Oncology Telemedicine - Real Life Applications and Considerations

ACE January 2019 – Sharon Hunt, VP Research Ops

SANFORD HEALTH

Oncology Telemedicine – Real Life

Services

- Patient
- Provider

Resources and Logistics

- Clinicians & Staff
- Equipment
- IT

Support

- Healthcare System
- Government
- Private

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Services

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The Health Resources & Services Administration defines telehealth as: "the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration."

Telehealth represents the interactive, electronic exchange of information for the purpose of diagnosis, intervention, or ongoing care management between a patient and/or health care providers situated remotely.

Patient-to-Provider

E-visits

Wearables

Secure messaging

Provider-to-Provider

E-consults, Multi-disciplinary Conferences

Implantables

Second opinion consults

- Asynchronous telehealth (also known as store-and-forward) transmits data to medical professionals for later use. This type uses data collected from wearable devices, passive sensors, or other peripherals to help inform clinicians' decisions during diagnosis and treatment.

- Synchronous telehealth (also known as real-time) enables clinicians and their patents to communicate remotely using desktop or mobile video, kiosk, telephone, or emerging modality such as a chatbot or voice assistant. This type of telehealth most closely resembles an in -person appointment.

- Remote patent monitoring (RPM) telehealth tracks patents' data from their home or a third-party care facility. Data can be collected from wearable devices, passive sensors, or other peripherals. Since RPM telehealth typically services high-acuity or chronic patents, data is collected and monitored by medical professionals more frequently than it is for asynchronous telehealth.

WHY TELEHEALTH? Consumer (patient) driven combined with efficiency and quality metrics

Real-time Virtual Visits

- ❑Enhance patient access and convenience
- ❑Attract and retain new patients
- ❑Reduce costs by shifting patients to lower cost settings
- ❑Cut patient/provider travel time

Remote Patient Monitoring

- ❑Differentiate from competitors
- ❑Align with consumer interest in technology
- ❑Reduce avoidable emergency department utilization and 30-day readmissions

Asynchronous Store-and-Forward

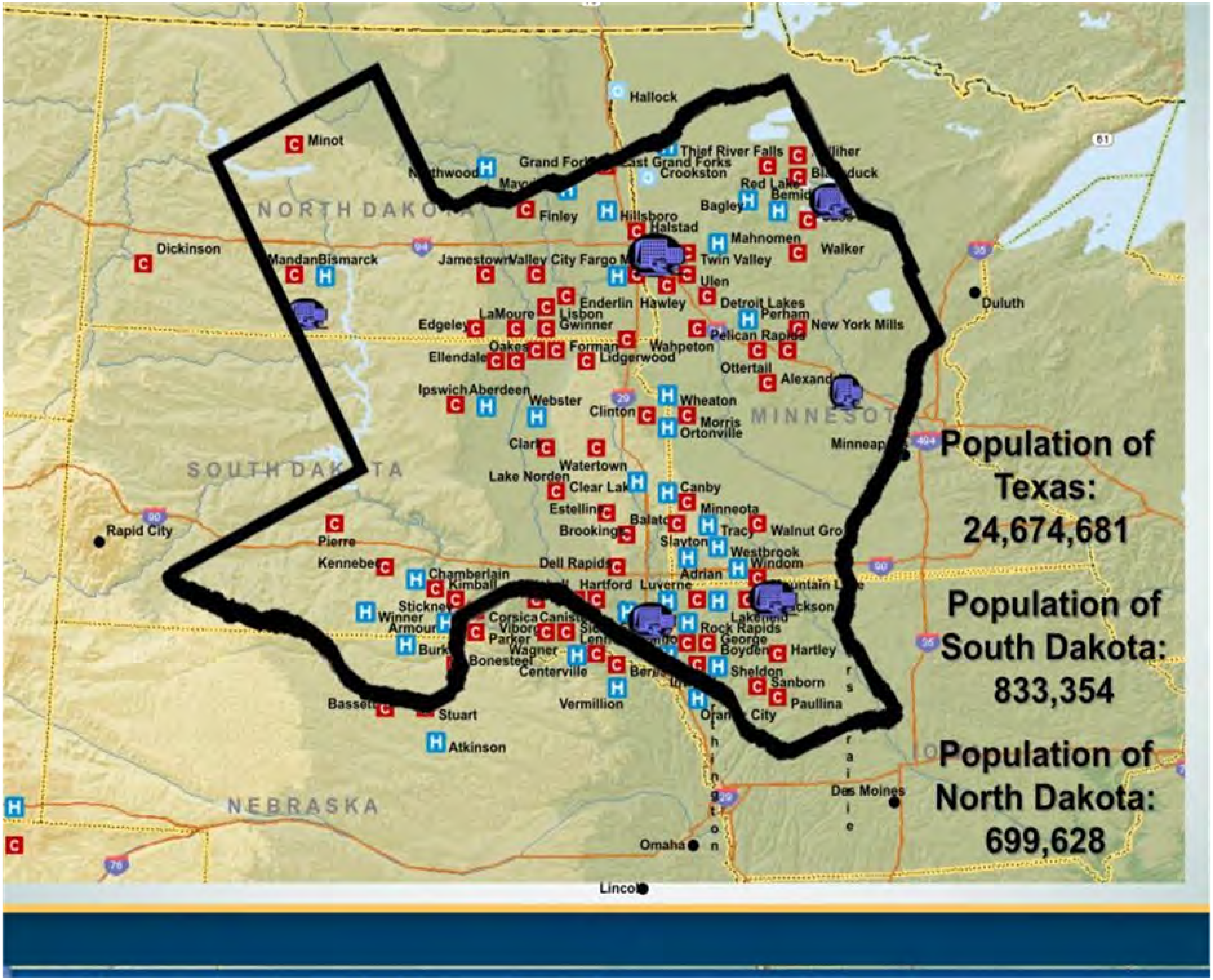
- ❑Reduce wait time to next appointment and no-show rates
- ❑Achieve operational efficiencies
- ❑Increase patient activation and engagement
- ❑Expand specialist coverage

