

## A TELEHEALTH HYPERTENSION FEASIBILITY STUDY AND AN ELECTRONIC MEDICAL RECORD "PRECISION PATIENT EDUCATION" PROCESS

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## **UNIVERSITY OF UTAH HEALTH**

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HELPING PATIENTS & THEIR FAMILIES MAKE					





The effects of a telemedicine health information prescription in uncontrolled hypertensive patients in a family medicine ambulatory clinic

### EMR-based outcomes research around tailored patient education



## I. HYPERTENSION FEASIBILITY STUDY

Targeted and timely patient education information is a key part of helping patients make informed choices to achieve behavior change and disease management goals.

Many patients face obstacles that make this challenging:

- Economic
- Technological
- Educational



### **HEALTH INFORMATION STATION**













# Vidyo k splashtop WIRELESS CONTROL

### **BENEFITS OF HEALTH INFORMATION STATION**

For patients Information equity Learn about authoritative information sources Tailored information

For providers

Improved efficiency of clinic visits Increased interaction with health care team Enhanced adult learning







- Only 50% of HTN patients have their blood pressure under control despite treatment<sup>1</sup>
- Limited understanding of HTN contributes to poor outcomes<sup>2</sup>
- Patients who receive materials customized to health literacy level and learning style preference show gains in knowledge<sup>2</sup>

1. Mozaffarian et al. Heart disease and stroke statistics--2015 update: a report from the American Heart Association. Circulation. 2015; 31(4)

2. Giuse, Koonce, Storrow, Kusnoor, Ye. Using health literacy and learning style preferences to optimize the delivery of health information. J Health Commun. 2012;17 Suppl 3



Could patients improve their blood pressure and related health outcomes more effectively by utilizing health technology for tailored health information?



### We hypothesized that offering an information session via the Station to patients with uncontrolled HTN would:

- Reduce time to achieve blood pressure goal
- Increase HTN-specific health literacy
- Increase patient engagement & self-management practices
- Increase patient satisfaction with their care

... when compared to standard of care



## **STUDY POPULATION AND DESIGN**

**Recruitment size:** 100 patients

Age of Participants: 18-69 years old

Inclusion criteria: Uncontrolled HTN, primary or secondary

**Exclusion criteria:** Non-English; intellectual/cognitive impairments

Survey/questionnaire research

Interviews and focus groups

**Prospective clinical research** 

Randomized



### PRE AND POST ASSESSMENTS

- 1. HEALTH LITERACY
- 2. HYPERTENSION KNOWLEDGE
- 3. I FARNING STYLE PREFERENCES
- 4. PATIENT ACTIVATION | FVE
- 5. PATIENT SATISFACTION

+ Blood pressure readings during clinic visits



## **PROTOCOL FOR INTERVENTION SESSIONS**

### Prior to session

Reviewed patient's chart in Epic Reviewed assessment results Identified most relevant information to share with patient

### After session

Emailed/letter sent to patient Entered Epic Telephone Encounter to close loop with PCP





### **TELEHEALTH SESSIONS**

- Technology set in advance
- Introductions & brief tour of MedlinePlus
- Focused dive on HBP Health Topics page
- Address HBP Questionnaire & PAM scores





## RESULTS

11 subject's data were analyzed

Trend toward better **BP** control in intervention group





HTN knowledge increased in intervention group

Both groups showed improvement in engagement level

Both groups showed similar Patient Satisfaction scores





# **PARTICIPANT FEEDBACK**

### Pros

- Personalized information
- Distilling all the information
- Felt it was "correct" information
- Learned how to stay current on new information
- Technology very user friendly

### Cons

- Talking with a stranger vs having the camaraderie of their doctor
- Wouldn't make a trip to the clinic just to use the kiosk – would prefer to connect from home



### **FUTURE DIRECTIONS**

- Establish telehealth patient access from home
- Integrate health librarians onto care teams
- Conduct full research study on different population



## **EMR-BASED OUTCOMES RESEARCH AROUND TAILORED PATIENT EDUCATION INFORMATION**

Developing Epic-integrated Library services to provide

- Evidence-based clinical decision support information
- Tailored patient education information

... at the point of care









### **Complements and builds on existing services**

- Quick-answer Infobutton function
- Self-service clinical knowledge resources
- Patient education information
- Consumer health library

### Service will be developed by interprofessional team

- Health sciences librarians
- Epic team
- Bioinformatics
- Providers from medicine, nursing, pharmacy, education lacksquare
- Chief Medical Information Officer, Chief Medical Officer



# **FUTURE DIRECTIONS**

- Contribute new EMR service models to the health sciences library field
- Partner with other organizations to conduct multi-site research studies on the effects of EMR-integrated library services on patient outcomes, health care costs, provider and patient satisfaction, etc.



# LIBRARIANS HAVE MAD SKILLS TO **CONTRIBUTE TO HEALTH LITERACY EFFORTS**

- Evaluate health information
- Identify which information is best for different situations & people
- Connect patients with health information in context of their care
- Teach others how to find & evaluate quality information
- Disseminate research
- Champion the cause!





### **QUESTIONS?**

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