



Telehealth Basics & The MSU Health Care Experience

1. About MSU Health Care
2. Defining Telehealth
3. Types of Telehealth
4. Telehealth at MSU
5. Challenges
6. Care Team Approach
7. Deployment of Telehealth for Pandemic Response
8. Future State

Telehealth/Telemedicine/E-Visits

- **Telemedicine** - the practice of caring for patients remotely when the provider and patient are not physically present with each other.
- **Telehealth** - use of audio/video streaming technology to examine patients.
- **E-Visits** – A communication between a patient and their provider via the patient portal. (Patient Initiated)
- **Telephone Visits** - In some cases, a full audio/visual telehealth visit is not possible or efficient.
 - Due to limits in technology access within their covered patient population, some insurance providers (Medicaid, Medicaid HMO, BC/BS, BCN, the list is expanding daily) have allowed for telehealth visit to count even if no video is used, only phone audio.

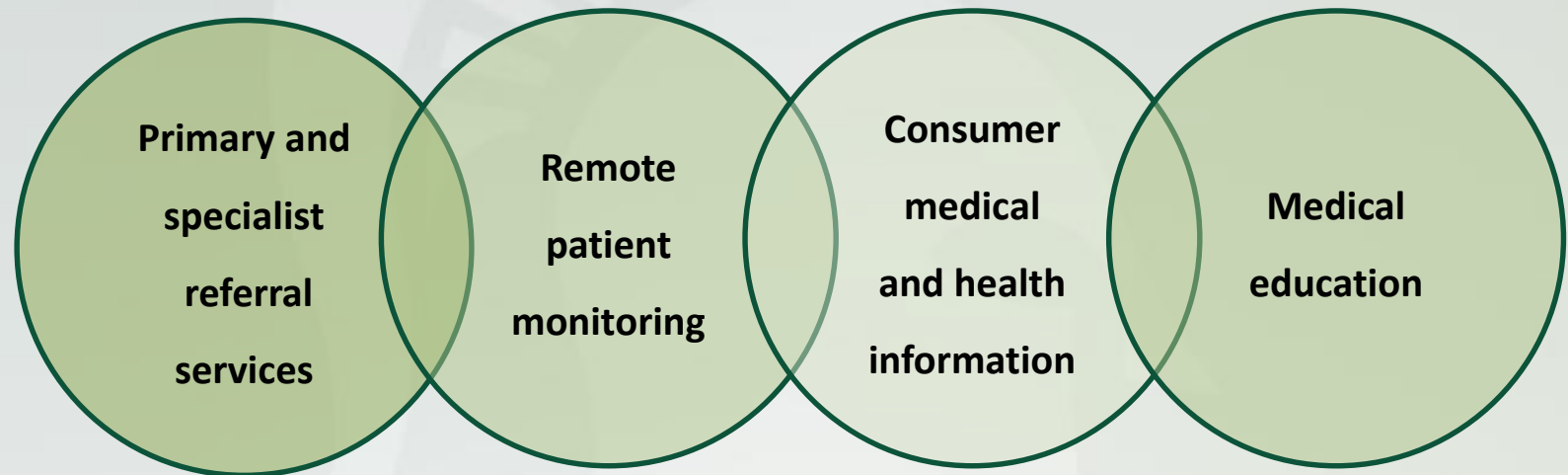
The Need for Telemedicine

- First documented in late **1950's** when a Nebraska psychiatrist provided mental health services to prison inmates >150 miles away, using close circuit TV
- **Augments services, improves access**
- **Reduces travel time & costs**
- **Alleviate Physician shortage**
- **Increase physician utilization**
- **Provide specialist access to rural populations**
- **Deliver Comprehensive care**



Whitten. Appl Clin Inf 2010;1:132

Types of services provided by Telemedicine



Telemedicine components

Equipment

- Computer with camera at provider and patients end
- Close by printer, FAX, telephone
- Optional: dual screen, headset, teledevices: otoscope, stethoscope

Video-conference platform

- Internet based, secure, HIPAA compliant for patient confidentiality
- Password protected web-link

Information Technology support

- Integration into electronic health records
- Streamlined workflow

Asynchronous "Store and Forward" Telemedicine

"Have camera, take a picture and transmit it"

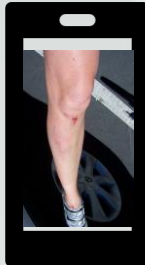


Image transfer(MRI, mammogram, CT Scans Ultrasound)



Home tele-care for disease management: monitoring blood pressure, blood sugar, weight



Synchronous Real-Time Telemedicine

- HIPAA secure videoconferencing: patient and provider communicate in real-time
- Assess patient using tele-devices
 - tele-stethoscope
 - otoscope
 - derma-scope
- Requires larger **bandwidth**



HIPAA = Health Insurance Portability and Accountability Act.
Privacy act to protect individuals health information



MSU Experience with Telemedicine

Telehealth Expansion

*Prior to the health system wide expansion of telehealth, virtual services were held in **small pockets** across the health system and was **limited** to provider partners to provide the in-office exam.*

PRIMARY CARE

Family Medicine
Internal Medicine
Pediatrics

ADULT SPECIALTY

Allergy and Immunology
Cardiology
Endocrinology
Hematology/Oncology
Infectious Disease
Neurology
Occupational Medicine
Physical Medicine and Rehabilitation
Podiatry
Psychiatry
Sports Medicine
Surgery
Urology