WHY Telehealth at SANFORD

- Over 30,000 Employees
- 2,251 providers (over 1300 physicians) and 6,100 registered nurses in more than 80 specialty areas

- Serving 2.74 million people, 300 communities,
- over 250,000 square miles,
  9 states, 4 countries
- Each year, Sanford provides more than…
  - 5.5 million clinic visits
  - 74,000 admissions
  - 72,000 surgical procedures
  - 9,300 births

- 45 Hospitals – 2 major hubs w/2 additional regional
- 230+ long-term care/independent living facilities
- 289 clinics
- >200,000 health plan members in four states
- $>6 billion in annual net operating revenue


Population of Texas: 24,674,681
Population of South Dakota: 833,354
Population of North Dakota: 699,628
NORTH DAKOTA
SOUTH DAKOTA
MINNESOTA
NEBRASKA
Minot
Dickinson
Mandan
Bismarck
Hallock
Thief River Falls
Grand Forks
East Grand Forks
Crookston
Red Lake
Bagley
Finley
Hillsboro
Halstad
Mahnomen
Walker
Jamestown
Valley City
Fargo
Twin Valley
Ulen
Enderlin
Hawley
Lisbon
LaMoure
Gwinner
Edgeley
Detroit Lakes
Perham
New York Mills
Pelican Rapids
Oakes
Forman
Wahpeton
Ellendale
Lidgerwood
Ottertail
Ipswich
Aberdeen
Webster
Wheaton
Clinton
Morris
Ortonville
Duluth
Watertown
Lake Norden
Canby
Minneota
Estelline
Brookings
Walnut Grove
Rapid City
Pierre
Kennebec
Westbrook
Windom
Dell Rapids
Adrian
Chamberlain
Kimball
Hartford
Luverne
Winner
Armour
Corsica
Parker
Rock Rapids
Boyden
Hartley
Bonesteel
Wagner
Centerville
Sheldon
Sanborn
Paulllina
Vermillion
Stuart
Atkinson
Des Moines
Omaha

Landscape

Summary of 2018 Telemedicine Survey Findings

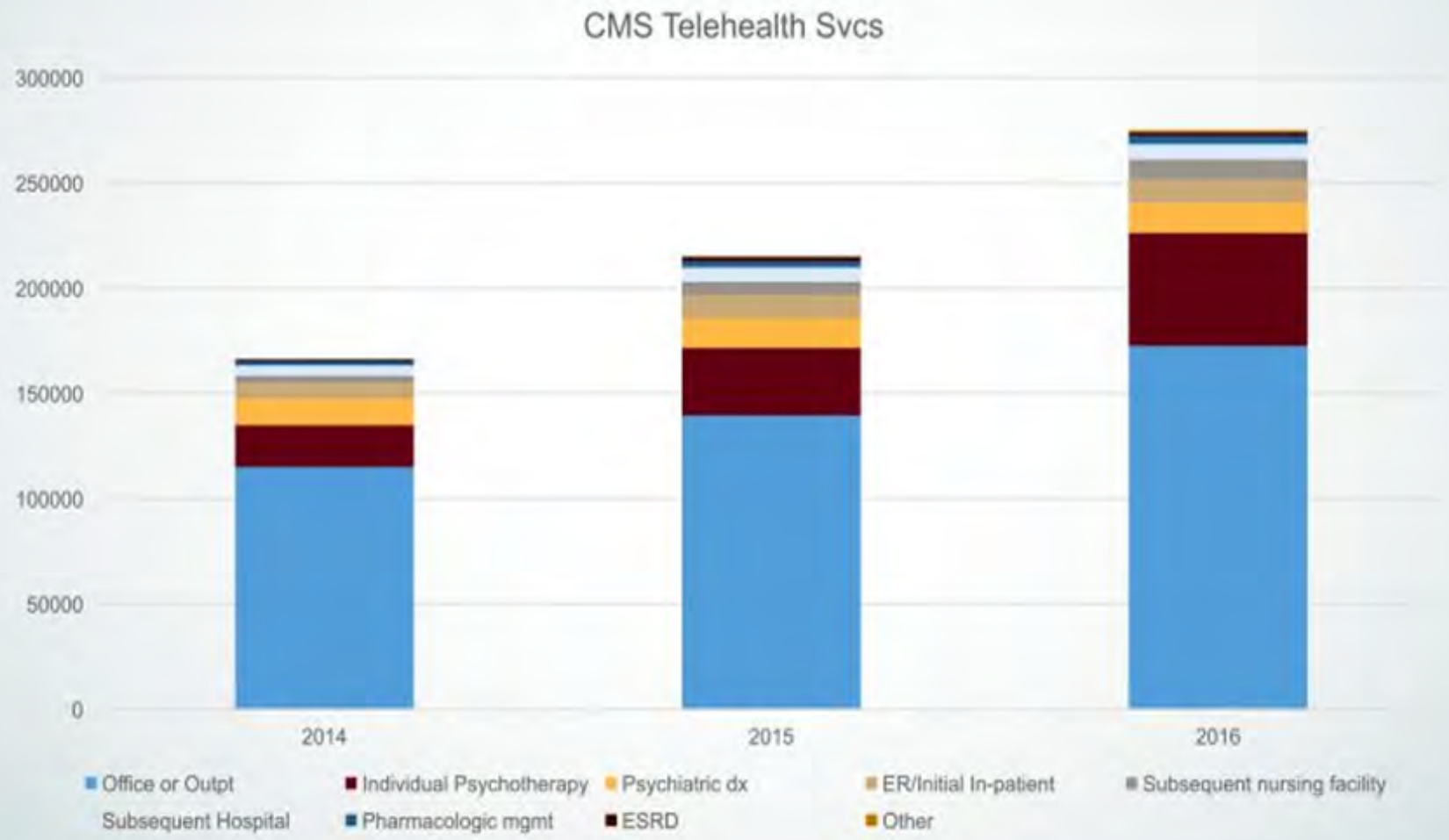
- The top four objectives of respondents' programs are patient-focused, a trend observed since this survey was launched in 2015.
- Almost half of respondents are taking an enterprise approach to telemedicine, a 23% increase from 2017.
- Reimbursement continues to be one of the top challenges for programs, a trend persisting since this survey's inception in 2015.
- Clinics and private practices are among the care settings showing the strongest growth since 2015.
- Psychiatry and dermatology are among the specialties showing the strongest growth since 2015.
- Clinical documentation is a key component in two of the top three most valuable platform features.
- Of those participants using their EMR system as their platform, nearly half are documenting in the EMR after remote consultations have ended.

