Remote Health Monitoring
Past, Present and Future

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Learning Objectives

Upon completion the participants will:

1. Relate to the complexities of starting a Remote Health Monitoring project. The project management of remote health monitoring project are complex with IT integration issues to provider integration.
2. Review how our team overcame barrier to innovation. A fishbone diagram will go over all the hurdles we overcame along with a explanation of how.
3. Describe remote health monitoring and the process. They should also be able to understand the benefits as improvement in outcomes, adherence and cost reductions.
4. Summarize project DREAM is and restate what our team was able to accomplish.
5. Sketch your own remote health monitoring project.
Purpose: To provide an overview of Remote Health Monitoring (RHM). Review the past, present, and potential future uses of RHM for the Defense Health Agency (DHA).

Outline:
1. Overview of Remote Health Monitoring
2. Common Uses for RHM
3. CMS Reimbursement for RHM
4. DoD Past Efforts/Early Beginnings
5. Project DREAM
6. Potential for the Future
Overview

• Remote Health Monitoring (RHM) is the process of monitoring a patient with a system for detecting, monitoring, and reporting physiological information using sensory devices.

• RHM pilots have demonstrated improvements in outcomes, adherence, and cost reductions.
Common Uses of RHM

• Treat Patients with Diabetes
  • Using Coaching/Intervention

• Reduce the Risk of Heart Failure
  • Remotely monitoring Blood Pressure

• Treat patients who suffer Infertility
  • Some studies show RHM as effective as one round of IVF

• Prevent Harm from Dementia and Falls
  • Locate, track, and alert dementia patients
Reimbursement for RHM

• Prior to 2019, the CMS Coding instruction for the billing of RHM did not incur much profit for RHM programs. RHM mostly existed in health care models such as Capitated Care Plans.

• In 2019, CSM implemented new RHM codes that created a profit margin for RHM. This event created a sort of “boom” in the private sector for RHM.

• Note: Coding for RHM is COMPLEX!
DoD Past Efforts in RHM

- Small handful of RHM projects looking into the remote health monitoring of Diabetes and project(s) monitoring heat casualties.
- All of these were funded using the Army Surgeon General annual $5M special appropriation to enable technology demonstrations.
  - Telemedicine and Advanced Technology Research Center (TATRC) at the U.S. Army Medical Research and Materiel Command (USAMRMC)
  - AMEDD Advanced Medical Technology Initiative (AAMTI)
Why?

• DoD mandate for Telehealth: NDAA 2017
  • Increase Telehealth Services
  • Pilot an RHM project that monitors outcomes for a Chronic Condition(s). One pilot with two sites. San Antonio and the National Capital Region.
  • Aims of the Pilot:
    • Target a Chronic Disease
    • Reduce Costs
    • Increase Access to Care
The Birth of DREAM

The Virtual Medical Center (V-MEDCEN) and DCOE, a specialty clinic for San Antonio Military Health System beneficiaries, united to determine the feasibility of implementing a market-level RHM program to monitor chronic health conditions.
DREAM Purpose

• Initiate RHM for patients with diabetes referred by their Primary Care Provider (PCP), Clinical Pharmacists, or identified through the Diabetes Center of Excellence (DCOE).

• Determine if implementing RHM could improve the quality of care delivered to patients with diabetes.

• As well as determine the feasibility of RHM as an enterprise capability.
DREAM Personnel

Administration

• Deputy Director of Operation: Maj. Daniel Yourk, MS
• Project Manager: Ms. Anna Moore
• Medical Director: Maj Darrick Beckman, MD
• Research Director: Dr. Jana Wardian, PhD
• Business Analysis: Ms. Kelly Caughlin, MS

DREAM Team

• 2 Nurses, One Health Educator
  o Kim Wasmuth, RN
  o Sarah Montano, RN
  o Mr. Delvon McDaniel, Health Educator
DREAM Strategic Partnerships

1. DHA & V-MEDCEN: Funding and support

2. DCOE: Diabetes expertise and clinical support

3. Telemedicine & Advanced Technology Research Center (TATRC): mCare application development & technology support

4. Primary Care Providers (PCPs), Clinical Pharmacists, and Disease Managers: Identifying and referring eligible patients
What is **DREAM**?

1. **Guidance in titration of basal insulin** using American Diabetes Association (ADA) titration algorithm.