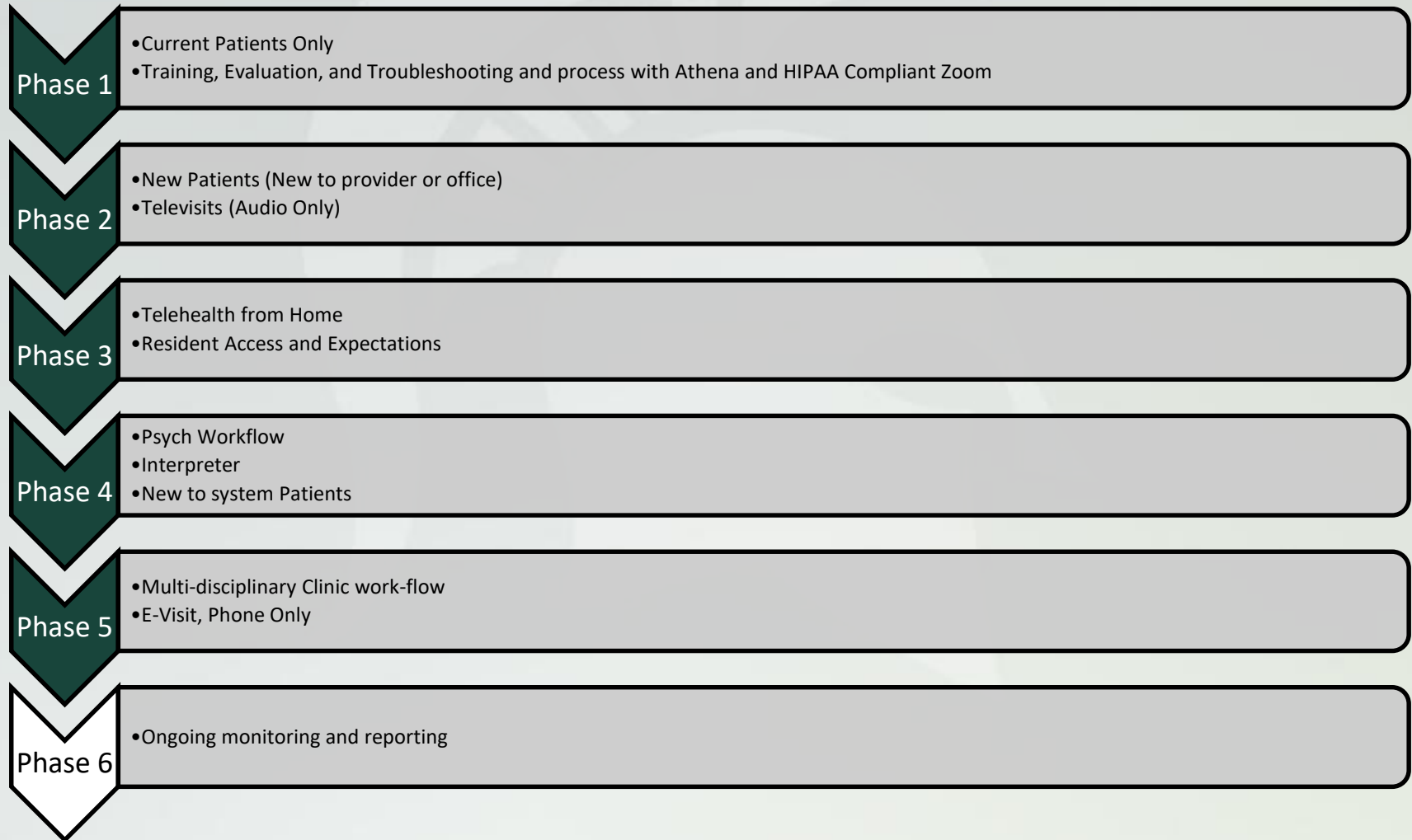
PEDIATRIC SPECIALTY

Allergy and Immunology
Hematology/Oncology
Infectious Disease
Neurology
Podiatry
Pulmonology
Psychiatry
Sports Medicine
Surgery
Urology