Five Key Barriers

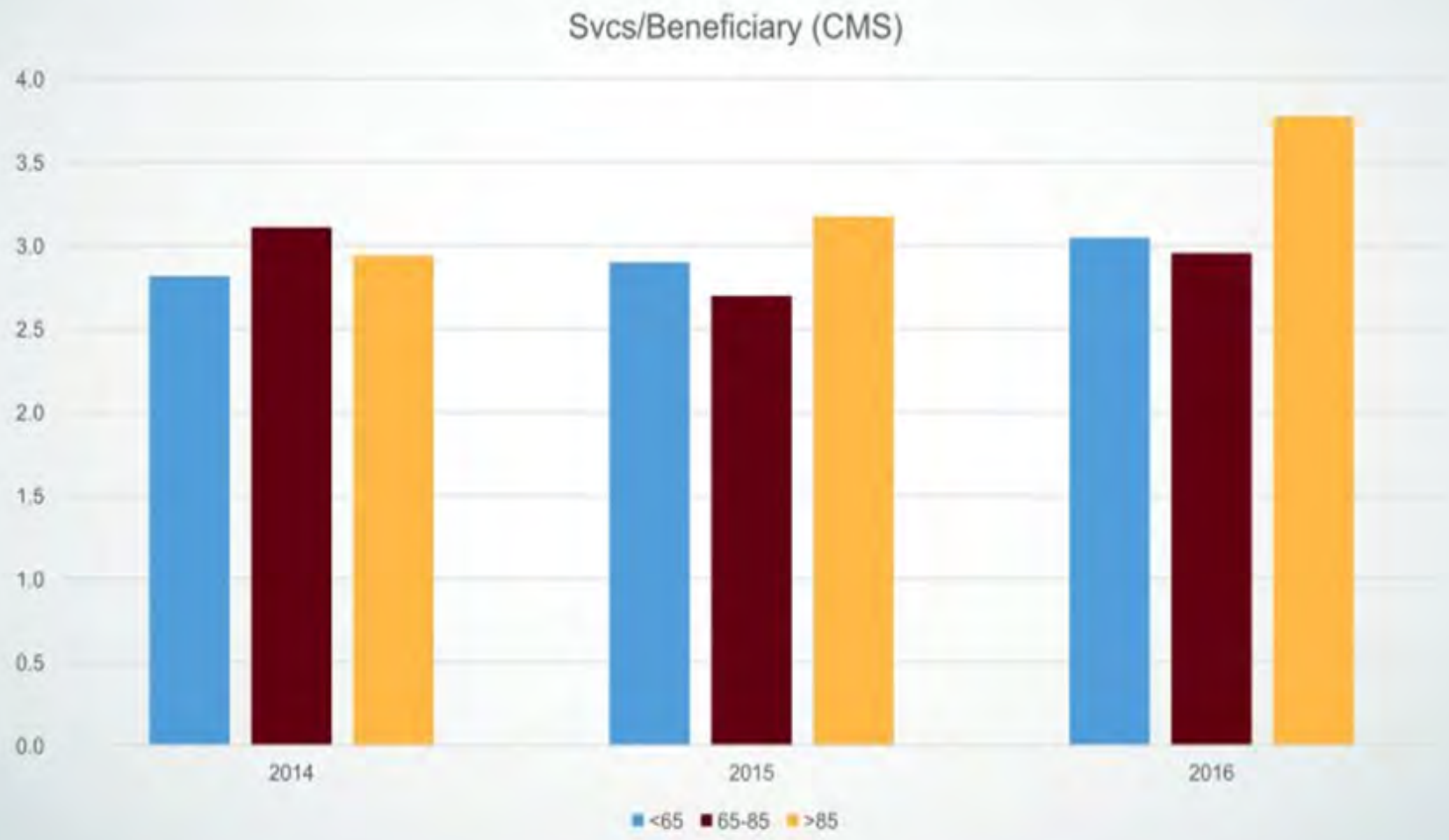
- Data integration - Data from telehealth visits included in a patient's medical record.
- Competition - Retail health and urgent care clinics offering similar low-cost healthcare services.
- Patient preference – Many patients still prefer in-person exams over virtual visits. Patients also tend to prefer telehealth visits with physicians they know and have established relationships with.
- Licensure - Absence of a national licensure standard leaves physicians with a "patchwork" state-by-state licensing process.
- Reimbursement, as not all insurers and employers cover telehealth visits.

"Whether the market reaches its potential for telehealth technology adoption will depend on the ability of stakeholders to position telehealth as a complement to care, not a direct competitor, and to position growth strategies accordingly," the report concludes. "Telehealth will not serve all healthcare use cases, and it will not serve all patient populations, but mounting evidence suggests that it can support care beyond the hospital."

