### U.S. VIRGIN ISLANDS DIGITAL HEALTH SUMMIT 2022



"The Journey of the USM into Health IT+Charge to Harness Tech for Future of Healthcare"

July 25, 2022

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#### Agenda

- USVI Into Health IT: USVI Telehealth Network 1996
- Telemedicine and the Future of Medical Care
- Harnessing Tech for the Future of Healthcare
- Transforming Health Care: The Critical Path –
   Systems Approach
- Integrated Community Health System:
   Population Health Centered
- Population Health Improvement Examples using Health IT
- 0 Q&A



FRIDAY, MAY 17, 1996 HOSPITAL LAWN 10:00 A.M.

PHASE#1 - PILOT NETWORK



UNIVERSITY

Caribbean TeleHealth Network

Phase I: USVI TeleHealth Network

Enhancing access to quality healthcare and health education

Howard University TeleHealth Sciences Center 2041 Georgia Ave. NW Towers Building, Suite 3500 Washington DC 20060



# Telemedicine



#### **Program Offerings**

- 1. <u>Telemedicine</u>-Secure Internet based healthcare consultations, collaborations, research
- 2. <u>Distance Learning</u> -videoconferencing and synchronous internet based course delivery and knowledge exchange
- 3. <u>Professional Services</u> -Global Dialogues, seminars, interviews, meetings, events using videoconferencing and or learning management systems (LMS)





# **Telemedicine and the Future of Medical Care Practice**

# **Learning objectives**

- Learning Objective #1: Define the essential elements of telemedicine and how they translate to primary care practice
- Learning Objective #2: Apply telemedicine to primary care practice resulting in a virtual medical practice
- Learning Objective #3: Understand how to integrate virtual medical practice into current practice model with an eye to the future

### Define the essential elements of telemedicine and how they translate to medical practice



### Question #1

Telemedicine is a medical specialty that requires video conferencing over an electronic network.

- True
- False



# What is Telemedicine?

#### An element of the practice of medicine

where medical information is exchanged from one site to another via electronic communications to improve a patient's health status

- > Not a separate medical specialty but a medical practice tool
- > Many payers:
  - No distinction between services provided on site and those provided through telemedicine
  - ✓ No distinction in the reimbursement fee structure
  - ✓ No separate coding requirements for billing of remote services

#### Source: American telemedicine association

ATAhttps://www.americantelemed.org



# **Telemedicine vs. Telehealth**

- Telemedicine and Telehealth both describe the use of medical/health information exchanged from one site to another via electronic communications to improve patients' health status.
- Although evolving, telemedicine is associated with direct patient clinical services and telehealth is associated with a broader definition of healthcare services provided via electronic communications.



# **Telemedicine/Telehealth: Examples**

#### Telemedicine

- remote consultations,
- in-home monitoring,
- outsourced diagnostic analysis,
- remote specialist consultations.

#### Telehealth

- health literacy consumer and professional
- medication management
- health promotion
- care coordination and home health
- disaster management
- Counseling



# **Telemedicine/Telehealth: Elements**

#### **Categories of Telemedicine Tools**

- Teleconsultations
  - eVisits
  - Specialty consults
- Telementoring
  - Educational assistance and coaching
    - Emergency Medical Technician Assistance
    - Disability treatment Autism
- Telemonitoring
  - Continuous or asynchronous data gathering for the purpose of diagnosis and treatment





# **Telemedicine/Telehealth: Elements**

Types of Telemedicine Transmission



- Store and Forward
  - Radiology, Dermatology, Pathology
- Real Time Two Way Transmission

- eVisits

# **Telemedicine/Telehealth: Elements**

Telemedicine Components

- Electronic Network, (i.e. Internet, point-to-point, cloud, virtual private network (vpn))
- Source of medical/health information capture and application
  - Computer software programs
  - Digital Device
    - Monitors: Blood pressure , scale, glucometer, vital signs
    - Imaging Echocardiogram, X-Ray, Ultrasound
    - Haptic Surgical arms
    - Video conferencing hardware
    - Cell phones
    - Computers
- Electronic Medical Record



### Question #2

Which are considered examples of Telemedicine?

