



# **AMDIS Ted Talks**

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# OPTIMIZING REMOTE CARE OF VULNERABLE PATIENTS VIA TELEHEALTH AND HOME VISIT PROGRAM COORDINATION

# BACKGROUND AND PROJECT AIM

- Growing number of U.S. older adults projected to nearly double by 2060<sup>1</sup> as well as in Illinois--the state will enter aged-society status.<sup>2</sup>
- Complex health concerns of older adults require age-specific prevention, treatment and management.
- The most vulnerable older populations, such as homebound persons, are not able to visit clinics for in-person care necessitating increasing range of community care services provided outside acute care hospitals.<sup>3</sup>
- Home-based care can meet many of these individuals' health care needs, but only 5.6% of those needing such services receive them.<sup>4</sup>
- Project AIM:
  - Optimize existing telehealth efforts to improve the health and wellbeing, including Coronavirus disease 2019 (COVID-19) prevention, of homebound patients served by the UI Health DFCM Home Visits Program



### **METHODOLOGY**

**Grant Funding** 

Define Metrics and identify a way to measure and obtain data

Devices and Device Management Meet with vendors regarding telehealth options

Implement a solution

- PREVENT-PROMOTE USE OF TELEHEALTH TECHNOLOGIES TO REDUCE THE RISK OF COVID-19
  - Collaborate with Home Visits program to provide telehealth services
  - Educate and engage health providers and patients
  - Explore and connect with technology vendors
- PREPARE-ENHANCE OUR READINESS TO RESPOND TO COVID-19 BY MEANS OF TELEHEALTH TECHNOLOGIES
  - Evaluate technology capabilities of homebound patients
  - Purchase and implement telehealth system and equipment to provide patient services
  - Train providers, patients and caregivers on telehealth system
- RESPOND-PROVIDE ACCESS TO TELEHEALTH TECHNOLOGIES TO LIMIT THE SPREAD OF COVID-19
  - Expand tele-education networks to connect with Home Visits Program patients and caregivers
  - Conduct telehealth visits for homebound or quarantined patients in the community via "Virtual Check-In" or "E-visit"



# RESULTS – PROCESS OUTCOMES

- After completion of staff training and delivery of devices to patients' homes by C24 Vendor and nursing staff, 33 out of the 100 homebound patients have been enrolled into the telehealth program
- The required data includes patient outcomes, clinical outcomes, and outcomes of the training provided.
- To guide the telehealth process and specify data to be collected we created:



# TELEHEALTH PROGRAM MANUAL AND DATA CODEBOOK

#### Telehealth E-visits Data Collection and Evaluation Codebook



#### TELEHEALTH MANUAL

#### TABLE OF CONTENTS PROGRAM OVERVIEW ..... TELEHEATH PROGRAM OBJECTIVES. TRAINING CLINICIANS AND STAFF TRAINING <u>VIRTUAL CHECK-IN TRAINING</u>......3 BACKGROUND TRAINING LEARNING OBJECTIVES TRAINING ACTIVITIES DATA COLLECTION BACKGROUND TRAINING LEARNING OBJECTIVES TRAINING ACTIVITIES DATA COLLECTION PATIENTS AND CAREGIVERS TRAINING BACKGROUND TRAINING LEARNING OBJECTIVES TRAINING ACTIVITIES DATA COLLECTION E-VISITS TRAINING ..... BACKGROUND TRAINING LEARNING OBJECTIVES TRAINING ACTIVITIES DATA COLLECTION PROGRAM DATA COLLECTION 9

#### Patient Data Collection

Variables	Abbreviations/ Questions	Code	Source	Frequency
1. Tested COVID positive prior to last visit? If YES, continues if NO go to (.2)		0 = No 1 = Yes	EHR via ROS	Per visit
Fevers/Chills		0 = No 1 = Yes		
Cough		0 = No 1 = Yes		
SOB	Shortness of breath	0 = No 1 = Yes		
Fatigue		0 = No 1 = Yes		
Muscle/Body Aches		0 = No 1 = Yes		
Headache		0 = No 1 = Yes		
New loss of taste/smell		0 = No 1 = Yes		
Sore throat		0 = No 1 = Yes		
Congestion/runny nose		0 = No 1 = Yes		
Nausea/vomiting		0 = No 1 = Yes		