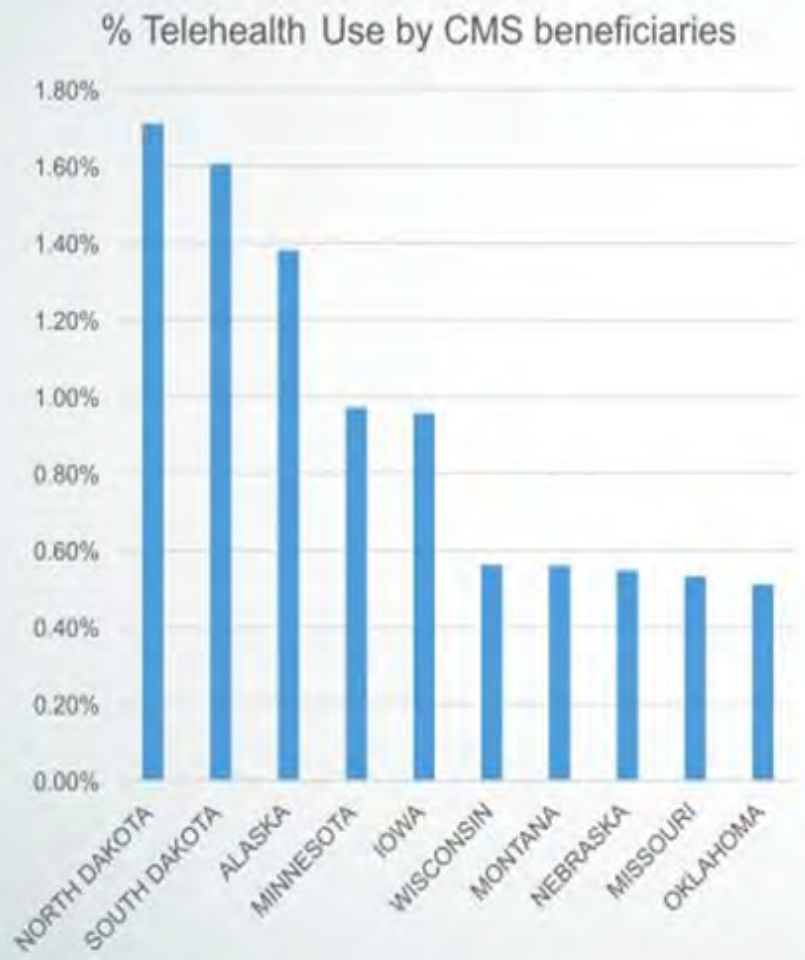
Telehealth Svc Growth

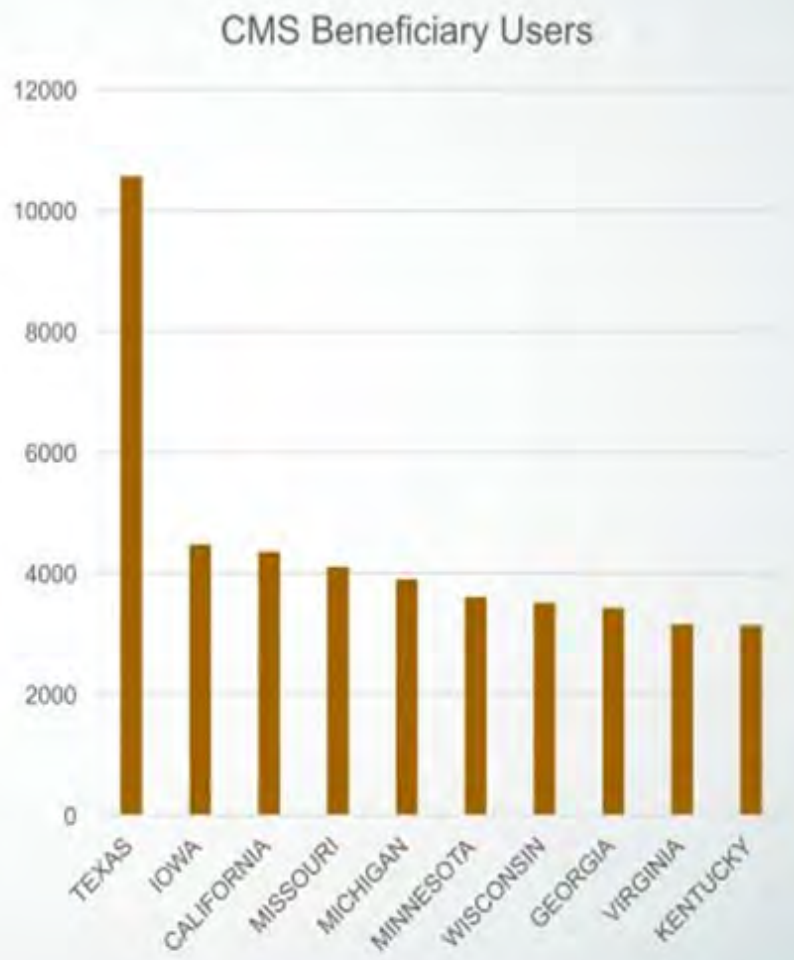


Telehealth Growth w/in Age group



Telehealth by State





Oncology Telehealth

Provider to Provider

- Provider to Provider consults (Radiology, Pathology, Cancer Care Team)
- Multi-disciplinary Conferences (tumor boards)
- PRMC
- Provider Education

Patient to Provider

- Traditional Telemedicine
- Virtual Infusion Center
- Clinical Trials
- Video Visits; E-visits
- Assessments; surveys; PROs
- *Tyto Care*
- *Wearables*
- *At home monitoring*

Oncology Telemedicine

- Traditional Telemedicine
  - *Active Oncology-related specialties*
    - *Medical Oncology – MD & CNP*
      - *Follow up visits*
      - *Survivorship visits*
    - *Hematology*
    - *Palliative Care*
    - *Surgical Consult*
    - *Surgical Post-op; wound care*
    - *Psychological Services*
    - *Genetic Counseling*
    - *Health Coaching*

HRSA Grant Initiated Virtual Infusion Center Project

The Need

- Limitations on chemotherapy regimens given in outlying hospitals/clinics
- Therapy reactions resulted in stopped treatment and, infrequently, hospitalization
- Patients travel hours for treatment – lower compliance with chemotherapy regimens
- Dis-satisfaction with primary care physicians in outlying areas
- Financial opportunity for small rural hospitals lost

The Result

- Regimen types tripled (now able to give all regimens)
- No inappropriate missed chemotherapy – zero hospitalizations
- Volume of regimens increased by over 200%
- Started with two locations – expanded to four with additional two in queue

HRSA Grant Initiated Virtual Infusion Center Project

- Integrated health system
- 2016 trained nursing and regional physicians on chemo/bio therapy
- Implemented standardized protocols
- Trained and authorized nursing staff on chemotherapy documentation/monitoring via shared EMR
- Installed telemedicine equipment in infusion centers