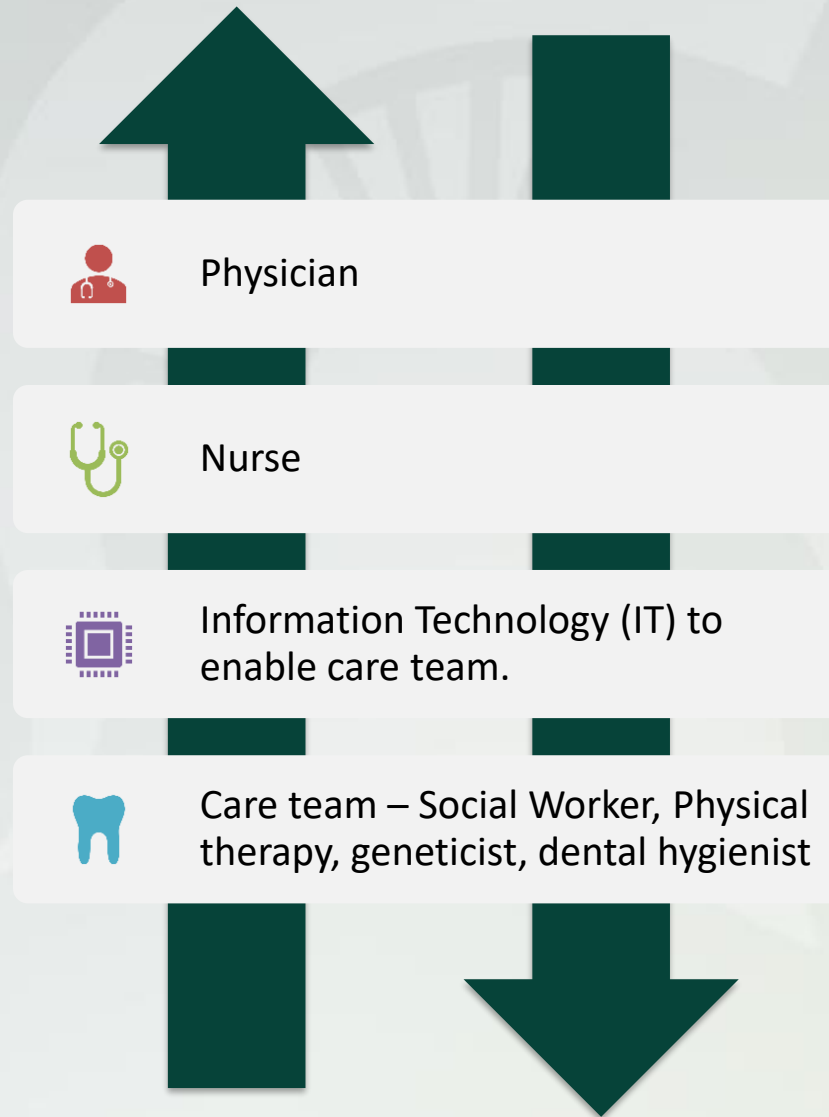
MULTI-DISCIPLINARY CLINICS

Center for Bleeding and Clotting Disorder
Cystic Fibrosis Clinic
Muscular Dystrophy Association (Adult and Pediatric)