- 1. remote consultations,
- 2. in-home monitoring,
- 3. medical interactive voice response (IVR),
- 4. remote specialist consultations

Choose the correct combination

A. 1,2 and 3
B. 1,2 and 4
C. 2,3 and 4
D. 1,3 and 4



- What Are the Benefits of Telemedicine?
- Improved Access
- Cost Efficiencies
- Improved Quality
- Patient Demand



### Without Telemedicine



## **Restrictions and Resolutions**

- <u>Without Telemedicine</u>
- Busy office hours
- Call backs
- No access
- No shows
- Delays
- No specialty access
- FU appt to monitor
- ED visits
- Patient frustration



- With Telemedicine
- 24/7 Access
- Available appointments
- Flexibility for patients
- Expanded access
- Reduction in unnecessary tests
- On-demand specialist
- Real time monitoring
- Reduction in ED visits
- Patient satisfaction

# **Telemedicine Allows Practice Anywhere**

- Connects providers and patients
- Avoids long travel times
- Your patient stays <u>your patient</u>
- Provides care services directly in the community
  - Primary care and Specialty Services such as
    - Teleradiology,
    - Telepsychiatry
    - Tele-post surgical care
    - Tele-oncology
    - etc.



Island Resort



Mobile Van

Workplace

https://www.verizonwireless.com/news/article/2015/03/mobile-clinic-connects-rural-communities-with-high-tech-telemedicine.html

# **Telemedicine Facts**

#### Telemedicine/Telehealth

 Telemedicine is a significant and rapidly growing component of health care in the United States



- Improves quality, reduces healthcare costs, and increases patient satisfaction
- Telemedicine is safe, guided by technical standards and clinical practice guidelines
- Expands access to PCP and specialists, and provides 24/7 access
- Medicare and Medicaid reimbursements for Telemedicine
- 30 states and the District of Columbia require that private insurers cover telemedicine the same as they cover in-person services

### Using Telemedicine to create a Virtual medical practice



# Question #3

You have decided to create a virtual medical practice. Which statement is false.

- A. Your virtual medical practice should be merged with your "brick and mortar" practice to create a 21th century practice.
- B. You should require that the virtual medical practice improve your income
- C. Your first step should be contacting a telemedicine vendor to assist in all of your decision making
- D. You will need to know your state's telemedicine regulations



# **Virtual Medical Practice**

Virtual Medical Practice (VMP) is the practice of medicine that utilizes an electronic network.

Goal: Merge VMP into your "brick and mortar" practice



# **Virtual Medical Practice**

Virtual Medical Practice (VMP) requires practice transformation to meet the follow objectives

- save time
- Improve quality of care
- >Improve income

# Telemedicine in virtual medical practice

# What Services Can Be Provided by Telemedicine?

- Live, interactive consultation
- Remote specialist
- Remote behavioral health provider
- Still image transmissions
- Remote patient monitoring (RPM):
  - -Vital sign
  - -Blood glucose
  - -Heart
  - -Variety of indicators for homebound patients
- Medical education



- **1.Create Implementation Team**
- 2. Research state regulations
- 3. Know payer rules for reimbursement
- 4. Define scope of services
- 5. Create Implementation Plan
- 6. Technology selection
- 7. Patient Adoption Plan
- 8. Quality Improvement Plan



### Create an Implementation Team

- Physician lead
- All relevant staff
- Clearly define the mission to create a virtual practice using telemedicine



### Research State Regulations

#### STATE POLICY RESOURCE CENTER

ATA's State Policy Resource Center monitors telemedicine state policies, identifies and works to resolve barriers to state-level telemedicine use, and provides policy technical assistance to the ATA members and state policymakers.

#### State Legislative & Regulatory Trackers

#### (Exclusive member benefit)

The ATA State Telemedicine Legislative & Regulatory Trackers provides live, up-to-the-minute updates pertaining to telemedicine policy. Each listing includes details on a bill or rule, the corresponding sponsor, language, status and scheduled hearings. This is a benefit available to current ATA members exclusively. Click the buttons below to access the ATA Legislative and Regulatory Trackers.



#### **Quick Links**

- > <u>State Legislation Matrix</u>
- >> State Interstate Licensure Matrix
- > State Gaps Reports
- » State Medicaid Best Practices
- » Public Comments to States
- ➤ State Toolkits

#### THE STATES ARE IN SESSION!

Contact your state lawmakers today to help bridge the gap between patients and providers. Want key facts to help make your case to your state lawmakers? Download the infographic below!