Telemedicine for Clinical Trials

- NEED and Champion
  - Sanford has 1 Gynecologic Oncologist, Dr. Maria Bell.
  - From Sioux Falls, SD outreaches to 3 distant sites (ND and MN) and other Sanford Clinics.
  - Hub sites MSA status deemed ineligible
- Sanford petitioned Medicare intermediary (Noridian) in January 2013 for variance in rural requirement to reflect specialty Physician shortage (Gynecologic Oncology) - unsuccessful.
  - Re-petitioned in 2015, again unsuccessful.
- Approval from NCI and GOG in August 2013 to move forward with telemedicine for GOG research
- Currently utilizing telemedicine for clinical trials in Sioux Falls, SD, Fargo, ND and Bemidji, MN and Bismarck, ND w/out coverage and two sites with coverage (non-MSAs).
- Successfully added telemedicine options to industry sponsored trials.

Non-Traditional

https://www.youtube.com/watch?v=bGfwKjbZNeA

https://www.youtube.com/watch?v=tCajVa263Ks

- Video Visits
  - Acute Care/Urgent Care
  - Patient out of pocket
  - Health Plan negotiated coverage
- Surveys/PROs
  - In-take forms
  - Assessments
- E-visit (Patient portal email)
- Tyto Care

Resources & Logistics

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Benefits

Patient and Family

- **Increased access to care**
- **Reduces family stress and expenses (saves travel expenses, time away from work and family)**
- Improves quality of life through better compliance
- Patient receives care in a facility they are familiar
- Increased access (appointments not restricted to outreach days)

Community

- **Supports "main street" and keeps community dollars at home**
- Helps strengthen the local healthcare presence
- Increases access to healthcare education/support groups
- Perception/Reality of improved quality of care without leaving home

Provider

- **Improve patient care coordination.**
- Allows specialty physician "virtual access" to a community to provide services
- Reduce windshield time/increase clinic time (specialty physicians)
- **Enhances professional relationships**
- Avoid unnecessary transfers
- Access to education

Logistical Considerations

EQUIPMENT

- Originating Sites
  - Dedicated hardware
  - Includes digital stethoscope (heart/lung)
  - Examination camera
  - I-pads for rounds and surveys
- Distant Sites
  - Exam rooms at clinician site equipped/connected
  - Video visit equipment
  - HIPAA/privacy/efficiency
- IT Operations
  - Broad Band Connectivity
  - Storage/maintenance
  - EMR integration

Logistical Considerations

PERSONNEL

- Clinician
  - Training to conduct visit
  - Documentation training
  - Originating site personnel training
- Scheduling
  - Created and utilize specific telemedicine visit type
  - Schedule like in-person visit for clinician – requires collaboration w/originating site
- Nursing
  - Originating site nurse or CNP rooms patient (vitals, questionnaires)
  - Distant site nurse confirms documentation for clinician
- Documentation - Specific telemedicine visit type
  - Allows metric collection
  - Drives note type
  - Drives Standardized telemed format

Provider/Staff Uses

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Expanded Tumor Boards

Implementation – Attendee Eligi

"Treatment" generally means the provision, coordination, or management of health care and related services among health care providers or by a health care provider with a third party, **consultation** between health care providers regarding a patient, or the referral of a patient from one health care provider to another.

...vacy (HIPAA) - Permi

- Treatment, Payment, Health Care
- Public Interest or Benefit Activity
  - Research

– Capacity/Cost

"Health care operations" are certain administrative, financial, legal, and quality improvement activities of a covered entity that are necessary to run its business and to support the core functions of treatment and payment. These activities, which are limited to the activities listed in the definition of "health care operations" at 45 CFR 164.501, include: Conducting quality assessment and improvement activities, population-based activities relating to improving health or reducing health care costs, and **case management and care coordination**;

Reviewing the competence or qualifications of health care professionals, evaluating provider and health plan performance, **training health care and non-health care professionals, accreditation, certification**, licensing, or credentialing activities;

TeleHealth MDC's Logistics

- Scope/volumes dictate participants
  - Frequency
  - Subspecialists (DAWGS)
  - Paired with multi-disciplinary clinics
- IT – Connectivity
  - Sound
  - Visuals
- Inclusion of research and non-traditional care team members
  - World Clinics
  - Research

	Monday	Tuesday	Wednesday	Thursday	Friday
7:00					GI
8:00					GU
9:00				*Lung M-D-Clinic*	
10:00					
11:00					
12:00	Neuro	Molecular		Lung	Molecular
13:00	*Breast M-D Clinic*	Heme			Head&Neck
14:00		General			
15:00				*GI M-D Clinic*	
16:00	Gyn				
17:00	Breast				
18:00					

Tumor Board Team

- Cancer Care Team
  - Physicians (**MedOnc**, RadOnc, Surgery) and APPs
  - **Nursing, Pharmacy**
  - **Research (Clinical Trials)**
- Experts
  - **Pathology**
  - Radiology
  - Nuclear Medicine
  - **Genetics**
  - Consultants
  - Basic Researchers
- Support
  - Therapies (PT, RT, Nutrition)
  - Palliative Care
  - **Counseling/social work**
  - **Navigators**
  - **Tumor Registry**

