow, and equipment used.
Computer status	



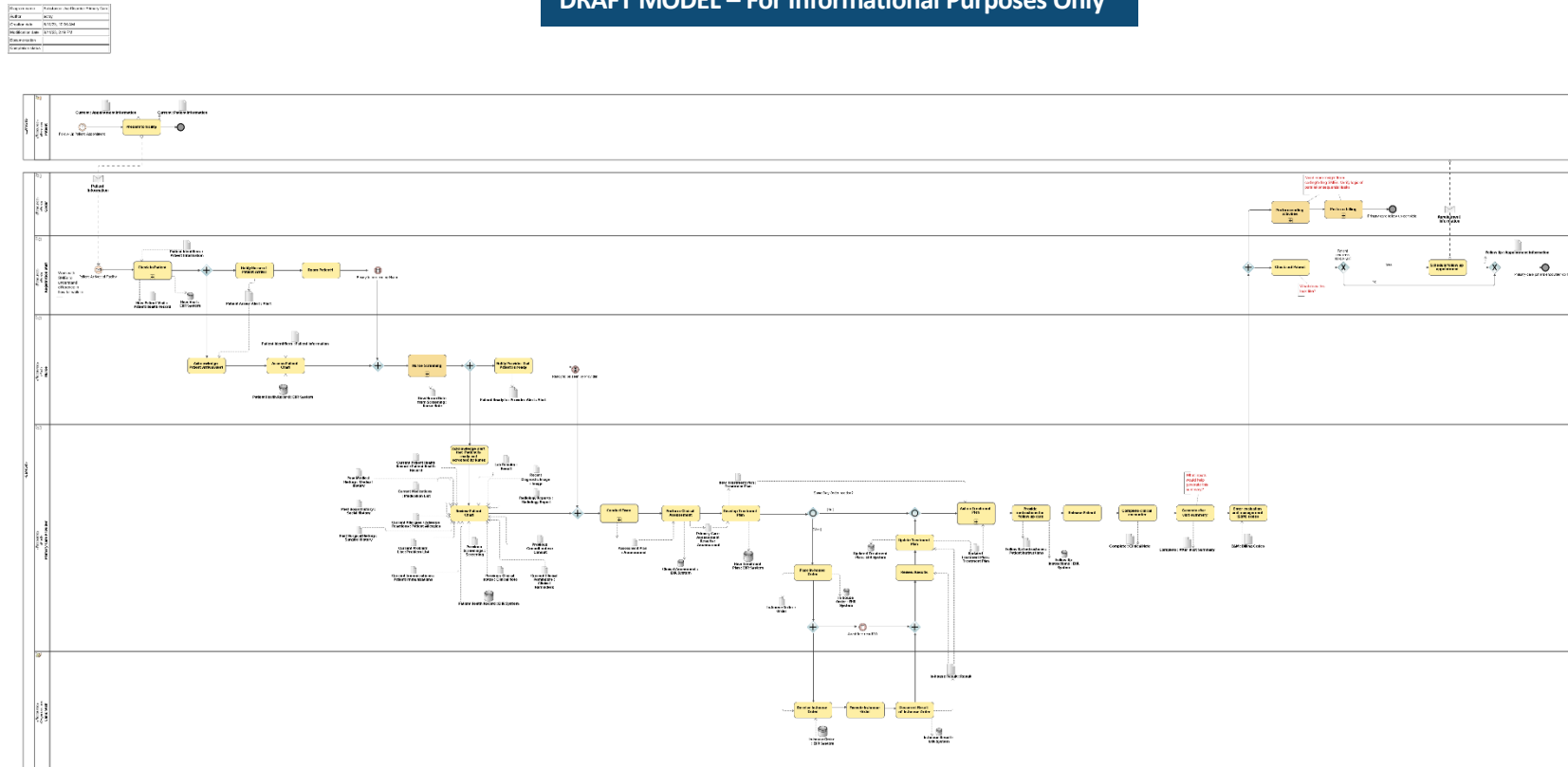
Dental Health Aide.png

# Substance Use Disorder Models