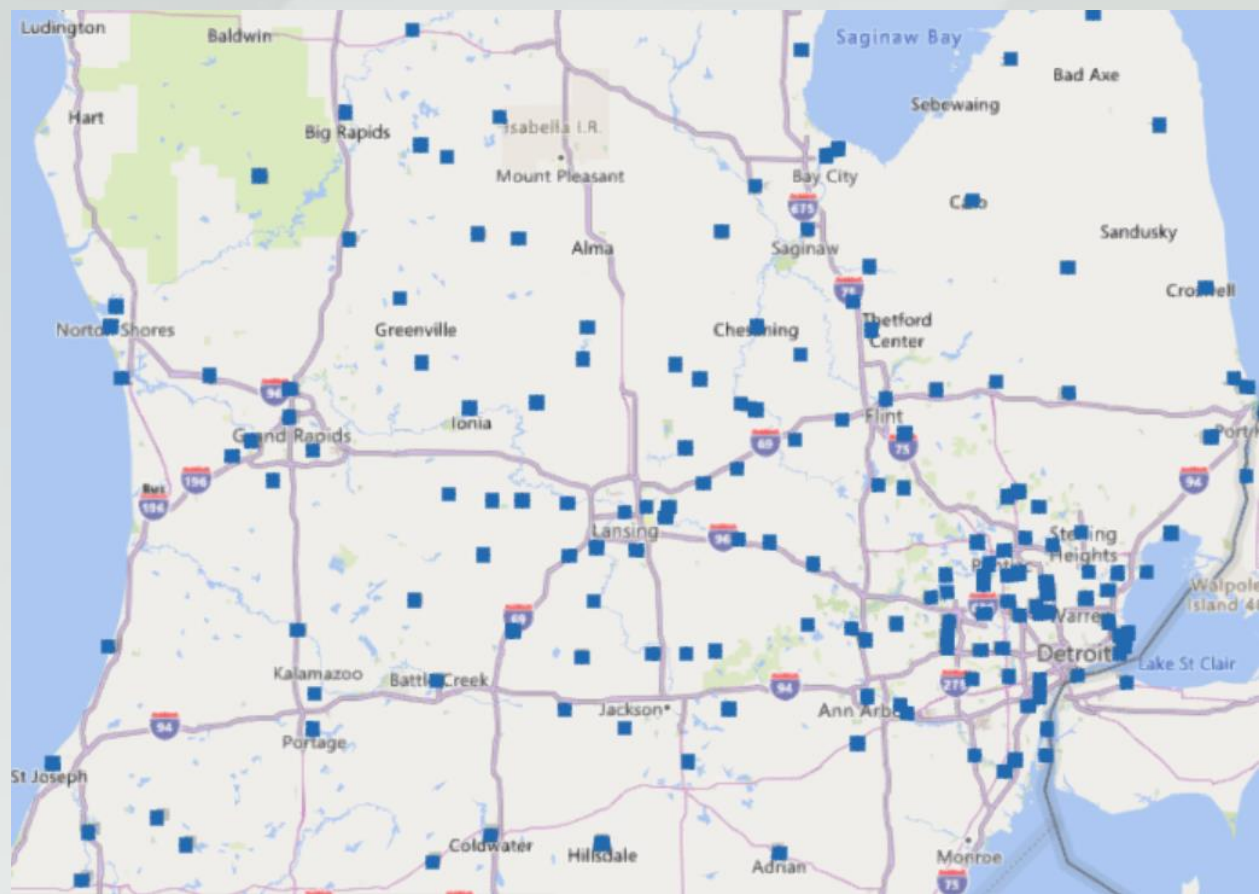
Widespan Telehealth Implementation



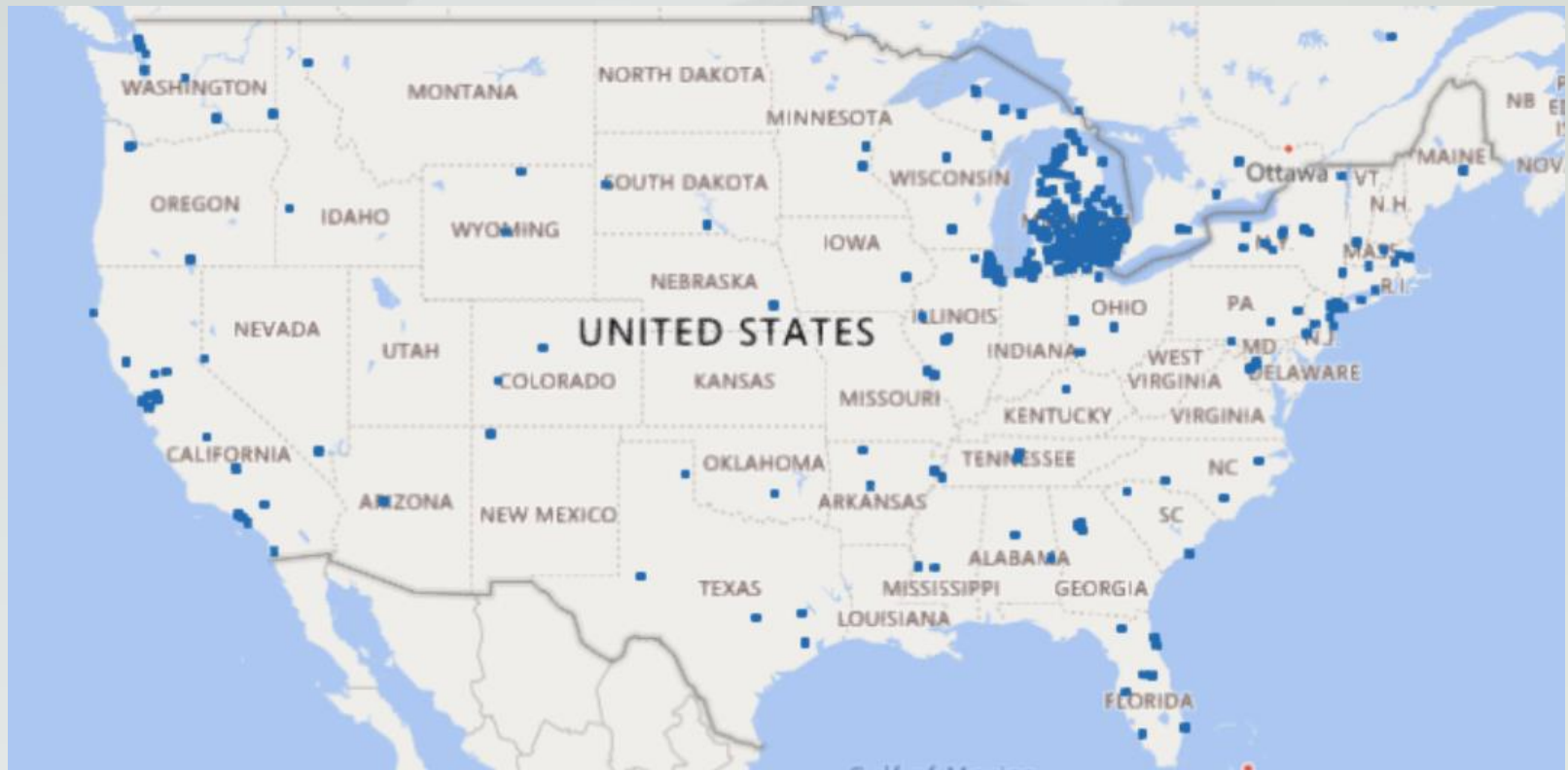
Team for Telemedicine



Telehealth Footprint Lower Michigan



National Telehealth Footprint



Telehealth has allowed MSU Health Care providers to continue to provide care to students who have returned home.