RED: All tumor boards
BLACK: As needed/appropriate

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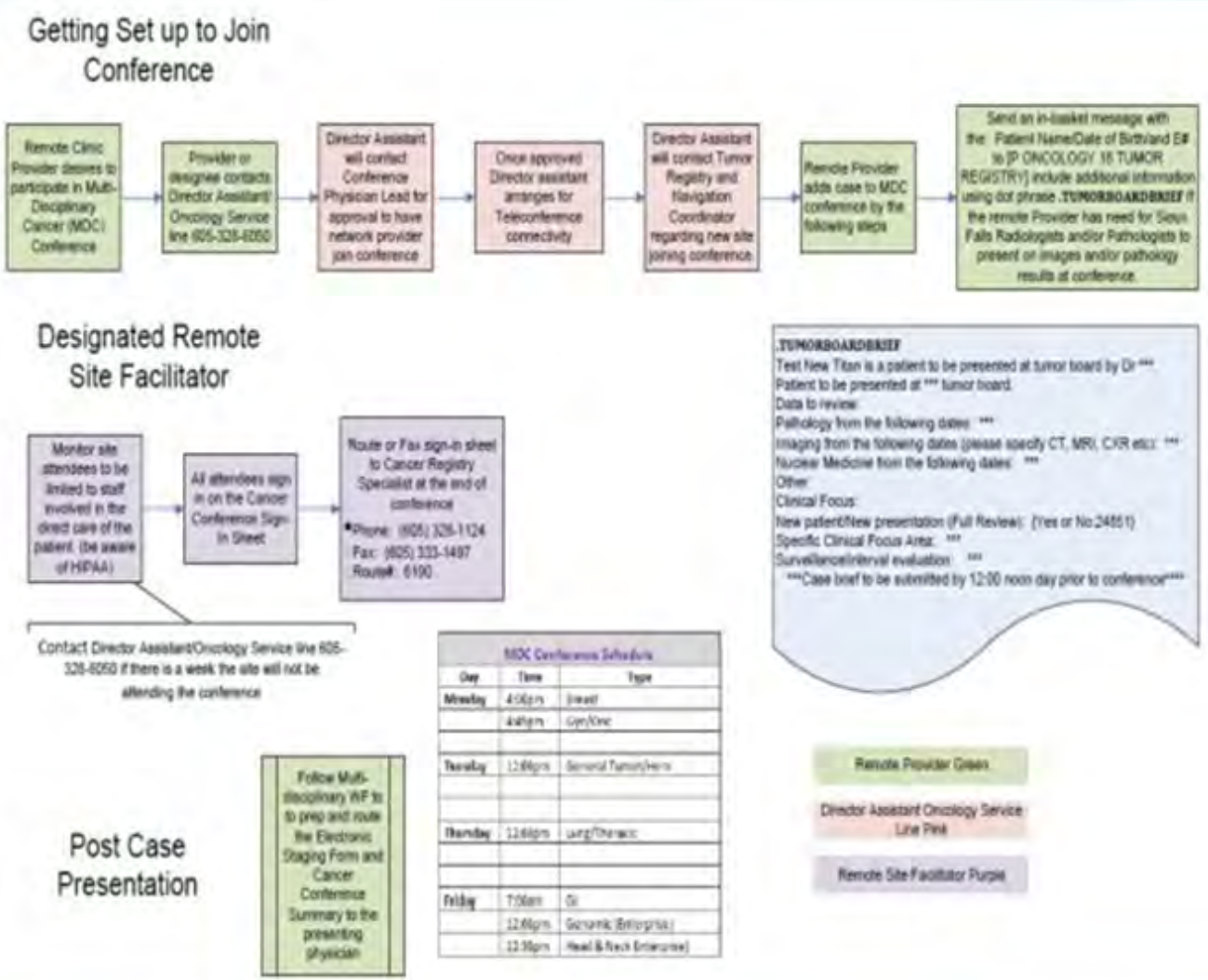
Facility Requirements

- Hub Conference Centers
  - Multiple Screens
  - Able to push screens
  - Space
    - 50-60 capacity
    - Layout
  - Patient Privacy
  - Learning
- Outlying Sites
  - Visual – Two Way
  - Audio
  - Patient Privacy
  - Learning

New Sites

- Logistics
  - Conference Room
    - Teleconference
    - HIPAA Compliant
    - Site sign-in/attendance
  - Physician Office
    - Personal connectivity
- Case presentation
- Documentation



Documentation to enhance cancer care team integration

Progress Notes

Mollet, Brittany A, PA-C at 3/23/2015 10:15 AM

Author Type: Physician Assistant Status: Attested Cosigner: Dirksen, Jesse Lee, MD at 3/24/2015 7:08 AM

[redacted] was discussed at the Sanford Multi-Disciplinary Cancer Conference on 3/23/2015.

Initial Presentation

Diagnosis

1. **Breast cancer, right breast**

Cancer Stage Clinical
Breast cancer, right breast
Primary site: Breast
Staging method: AJCC 7th Edition
Clinical: Stage IA (T1c, N0, cM0) - Signed by Dirksen, Jesse Lee, MD on 3/19/2015
Summary: Stage IA (T1c, N0, cM0)

Prognostic Indicators mixed IDC & ILC, Grade 1, of the right [redacted] receptor positive, progesterone receptor positive and HER-2/neu negative

Clinical Trials available? Patient [redacted] on 3/23/15. No clinical trial available at this time. Can re-screen if more information becomes available

Conference Summary:
69 y/o female with newly diagnosed right breast mixed invasive ductal and lobular carcinoma, Grade 1, ER(+)/PR(+)/HER2(-). Of note, the patient has a history of Stage IIIC ovarian cancer in 2011 in which she was also treated with adjuvant chemotherapy, and a history of thyroid cancer in 2012. Patient is amendable to breast conserving therapy; however the patient and her family inquired about non-surgical options for the treatment of breast cancer. Referral to Medical Oncology to discuss primary anti-hormonal therapy. Of note, Ms. Larsen does not have a family history of breast but does have a family history of ovarian cancer. She believes she underwent genetic counseling, but is not interested in exploring this option again because she has no biological children.

NCCN guidelines were also reviewed and incorporated into the patient's plan of care.

The Sanford Multi-Disciplinary Cancer Conference are meetings of clinicians from various specialty areas who evaluate and discuss patients using a multidisciplinary approach. Collectively, the board discusses treatment options and approaches for each patient based on the information presented. The treating physician then reviews and discusses the options with the patient to determine the treatment plan. The physician and patient continue to be the sole decision makers regarding patient care.

Attestation signed by Dirksen, Jesse Lee, MD at 3/24/2015 7:08 AM

I concur with this note. A follow-up conversation with the patient will occur to review these recommendations. After this discussion with the patient, appropriate orders will be entered to establish the Treatment Care Plan.