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# SUD – Primary Care

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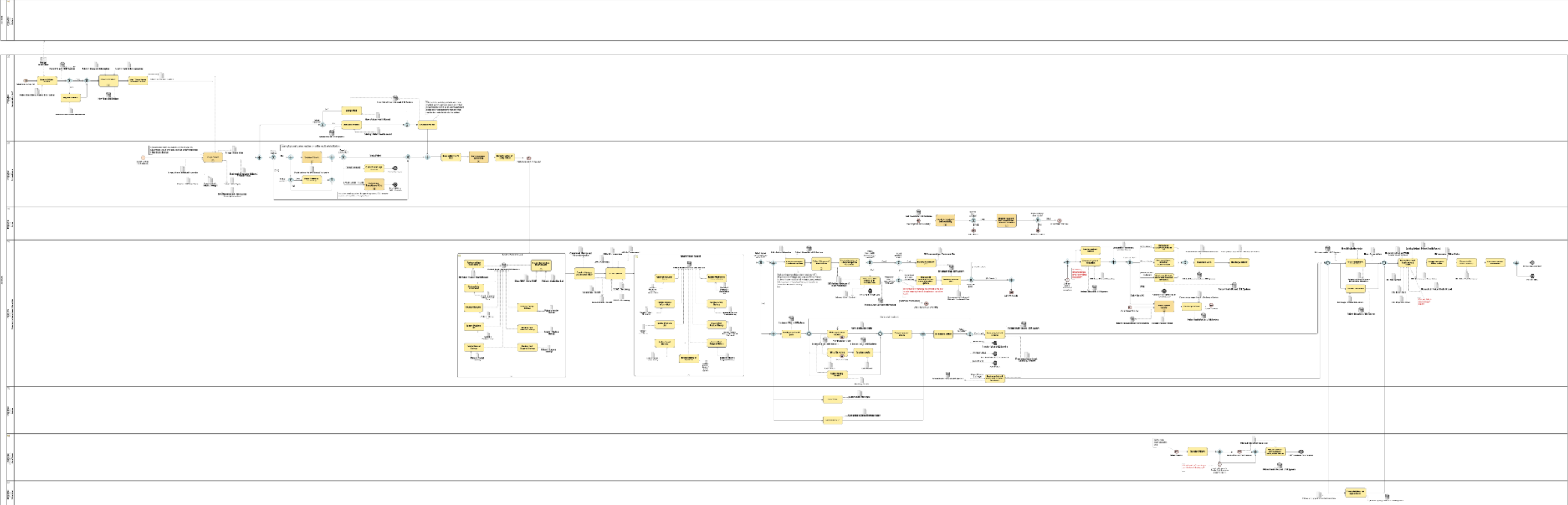