Patient compliance with the Pilot Program has been steady, averaging between 55% and 73%



	Compliance Data of RPM Program						
Feb 21							
99454	Days Vitals	Days Active	Days with	Device			
Vital Alerts	Taken		communication	ID			
0	12	19	16	14022			
2	15	19	18	14031			
0	4	19	18	14028			
0	14	19	18	14099			
0	2	19	3	14027			
1	15	19	18	14026			
0	18	19	18	14021			
0	16	19	16	14017			
0	13	19	14	14020			
0	15	19	18	14100			
0	17	19	18	14015			
	APR 21						
99454	Days Vitals	Days Active	Days with	Device			
Vital Alerts	Taken		communication	ID			
0	2	10	7	14022			
0	9	10	10	14031			
0	2	10	2	14028			
1	6	10	6	14099			
0	2	10	2	14027			
0	2	10	2	14026			
1	9	10	10	14021			
0	2	10	2	14017			
0	2	10	3	14020			
0	3	10	10	14100			
0	0	10	0	14015			







# Link+ User Guide



Health
Improving Aging in Place

#### Bluetooth Fingertip Pulse Oximeter (SPO2)

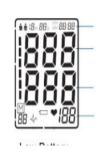




#### Bluetooth Blood Pressure Monitor



Memory Symbol



Year/Mo/Date/Time Systolic Blood Press

Diastolic Blood Press

Heart Rate

## Step 1: Press red emergency button

My My My Events

My My My Events

Tele-Provider Health

On the Link+ device, press the red emergency button and hold for **2 seconds** to call for help.

#### Step 2: Confirmation screen

After holding down the emergency button you will see a confirmation screen asking, **if you have an emergency.** If the request did not go through, you will see a screen prompting you to call 911. *See below*.







## CONCLUSIONS

- The project is proceeding successfully we have been able to provide care and record clinical outcomes during the COVID-19 pandemic.
- Phase 2
  - Interface with the EPIC© (EMR)
- Continue to enhance the health and well-being of patients served by the Home Visits Program

# LESSONS LEARNED – KEYS FOR SUCCESS

- Building a strong and collaborative team
- Careful planning and continuous quality improvement
- Agility and being nimble and adjust to unanticipated challenges
- Organization and regular team meetings with defined agendas and work targets
- Funding and Departmental Leadership support
- Innovations come with hard work and due diligence remember to have fun and joy in working together!



# ACKNOWLEDGEMENTS

- This program was supported by the Health Resources and Services Administration of the U.S. Department of Health and Human Services Grant #U1QHP28730-03-02 and the COVID-19 Telehealth Award (T1MHP39059) awarded to Dr. Gruss and Dr. Hasnain. The contents are those of the authors and Engage-IL and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, the U.S. Government HRSA GWEP.
- Our sincere gratitude and appreciation to all members of our Home Visits Program Faculty and Staff Team; Our Technology Partner Rich Pingalore C24 Staff; and Kanwal Haque, MPH, Engage-IL Data Manager



## REFERENCES

- 1. The Administration for Community Living. (2017). "2017 Profile of Older Americans." Retrieved from <a href="https://acl.gov/sites/default/files/Aging%20and%20Disability%20in%20America/2017OlderAmericansProfile.pdf">https://acl.gov/sites/default/files/Aging%20and%20Disability%20in%20America/2017OlderAmericansProfile.pdf</a>
- 2. United States Census Bureau. (2019). "QuickFacts Illinois." Retrieved from <a href="https://www.census.gov/quickfacts/IL">https://www.census.gov/quickfacts/IL</a>
- 3. Inouye SK, Studenski S, Tinetti ME, Kuchel GA. Geriatric syndromes: clinical, research, and policy implications of a core geriatric concept. Journal of the American Geriatrics Society. 2007;55(5):780-791.
- 4. Ornstein KA, Leff B, Covinsky KE, et al. Epidemiology of the Homebound Population in the United States. JAMA Intern Med. 2015;175(7):1180-1186.





# Thank You!