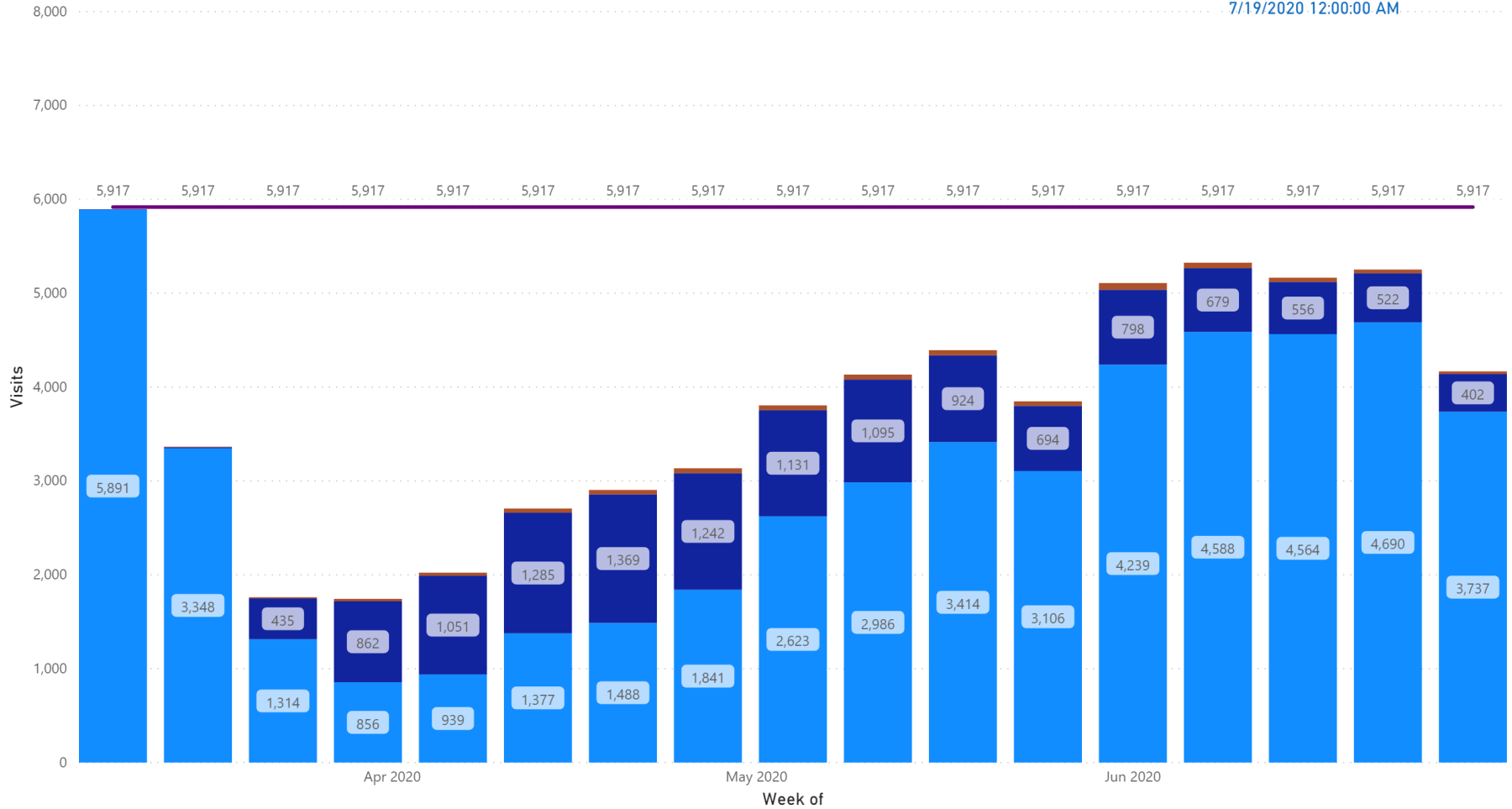
HEALTHCARE - FACE TO FACE vs VIRTUAL VISITS

MULTIPLE DEPARTMENTS

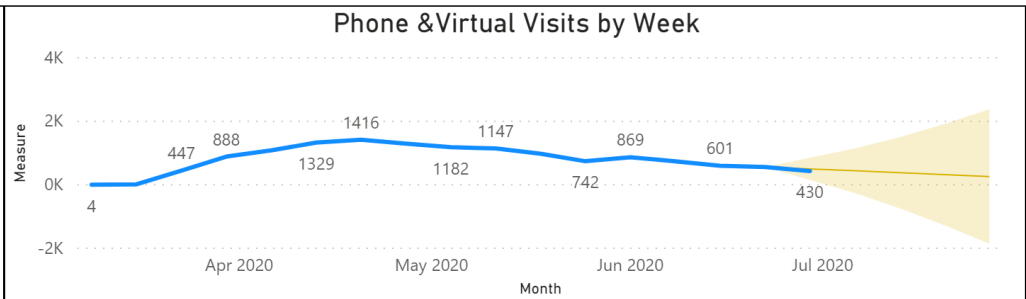
● Face to Face ● Virtual Visits ● Phone Visits ● Avg Weekly Visits Last 6 months

Last Updated

7/19/2020 12:00:00 AM



Week Start	Face to Face Visits	Virtual Visits	Phone Visits	Total	% Virtual Visits
03/09/2020	5,891	4	5	5,895	0.03%
03/16/2020	3,348	11	5	3,364	0.12%
03/23/2020	1,314	435	12	1,761	3.26%
03/30/2020	856	862	26	1,744	6.47%
04/06/2020	939	1,051	33	2,023	7.90%
04/13/2020	1,377	1,285	44	2,706	9.68%
04/20/2020	1,488	1,369	47	2,904	10.32%
04/27/2020	1,841	1,242	52	3,135	9.43%
05/04/2020	2,623	1,131	51	3,805	8.61%
05/11/2020	2,986	1,095	51	4,132	7.81%
05/18/2020	3,414	924	51	4,390	6.99%
05/25/2020	3,106	694	51	3,852	5.71%
06/01/2020	4,239	798	51	5,088	4.77%
06/08/2020	4,588	679	51	5,318	3.93%
06/15/2020	4,564	556	51	5,171	3.21%
06/22/2020	4,690	522	51	5,263	2.89%
06/29/2020	3,737	402	51	4,190	2.17%