Substance Use Disorder Primary Care.png

# Buprenorphine Bridge Program

**DRAFT MODEL – For Informational Purposes Only**

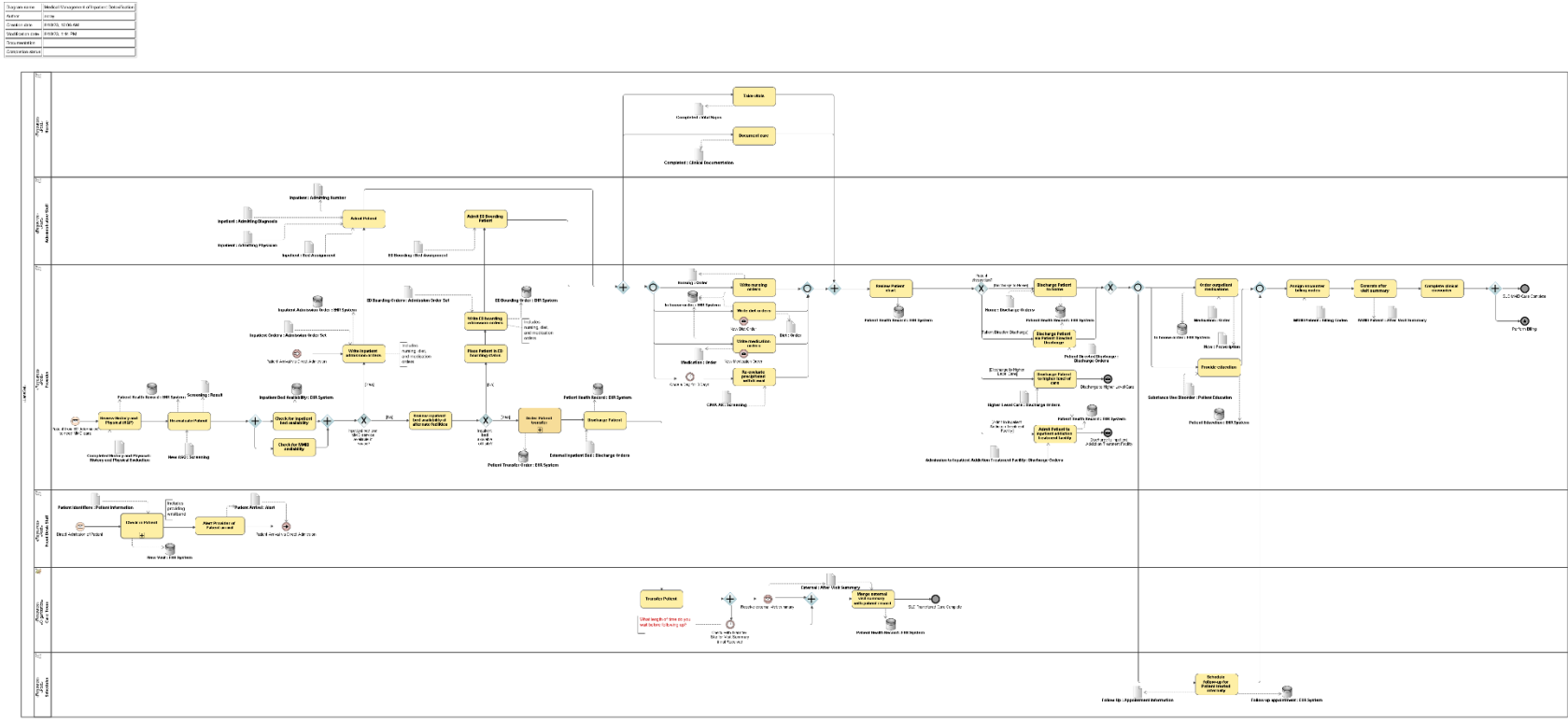
Project Name	Buprenorphine Bridge Program
Version	1.0
Author	[Name]
Reviewer	[Name]
Date	[Date]
Page	35



Buprenorphine Bridge Program ED.png

# Medical Management of Inpatient Detoxification

DRAFT MODEL – For Informational Purposes Only



Medical Management of Inpatient Detoxification.png

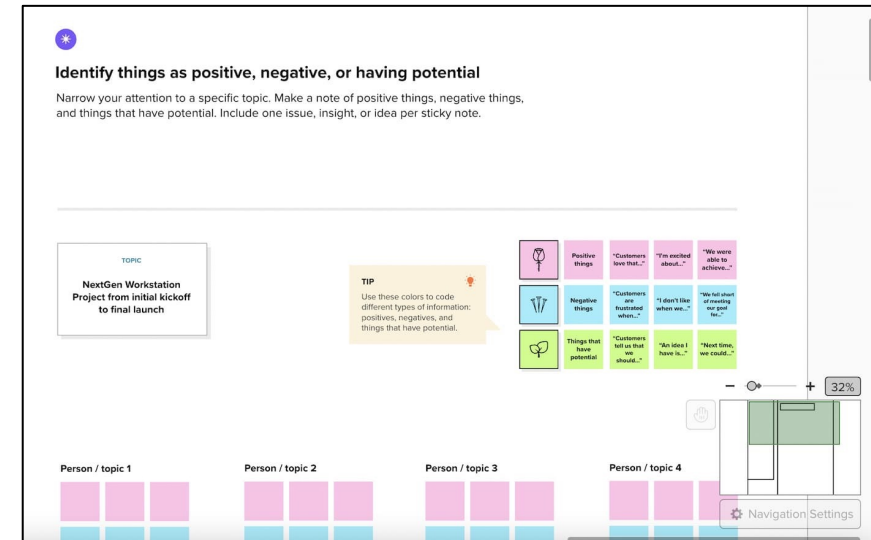
# Group Discussion

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# Today's exercise

- Design and Decide starting with a “Rose, thorn, and bud” exercise
- Exercise helps teams:
  - Define the central topic or problem
  - Brainstorm with your team to identify what is going well, what isn't working, and opportunities for improvement
  - Organize and identify themes across your feedback for further analysis
  - Get aligned in next steps
- Done over Mural, a virtual whiteboard for facilitating interactive meetings and workshops
- Part I Mural: [IHS Conf 2023-Telehealth • MITRE Sandbox \(mural.co\)](#)