DOWNLOAD INFOGRAPHIC

http://www.americantelemed.org/policy-page/state-policy-resource-center

#### Know Payer rules for reimbursement

States with Parity Laws for Private Insurance Coverage of Telemedicine (2017)



States with the year of enactment. Alaxia (2016)". Arizona (2013)'. Arkanas (2013), California (1996), Colorado (2001), Connecticus (2013), Delaware (2015), Georgia (2006), Hawaii (1999), Imitiana (2015), Kentucky (2000), Lousiana (1915), Main (2006), Manyland (2012), Michigan (2012), Minesota (2012), Missiagi (2013), Missiagi (2014), Missiagi (2015), Missiagi (2014), Missiagi (2015), Missiagi

States with proposed legislation: In 2017, Idaho, Iowa, Kansas, Massachusetts, North Carolina, Ohio, Pennsylvania, and West Virginia

\*Coverage opplies to certain health services.

http://www.americantelemed.org/policy-page/state-policy-resource-center

# Define the Scope of Services

- >% time devoted to telemedicine
- What situations that will use TM and which will not
- Create Road Map
- Define team roles:
  - ✓ work through use-cases

### Create an Implementation Plan

- Budget Development
- Timeline
- Scheduling and billing plan
- Workflow development
- Consent Management
- Technology selection and acquisition
- Adoption and Training plan
- Mock trials and process improvement
- Go Live



# ✓ Technology Selection – key points

- ➤Vendor neutral
- ≻HIPPA Compliant
- Customizable
- >Interoperable
- ➤Ease of Use for all
- ≻Fit into your workflow
- ➢ Reasonable Cost


## Technology Selection - components

- High Speed Network
- HD video conferencing
- >Website

#### Example: Virtual Medical Practice: Home Page



#### Technology Selection - components

#### Software (Standards based)

EMR
 Practice Management
 Chat
 Email
 Devices (Standards based)
 Biometric monitors
 Video Conferencing
 Smart Phones, computers



#### Example: Virtual Medical Practice: Patient Page

|                                   |  |   | My Profile | Staff Director  | /   How-to   Log  | pout |                                  |  |
|-----------------------------------|--|---|------------|---|---|------|----------------------------------|--|
|                                   | FamilyCare   | 10ME HEALTH DIARY VIRTUAL VISIT   | ELEARNING  | MESSAGES  | DISCUSSION F  | PAQ  |                                  |  |
| Care and<br>Treatment<br>Plans    |  | Your care is our<br>primary care  |            | My Alerts There are no alerts at this time Helpful Links WebMD National Diabetes Education  |   |      | Disease<br>Specific<br>Education |  |
| Alerts:<br>Provider to<br>Patient | R  | PA-L  |            | Resource Prog<br>American Di<br>(ADA)<br>Diabetes Pla<br>nmadiabetes<br>Body Calcula<br>Weight Loss<br>Type 1 & Typ<br>Differences  | ram<br>abetes Association<br>nner.com<br>inet.org<br>stor<br>pe 2 Diabetes -                      |      | General<br>Health<br>Education   |  |
| Patient<br>Notes                  | Health Diary     This provides a central lo     This provides a central lo     Conference with your pro     International Conference with your pro     International Conference and vious     Messages | cation for you to keep track of your health<br>ovider with text, audio and video<br>deo from around the web |            | <ul> <li>Diabetes Learning Center<br/>(American Diabetes Association)</li> <li>Diabetes Care - 10 Ways to Avoid<br/>Complications</li> <li>Hyperglycemia</li> <li>Diabetes Myths</li> <li>Anger</li> <li>How You Can Help Your Loved One<br/>With Diabetes</li> <li>Glucose Meter and Diabetes</li> </ul> |   |      | Social<br>Networking             |  |
| Communication<br>Tools            | Send and view all your n<br>Discussions<br>Discussion forums<br>FAQ<br>Commonly asked question   | nessages  |            | <ul> <li>Blood Tests I</li> <li>Your Diabetes</li> <li>Diabetes Mei</li> <li>Glucomenu g<br/>information ab</li> <li>Exercise and</li> </ul>  | to Help You Monito<br>al Planning<br>gives nutritional<br>out specific foods<br>I Diabetes - When | to   | PHR<br>Information               |  |

# Integration with Telehealth Devices

With the use of Telehealth enabled devices, your patients can upload their readings directly into the portal.