Anticipated Challenges

Patients

- IT literacy higher than expected
- Fear of insurance coverage
- Lack of understanding around telemedicine and appropriateness of visit
- Lack of service awareness addressed through social campaigns

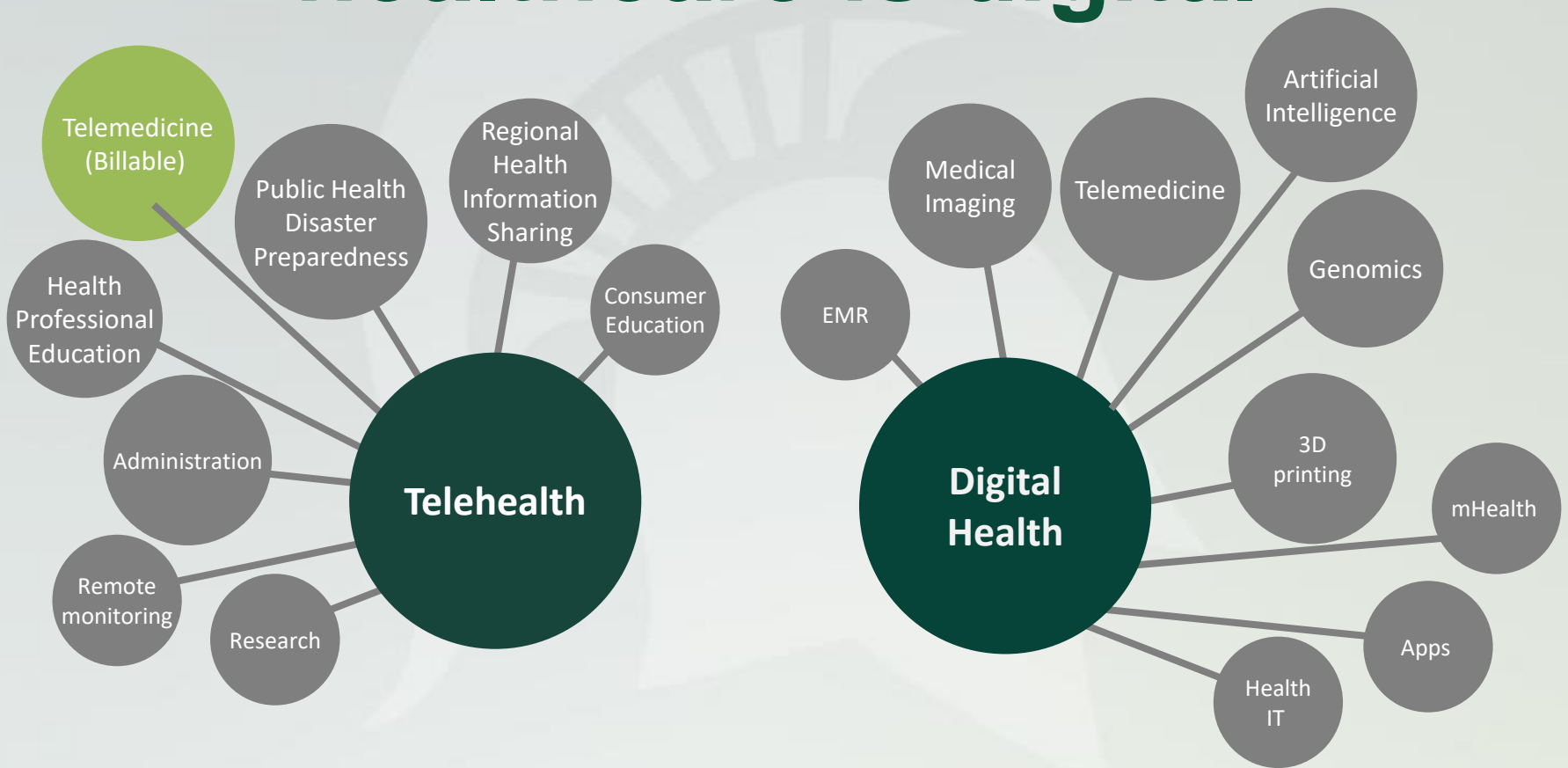
Providers/Staff

- Resistance to adoption decreased after training sessions
- To schedule a patient/convert a patient to telehealth resource heavy

Why now?