# Discussion Topics

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- History of telehealth @ IHS
- Review of draft models – high level narration, consider including CHAP model (CHR and PHN?)
- Mural rosebud and thorn exercise (live) - what's working? What's not working? What could be better?
- Findings and response to 2022 GAO report
- Overview of RCM – seven steps, entities involved, telehealth-specific considerations, different post PHE?
- Billing opportunities for telehealth services
- Structure of CMS reimbursement
- Quality of documentation – accuracy, completeness, timeliness
- Current measurement and reporting related to telehealth productivity, outcomes, return on investment
- Value of seeking telehealth care within IHS vs externally
- Future of telehealth in IHS – technology and devices that can be leveraged by specialized staff (e.g., CHAP)
- Opportunities for collaboration across complementary services – telehealth, CHAP/CHR/PHN, RCM
- Provider shortage – how does this impact telehealth?
- Future – what does AI mean for telehealth?

# Relevant research

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in usage and  
for those in rural  
ities was lower  
patients in urban  
ities

**Larson AE, Zahnd WE, Davis MM, Stange KC, Yoon J, Heintzman JD, Harvey SM. Before and During Pandemic Telemedicine Use: An Analysis of Rural and Urban Safety-Net Clinics. Am J Prev Med. 2022 Dec;63(6):1031-1036. doi: 10.1016/j.amepre.2022.06.012. Epub 2022 Sep 10. PMID: 36096960; PMCID: PMC9462940.**

“Before the COVID-19 pandemic, little difference in the percentage of total encounters conducted face-to-face versus through TM by rurality was found...Throughout the pandemic period, the proportions of visits received through TM were consistently lower among rural patients than among more urban patients.”

disparities in  
technology, and  
eracy continue to  
medicines use

**Patel SY, Rose S, Barnett ML, Huskamp HA, Uscher-Pines L, Mehrotra A. Community Factors Associated With Telemedicine Use During the COVID-19 Pandemic. JAMA Netw Open. 2021;4(5):e2110330. doi:10.1001/jamanetworkopen.2021.10330**

“Through July 14, 2020, we observed substantial variation across counties in telemedicine use. Our results support concerns that rural and lower-income communities may be left behind in the shift to telemedicine use. To ensure telemedicine is accessible by all people in the US, interventions such as increased broadband investment in rural areas<sup>6</sup> or greater reimbursement in disadvantaged communities may be needed.”

g IHS-based  
cine can address  
barriers while  
g access

**Morenz AM, Wescott S, Mostaghimi A, Sequist TD, Tobey M. Evaluation of Barriers to Telehealth Programs and Dermatological Care for American Indian Individuals in Rural Communities. JAMA Dermatol. 2019;155(8):899–905. doi:10.1001/jamadermatol.2019.0872**

“Substantial geographic and insurance coverage barriers to dermatological care exist for American Indian individuals in rural communities; tele dermatological innovations could represent an important step toward minimizing the disparities in dermatological care access and outcomes.”

cial success in  
g telemedicine  
cation  
ment of substance  
orders (SUDs)

**Weintraub E, Seneviratne C, Anane J, et al. Mobile Telemedicine for Buprenorphine Treatment in Rural Populations With Opioid Use Disorder. JAMA Netw Open. 2021;4(8):e2118487. doi:10.1001/jamanetworkopen.2021.18487**

To mitigate gaps in access to available treatment for opioid use disorder [OUD], we have tested a mobile service that travels to rural areas, equipped with on-site diagnostic and treatment services delivered via videoconferencing by physicians specialized in addiction medicine. Our data indicate that by combining the known effective approaches of TM and mobile treatment, our model is a viable and feasible approach to narrow the gaps in accessibility to telemedicine (TM) medications for opioid use disorder (MOUD) in underserved rural areas.

# Relevant research

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