## **Biometric Readings**

| FamilyCare<br>My Medical Home  | НОМЕ         | HEALTH DIARY | VIRTUAL VISIT | ELEAR      | NING       | MESSAGES | DISCUSSIO | N FAQ |
|--------------------------------|--------------|--------------|---------------|------------|------------|----------|-----------|-------|
| Health Die                     | ary > My     | Readings     |               |            |            |          |           |       |
|                                |              | U            |               |            |            |          |           |       |
|                                | Start Date : | 5/21/2009    | End Date :    | 6/4/2009   | 9          | Up       | date      |       |
| Blood Glucose                  | Blood Pressu | Ire Heart Ra | te Weight     |            |            |          |           |       |
| в                              | lood Glucose |              | mg/dL         |            |            |          |           |       |
| Date Taken Blood Glucose Level |              | 200          | N             |            | $\sqrt{1}$ |          |           |       |
| 7/8/2009 8:08:00 1             | PM 133       |              | 180-          |            | N          |          |           |       |
| 7/8/2009 6:01:00               | PM 102       |              | 160           |            |            | 11       |           |       |
| 7/8/2009 5:07:00 AM 118        |              |              | 140           | 1 + 1      | - V        |          |           |       |
| 7/7/2009 8:03:00               | PM 141       |              | 120-          | <u>ч</u> . | 1.1        |          |           |       |
| 7/7/2009 6:03:00 8             | PM 102       |              | 100-          |            |            |          |           |       |
| 7/7/2009 5:09:00 /             | AM 128       |              | 80-           |            |            |          |           |       |
| 7/6/2009 8:09:00               | PM 173       |              | 40            |            |            |          |           |       |
| 7/6/2009 6:14:00               | PM 127       |              | 40.           | 4          | 6          | 8        | 10 12     | 14    |
| 7/6/2009 5:08:00 /             | AM 113       |              |               |            |            |          |           | Days  |
| 7/5/2009 8:20:00               | PM 154       |              |               |            |            |          |           |       |
| 7/5/2009 6:06:00               | DM 100       |              |               |            |            |          |           |       |

# eVisit: 2-Way Video Conferencing



#### Patient Adoption Plan

- Marketing
- Education
- ➤Training
- Feedback



## Quality Improvement Plan

- Measures outcomes
  - Clinical
  - > Process
    - Time efficiencies
  - ≻Cost
  - Patient satisfaction



#### Understand how to integrate virtual practice into current practice model with an eye to the future



#### **Question #4**

Telemedicine as a part of the virtual medical practice addresses all of the secondary drivers of practice transformation as defined by MACRA legislation except which area below.

- A. Patient and Family Engagement
- B. Team-Based Relationships
- C. Population Management
- D. Practice as a Community Partner
- E. Coordinated Care Delivery



#### VMP Introduction into Transforming Clinical Practices Initiative (TCPI)



MACRA - Medicare Access and CHIP Reauthorization Act is the CMS reimbursement model (2015) that requires physicians and clinicians to accept cost risks, and be responsible for a portion of the difference between actual total costs and exceeded budgeted costs. The MACRA initiative is aimed at helping providers implement evidence-based initiatives to transform their practices.

https://innovation.cms.gov/initiatives/Transforming-Clinical-Practices/

## Background

- MACRA legislation recognizes Telemedicine
  - Increasing patient engagement
  - Decreasing ED utilization
  - Improving care coordination
  - Advancing information technology



# **Primary drivers**

- PERFORMANCE: Person and family-centered care design combines evidence-based practices with the voice of patient and family.
- QUALITY: Continuous, data driven quality improvement that leverages technology, systems and innovation.
- SUCCESS: Sustainable business operations that are staffed correctly, efficient workflows and coordinated care.