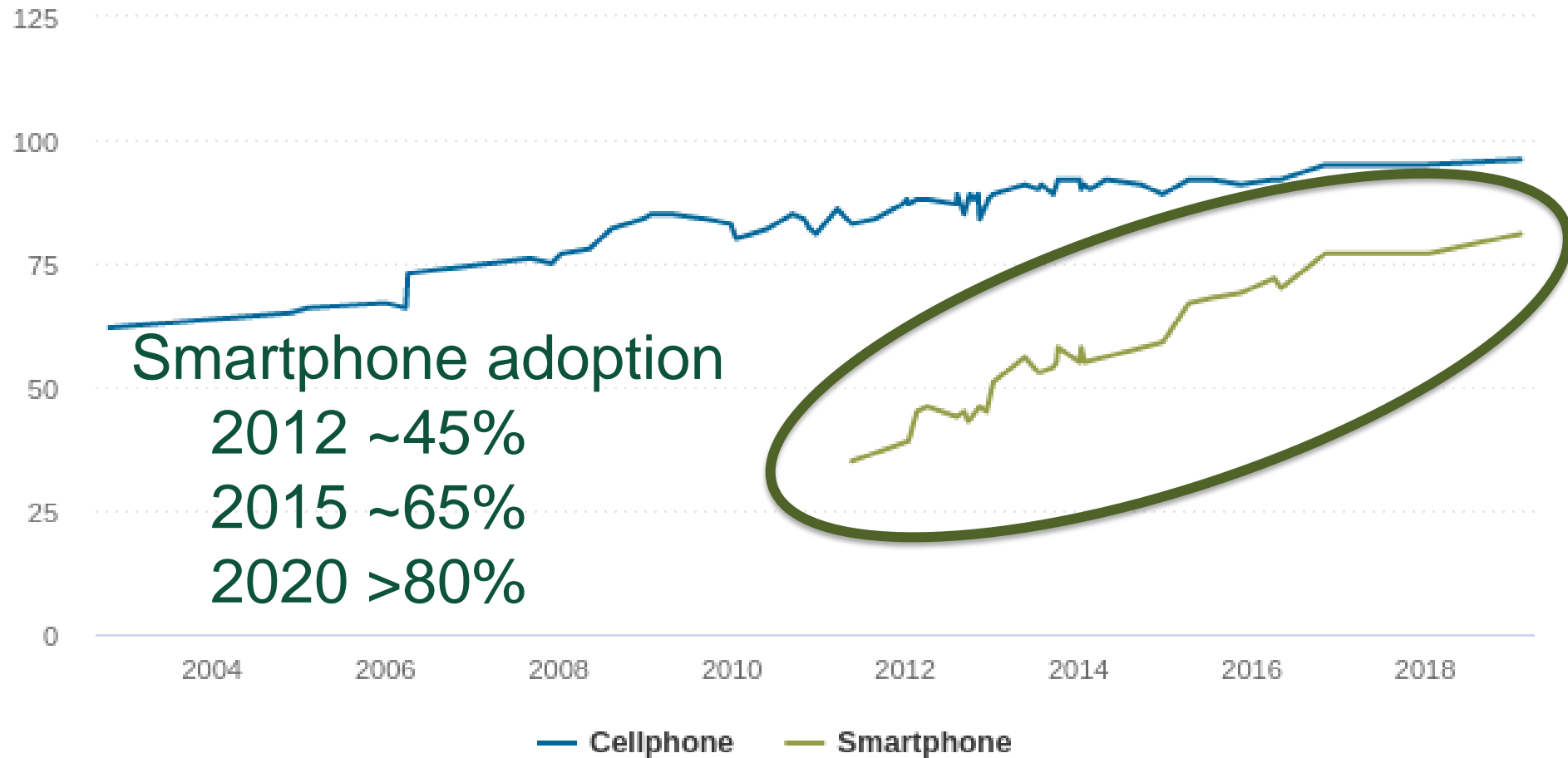
With the **smartphone** and current pandemic, people have connected in more ways than ever before.

The current/future of healthcare is digital



Mobile phone ownership

% of U.S. adults who own the following devices

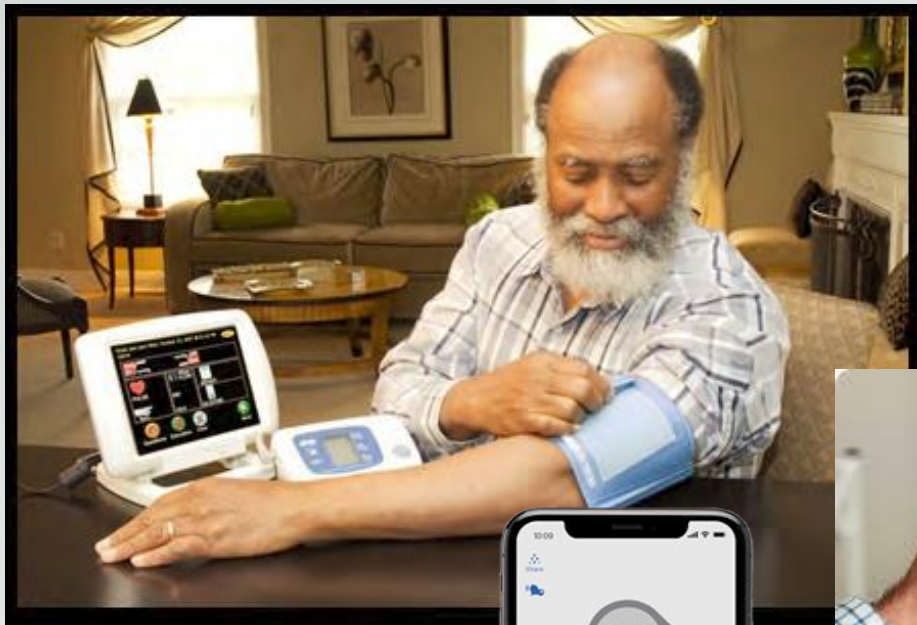


Bandwidth

- More accessibility than ever before
- More bandwidth, more services
- 5G cellular, long range wireless help solve access limitations in the near future
- We should be ready!