Jesse Lee Dirksen, MD

EMR Documentation

Real-World Genomic Tumor Boards

Implementation – Attendee Eligibility

- All required to have documented, current HIPAA training
- State Licensure?
- Non-employee/non-care tea
  - Consultants
  - Researchers
  - Community Care Providers
  - Students
  - Interns

Since states are responsible for providing medical licenses, each state has a slightly different **legal definition** for the **practice** of **medicine**. In general, a person **practices medicine** when he or she tries to diagnose or cure an illness or injury, prescribes drugs, performs surgery, or claims he or she is a doctor.

Education

Accreditation/Grant Mandated

- CoC
- NAPBC
- NCORP
- Magnet
- CME/CEU

Quality/Standardization

- Staging Module in EMR
- Palliative Care Consults
- Oncology History (EMR)

- Physicians
- Nurses
- Support Staff
- Students
  - Medical students
  - Residents
    - Pediatric
    - Surgical
    - Internal Medicine
    - Pathology
  - Fellows
    - Cardiac
  - Nursing

Advances in Care

New Technology

Breast Imaging (3D, contrast enhanced, Y-90; Osteo-Cool IORT

Support

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Paying for TeleHealth

- Equipment/start-up
  - Grants
  - Investments
- On-going
  - Reimbursement
  - Quality improvement
  - Provider time savings
  - Market share

Funding

- **DEPARTMENT OF HEALTH AND HUMAN SERVICES**
  - **HRSA** Office of Rural Health
- **USDA**
- **SBIR (Small Business Innovation Research)**
- **Hearst Foundations (Health)**
- **State and Local Grants**
- **Community Foundations & Funds**

- **Costs**
  - Infrastructure
  - Sites

Telehealth funding program examples

- Rural Broadband Access Loan and Loan Guarantee Program

Loans and loan guarantees to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide service at the broadband lending speed in eligible rural areas.

- Telehealth Network Grant Program (TNGP)

Funding to show how telehealth networks can improve access to healthcare services in rural, frontier, and underserved areas. Eligible applicants include rural or urban nonprofit entities that will provide services through a telehealth network. Applicants are encouraged to develop innovative proposals that meet new and emerging needs in a changing healthcare delivery system with a focus on value and improved healthcare outcomes.

- USAC Rural Health Care Telecommunications Program

Discounts to rural healthcare providers to obtain internet and telecommunications access.

- USDA Community Facilities Loan and Grant Program

Funding to construct, enlarge, or improve essential community facilities for healthcare, public safety, and public services in rural areas and towns of up to 20,000 in population. These facilities include schools, libraries, childcare centers, hospitals, medical clinics, assisted living facilities, fire and rescue stations, police stations, community centers, public buildings, and transportation. Funds may be used for telehealth initiatives.

- USDA Distance Learning and Telemedicine Loan and Grant Program (DLT)

Financial assistance to improve telemedicine services and distance learning services in rural areas through the use of telecommunications, computer networks, and related advanced technologies to be used by students, teachers, medical professionals, and rural residents. Applicants must operate a rural community facility directly or deliver telemedicine services to another organization that operates a rural community facility.

Reimbursement

Telehealth services generally reimburse face-to-face interactions at same level as in person visits for the “distant site”. Originating site receives a nominal “facility fee”.

Medicare – Generally set the standard for reimbursement

- Originating site (where the patient is) is in a Health Professional Shortage Area (HPSA) or in a county that is outside of any Metropolitan Statistical Area (MSA)
- Originating site must be a medical facility and not the patient's home.
- Only pay for "face-to-face", interactive video consultation services wherein the patient is present.

Private Payers - There is no single widely-accepted standard for private payers, most follow Medicare’s lead at the minimum.

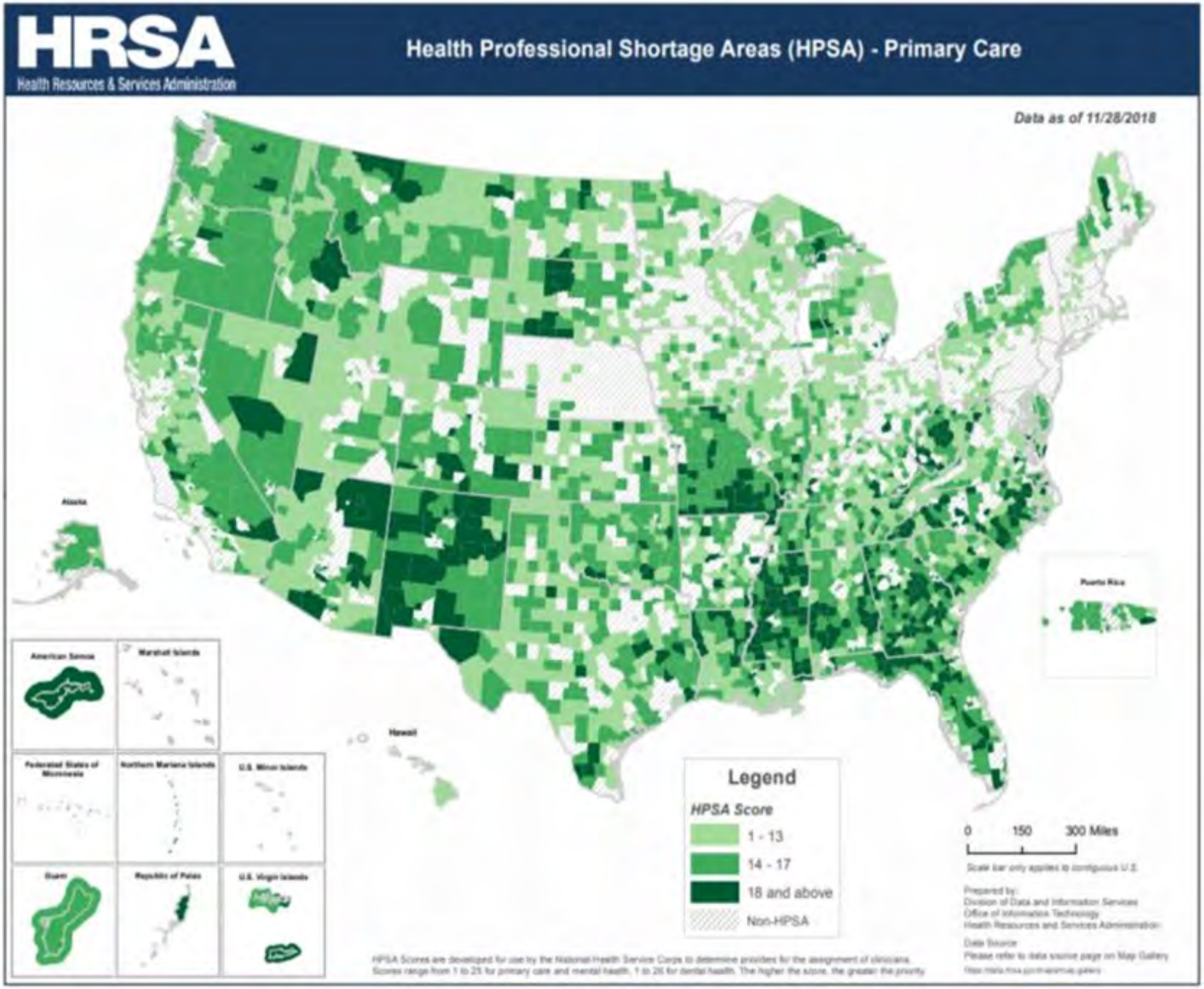
- Some value the benefits of telehealth and reimburse a variety of services including non-real time interactions (store and forward); others cover e-visits and video visits .
- Others may require prior approval (pre-auth).