2. Patients receive **Bluetooth Enabled (BTE) equipment** connected to the DoD-approved mCare platform.

3. Healthy lifestyle **coaching and education** are provided.
# DREAM Equipment

## QUALITY HEALTHCARE RESULTS: SAFE, EFFECTIVE

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Image</th>
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<tbody>
<tr>
<td>BP Cuff</td>
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<tr>
<td>Glucometer</td>
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<td>Scale</td>
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<tr>
<td>Activity Meter</td>
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## TRANSFORMATIONAL
DREAM Program Overview

Who We Serve

Patients with Type 2 Diabetes who also

- Prescribed Basal Insulin
- HbA1c > 8%
- Personal Smartphone
DREAM Challenges

Developed from scratch

• Processes (Referrals/ Feedback)
• Forms
• Standard Operating Procedures
• Patient Education Resources
• Collaboration with TATRC to enable RHM platform to meet DREAM needs
• Non-Research Determinant (NRD)

It just takes time!
Other DREAM Challenges

• **Staffing**
  - Not all nurses are well-suited for RHM
  - High turn over in RHM nurses

• **Technology**
  - Platform instability
  - Unreliable Wi-Fi in Government buildings

• **Equipment**
  - Storage
  - BTE glucose meters problems
  - Formulary Strips

• **Coding for Telemedicine**
What icebergs weigh down your DREAM’s
by the Numbers

**Number Enrolled:** 13

**Average Age:** 53 yrs
**Age Range:** 37 to 69 yrs old

**Average Steps per Day:** 7,727

**Time to Target Glucose Range:**
**4.5 weeks**

**Average A1C Change at 3 month Recheck:**
- 1.3%

**Patient Satisfaction:** 100%
DREAM Future

- Developing partnerships at Wilford Hall Ambulatory Surgical Center (WHASC) and Brooke Army Medical Center (BAMC)

- Group Orientation

- Expansion throughout the San Antonio Military Health System, the National Capital Region, and then throughout the MHS
The DREAM Blood Pressure Monitoring (BPM) Branch was developed to support PCPs with blood pressure medication titration and post-discharge monitoring.
Inclusion Criteria:
- ≥ 18 years
- Diagnosed with hypertension
- Must have a smart phone with no connectivity restrictions
- On or starting blood pressure medications

Exclusion Criteria:
- Pregnancy
- Dementia
- Any diagnosis requiring real-time blood pressure monitoring
• This expansion is intended:
  o To help ensure the health of service members by providing a readiness component for military members and their dependents.
  o As a tool to assist units and service members who may need physical fitness remediation, dietary parameters, and activity-oversight in order to preserve the fighting strength.
  o As a tool to support military dependents in maintaining and/or attaining a healthy lifestyle.
DREAM Program JBSA Healthy Lifestyle Branch

Inclusion Criteria:

• ≥ 18 years
• Smart phone with no connectivity restrictions
• Tricare Beneficiary

Exclusion Criteria:

• Pregnancy
• Dementia
• Any diagnosis requiring real-time monitoring
Future RHM Projects

• Acquisition of Disease Agnostic RHM Platform
• RHM of Glaucoma with TROOP
• Integration of BATDOK
• Integrating Sensors (TBI, Core Temp., Blast Injuries, SensoRING)
Questions
Back-Up Slides
DREAM DIABETES REMOTE ELECTRONIC ASSISTED MONITORING
DREAM Program Presentation

Where We Began

- Fall 2017: 1st meeting with V-MEDCEN
- Summer 2018: DCOE agreed to be an RHM site
- AUG 2018: NRD approval
- OCT 2018: 5 pallets of BTE equipment arrives
- NOV 2018: Facilities ready
- DEC 2018: Development of DREAM begins
- 14 FEB: 1st Patient
- 11 MAR 2018: Fully staffed
DREAM Program Products
Since January 2019

**Finished Products**
- Physician Referral Form
- Process Map
  - Screening Script
  - Technology Set Up: mCare & FitBit apps
  - Orientation
- Patient Orientation
  - Patient Enrollment Form
  - Education Brochures
    - Insulin Titration Guide
    - Sharps Disposal
    - Blood Pressure SOP
    - Exercise
    - Nutrition
  - Patient Agreement
  - Patient Consent
- DREAM Logo and PowerPoint Template
- DREAM Program Guide
- Billing Codes for RNs
- AHLTA Note Templates
  - Patient Encounters
  - Monthly Summary for PCMs
- Group PowerPoint Orientation
- Metrics in Excel
  - FBG
  - A1C
  - Weight Change
- ORG box
- mCare Issues Log
- Patient Satisfaction Survey & Questionnaire
- Physician Satisfaction Survey
- Patient & Provider Letters for:
  - DREAM Non-Adherence
  - DREAM Graduation

**In Progress**

**SOP/COOP**
- Health Educator Coding/Templates
- Scheduling Power Point Presentation for Family Practice/Internal Medicine/Disease Management
- AHLTA Encounter Templates
- Healthy Lifestyle Education Materials
- Program Stage Descriptions
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