Connected Devices



Comprehensive care and Hybrid care: telemedicine and physical outreach



Insurance Influence on Adoption

2001

Medicare program began paying for virtual care

- **Medicare Advantage** was allowed to offer telehealth from home

2020

Blue Care Network announced they would cover video visits from home (plan May 1, 2020)

Insurance Influence on Adoption

Effective Jan 1, 2016

Policy #1: Allow patients to connect from home

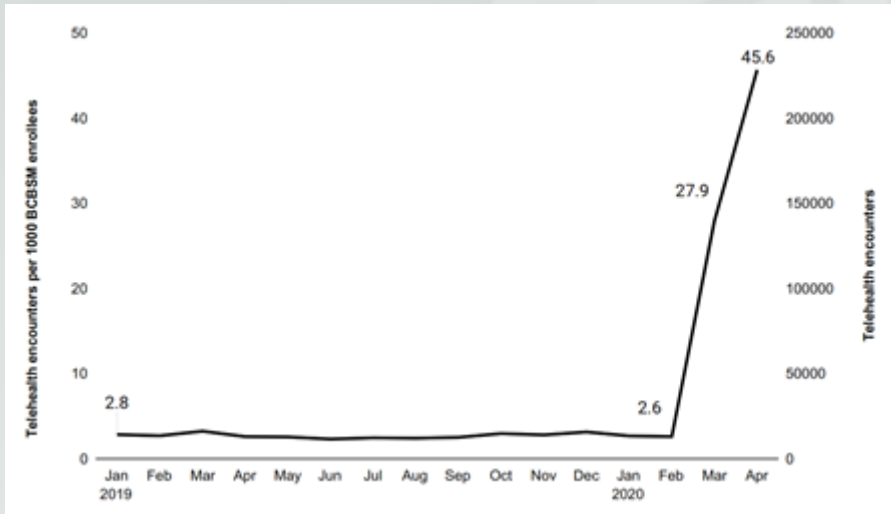
Policy #2: Reimburse phone calls

Policy #3: Allow direct to consumer telehealth (e.g., AmWell)

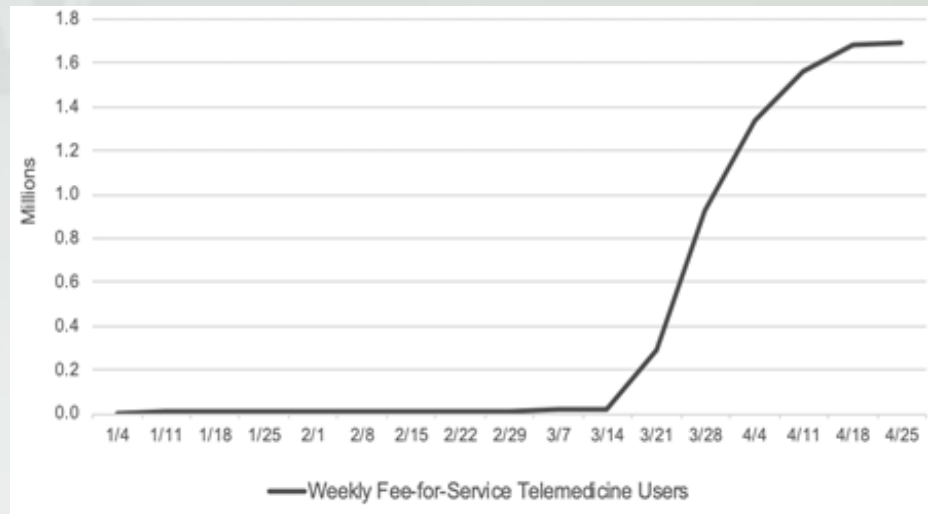


Pandemic Growth of Telehealth

BCBSM (State)



Medicare (National)



Medicare program began paying for virtual care



2001

BCBSM began reimbursing telehealth from home



2016



2019



2020

COVID-19



March 2020

Why do we need to do virtual visits?

Travel

- Rural Communities
- Homeless Populations
- Financial Limitations
- Transportation Limitations

Continuity of Care

- Student
- Travel
- Movement limiting conditions (Agoraphobia, etc)
- Support
- Low Income

Privacy

- Stigma of psychiatry

ACCESS TO HEALTHCARE

Telemedicine (TM) clinics at MSU: Cost Analysis

- Types of patients seen N= 58 patient , VWD(21%, Hemophilia 12%, Bleeding disorders 33%, Blood Disorders 22%, Oncology 12%)

Site	Patient costs	Marquette Gen	Traverse City	Portage UP
Patient seen at MSU, HTC East Lansing	Total costs with driving	\$1143	\$579	\$1275
	Total costs with flying	\$1668	\$1405	\$1887
Patient seen locally by TM at clinic	Total costs: local clinic	\$73-\$117	\$47	\$40

Future Needs

- Streamlined EMR Integration
- Patient Centric and Accessible
- Campaign to Patients for Telehealth Promotion