- 1. Person and Family-Centered Care Design
  - -1.1 Patient and Family Engagement
  - -1.2 Team-Based Relationships
  - -1.3 Population Management
  - –1.4 Practice as a Community Partner
  - -1.5 Coordinated Care Delivery
  - –1.6 Organized, evidence-based care
  - -1.7 Enhanced access



#### 1.1 Patient and Family Engagement

- 1.1.1 Respect values and preferences:
- Scheduling flexibility
- Transportation
- Family involvement
- Comfort



#### 1.2 Team-Based Relationships

- 1.2.1 Enhance teams: Coordination with Specialists, Nursing facilities, Home health agencies
- 1.2.3 Optimize continuity: Establish partnerships



# <u>1.5 Coordinated Care</u> <u>Delivery</u>

- 1.5.2 Establish medical neighborhood roles:
- Clear expectations
- Established roles
- Information sharing



#### 1.6 Organized, evidencebased care

- 1.6.4 Decrease care gaps
- 1.6.5 Reduce unnecessary tests



#### 1.7 Enhanced access

- 1.7.1 Provide 24/7 access
- 1.7.2 Meet patient scheduling needs
- 1.7.4 Mitigate access barriers



CMS Practice transformation strategies

## Harnessing Tech for Future of Healthcare

## Question #5

The <u>most important</u> aspect of a future virtual medical practice is it's ability to

- A. incorporate complete genomic data into it's decision support tools
- B. exchange data and incorporate future technologies
- C. maximize the use of artificial intelligent
- D. support wearable devices that monitor biometric variables



## The Future of Medical Practice



Paradigm shift in Healthcare System

#### The Connected Medical Partners

Do not create your virtual medical practice in isolation!



## **Precision Medicine**

#### Incorporation of complete genomic (CG) data is coming!



#### Interoperability

- the ability of systems to exchange and use electronic health information from other systems without special effort on the part of the user



#### Biosensors

- Wearables monitors vital signs, biomarkers, labs, etc. –clothing, glasses, watches,
- Smart homes measuring gait to sleep patterns to air quality
- Smart pills transmit data around medication management
- Data
  - Artificial Intelligence/ML "cognitive assistant", deep learning, decision support
  - Data Mining that recognize subtle patterns of health status
  - Predictive Modelling that allow for pre-empted interventions
  - Personalized Medicine and Drug Design
  - Population Health Analytic and Management Systems
- Genomics
  - Precision Medicine and deep genomics
- Imaging
  - Mobile imaging,
  - 3D and 4D whole body visualization
  - Image assisted therapeutics
- Robotics
  - At home assistants, haptic systems applications
  - Rehab
- Nanotechnology
  - Portable medical devices

#### **Transforming Health Care: Critical Path – Systems Approach**

#### Healthcare Reform – A Systems Problem

- US healthcare system, the most expensive in the world,
  - Serves 350 million people with no central control (single payer)
  - an assemblage of **fragmented**, **loosely coupled**, **uncoordinated** subsystems embedded in a market economy (Workshop of HC Experts)
  - promotes fee-for-services without reference to the end-to-end quality of care and cost delivered to patients.
- President's Council advocates that the U.S. health care industry should adopt a systems-engineering approach to improve overall quality and delivery of care.
- Improving the health care sector presents a challenge in that the optimization cannot be achieved by sub-optimizing the component systems, but must be directed at the entire system itself.
- An ideal (optimal) health care delivery system will require methods to model and coordinate large scale Systems of systems.

# US healthcare system consumes 1/3 of Budget. Why?\*

- Medical professionals are smart, work very hard, but are narrowly trained.
   Example: Clinical trial mindset, control all but variables of interest
   Not trained to cope with complexity of integrating numerous coupled interventions
   Not trained to collaborate in teams
- System is bad, not the people
   Doesn't allow them to succeed
   The usual reasons for failure don't apply
   Competition doesn't work: Zero sum cost shifting

Value-based health care is the right goal i.e., value not cost Positive outcome is more critical than efficiency Healthier patients, get them recovered faster, with better functionality Positive sum - value everyone benefits

- Value-based purchasing vs cost-based purchasing
- Central driver of value improvement is universal outcome measurement
   Only 2 examples in US: Organ transplants, in vitriol fertilization

<sup>\*</sup> Michael Porter on Paving the Way for Value-Based Health Care

# System Self-assessment of Ideal Elements in a Health Care System

- 1. Focuses on meeting the <u>population's health</u> needs.
- 2. Matches services, capacity to meet the population's needs.
- **3**. Coordinates and integrates care across the continuum.
- 4. Has information systems to link patients, providers both clinical and non-clinical, and payers across the continuum of care and social services.

# System Self-assessment of Ideal Elements in a Health Care System

- Is able to provide information on cost, quality outcomes, and patient satisfaction to multiple stakeholders.
- Uses financial incentives and organizational structure to align governance, management, physicians, and other caregivers in support of achieving shared objectives.

# System Self-assessment of Ideal Elements in a Health Care System

- 7. Is able to improve continuously the care that it provides.
- Is willing and able to work with others to ensure that the community's health objectives are met.

#### **Getting Ready for Value-Based Healthcare\***

- Paying for health care is now required to be based on value (VBPurchasing)
- But VBPurchasing needs to be directly related to desired outcomes
- Currently VBPurchasing is not optimally aligned with measures leading to such outcomes
- As VBPurchasing becomes the way to do business,
   *Care coordination Pathways* will be a critical enabler
- Astute investors will need to capitalize on this new layer of evolving IT infrastructure

\*By 2016 CMS wants 30% of Medicare payments linked to payment reform models; 50% by 2018. Coalition of providers, insurers and employers pledged to have 75% of their members' business switched to performance-based contracts by 2020.

#### Value-based Healthcare: A Service Systems Perspective

- There must be working definitions of *quality of service*: healthcare value defined as outcome divided by cost (Q/C ratio)
- There must be systems implemented to measure, in an ongoing manner, the critical elements of treatment interventions that can be aggregated to compute quality as defined,
- There must be systems that allow alternative component configurations (protocols, processes, procedures) to be continually tested and
- There must be systems to correlate measured quality with component configurations to provide evaluations that can be employed to help select the most promising alternatives.

#### Need The Right Health Information Technology (HIT) to implement Value-based Healthcare

## **Transforming Health Care: Critical Path**

Fee for Service

Value Based



Halfon N. et al. Health Affairs November 2014
### Integrated community health system: population health centered



## **Population Health Improvement**

#### Why are we here today?

- Opportunity to create infrastructure needed to sustain population health improvement in states, counties and territories
- Opportunity for Multisystem Coordination (Hospital Systems, Ambulatory Systems, Behavioral Systems, Pharmacy Systems, Public Health, Social, Environmental, etc.)
- Alignment and integration of multiple value based strategies

### **Population Health Management**

# What is PHM and It's Purpose?

- Definition: The coordination of care delivery across a population to improve outcomes through disease management, care management, and demand management
- Goal: To improve outcomes and reduce utilization for patient
  populations with clinical and financial risk
- 'Populations' are identified through community need assessments, clinical risk registries

### What are the components of Public Health Population Health Management Network

- Requires integration three robust elements
  - Partnerships
    - Internal
    - External
  - Advanced IT connectivity
  - Standards and governance
    - All processes and systems

### What are the IT consideration needed to support Population Health Management?

- Data Usage, Capture, Analysis and distribution
- High-level legal issues,
- funding,
- sustainability and maintenance,
- security
- compliance
- collaboration, and
- governance
- Federal State, county, and territory procedures, rules and alignment



# **Health of a Population**

The question is: how to capture and analyze enough information to manage the health of a population?



# **Population Health: Health Factors**



County Health Ranklings model @ 2014 UWPH

### **Social Determinants & Population Health**



Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

# **Transforming Health Care: Clinical Systems**

#### Patient-Centered Medical Home



### **Transforming Health Care: Care Coordination**



# **Public Health Information Network**

The PHIN is the Health Information Technology Infrastructure that gives Public Health the ability to approach a community integrated Healthcare systems plus Public Health surveillance and enforcement.



¢ þ



Public Health systems: surveillance, enforcement, environmental, preparedness, etc.

#### IT system support of Population Heath Management



There are currently no established Standards and no Centralized system of Care Coordination

### **Population Health Management**



https://www.wellcentive.com/what-is-population-health-management/

# **Targeted Population & Stratify Risk**

Inpatient Utilization Data for HEZ - zip code 20743 from CRISP



#### Care Coordination Team: Evidence-Based Care Transitions and Care Coordination

#### **Operations Team**

- Nurse Coordinator -Triage and Clinical Oversight
- Social Worker Social Services & Wraparound Oversight
- Licensed Clinical Therapist – Behavioral Health Oversight
- Community Health Workers – Care Coordination
- Insurance Navigators – Promote Insurance enrollment and retention



#### **Care Coordination Team: Bidirectional E-Referral**



### Care Coordination Team E-Referrals: Bidirectional Central Referral System (CRS) Health Information Exchange & Partnerships



### Population Health Improvement Examples using Health IT



# **Case Example #1**

#### **Real Case**

- 56 y.o. AA female
- 4 hospitalizations
- Referred to CHW
- Issues
  - Diabetes poor control
  - No PCP
  - No Transportation uses 9-1-1 when not feeling well
  - Not taking medications
  - Depressed
  - Introverted
  - No Family Support
  - Unable to take care of home

#### **CHW Intervention**

- At intake: Home visit, multiple needs, unable to read, family abandonment
- Pathways Completed:
  - Medical home
  - Transportation
  - Medication Assessment
  - Medication Reconciliation/Pictorial Aids
  - Medical Referral and Connections to: home health, behavioral health, cardiology, pulmonology, nephrology, ophthalmology, GI, podiatry, vascular surgery
  - Diabetes self-management
  - Referral for Adult Evaluation Review Service
  - Linked to:
    - Adult daycare
    - Personal care assistant
    - Diabetes group classes
    - Prime Time Sister Circle support group

Outcomes: Adherent to PCP visits, specialty visits, medications. Support services improved socialization skills, reconnection to family, thriving... No ED visits, 1 Hospitalization for elective surgery

# **Case Example #2**

#### **Real Case**

- 29 y.o. female referred by Prince George's Hospital Center on 3/30/2017
- 17 medical conditions, 18 doctors, 20 medications
- 8 ED visits and 1 hospitalization in 2 months before referral
- Client living behind the Walmart and Shoppers Food in Laurel, MD.
- No income, no transportation and no family support.
- Conditions: HTN, diabetes, obesity, hypoglycemia, clinical depression, Sick Sinus Syndrome, epilepsy, anemia, chronic abdominal pain, borderline personality, cholecystectomy, Polycystic Ovarian Syndrome, liver disease with fibrosis, peptic ulcer disease, stomach erosion, pancreas and liver calcification

#### **CHW Intervention**

- Intake: Conducted in open field behind Walmart
- Pathways Completed:
  - Social Services
  - Housing
  - Social Security Disability
  - Connection to Laurel Advocacy Referral Services (LARS) program.
  - Transportation to and from medical appointments for 18 doctors
  - Food stamps and food pantries
  - Referrals to behavioral health as well as food insecurity.
  - Medication Reconciliation with PCP and local pharmacy
  - Letter from client: "Thank you for saving my life."

**Outcomes:** Permanent housing in 3-months ... 1 ED visit and no Hospitalizations 6 mos after intervention

# **Case Example #3**

#### **Real Case**

- 34 year old client Referred by Laurel Regional Hospital for multiple ED visits for chronic conditions and chronic pain.
- 10 ED visits at 6 hospitals
- Conditions: HIV, Leiomyosarcoma and Schizophrenia.
- Non-adherent with his HIV treatn and medications for HIV.
- No cancer treatment.
- No family support
- Couch surfing and schizophrenia.
   Conditions: HTN, diabetes, obesity, hypoglycemia, clinical depression, Sick Sinus Syndrome, epilepsy, anemia, chronic abdominal pain, borderline personality, cholecystectomy, Polycystic Ovarian Syndrome, liver disease with fibrosis, peptic ulcer disease, stomach erosion, pancreas and liver calcification

#### **CHW Intervention**

- Intake: Conducted in our office
- Pathways Completed:
  - Specialty referral to Health Department HIV/AIDS
     Prevention, Cheverly Health Center
  - Social Service: AIDS Healthcare Foundation for treatment and support services
  - Medical referral to Infectious disease doctor for treatment and medication management.
  - Transportation to appointments
  - Medication Assessment
  - Health Literacy
  - Housing
  - Multiple contacts, coaching and follow up
- Compliant with doctor's appointments and medications

Outcomes: 2 ED visits, no hospitalizations, in-home hospice

### 2015 – June 2016 HEZ Hospital Use Analysis: Pathway Issues Identified



### 2015 – June 2016 HEZ Hospital Use Analysis

N = 143 patients managed over an 18 month period



Average Hospital Visits

#### Average Hospital Charges (\$)

#### **Pop Health– Diabetes, Hypertension and Stroke**



#### PREVENTIONLINK of Southern Maryland

### **Thank you!**



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