Medicaid - Different states have various standards by which their Medicaid programs will reimburse for telehealth expenses. Many base coverage upon Medicare.

Medicare Telehealth Payment Eligibility

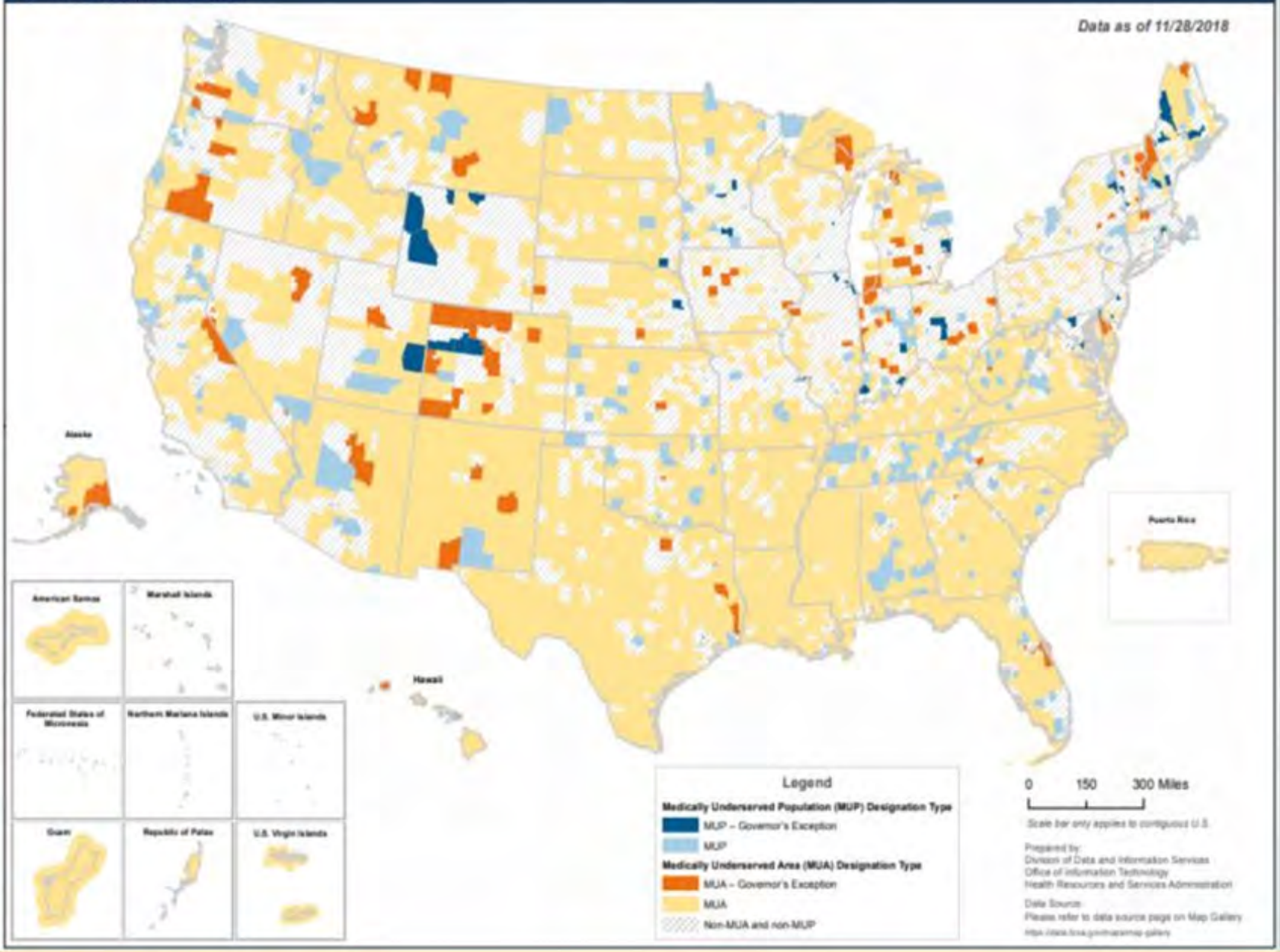
- The Federal Medicare law requires the Medicare beneficiary to be located in a "rural" area.
- The Medicare beneficiary must reside in, or utilize the telemedicine system in
  - federally designated rural Health Professional Shortage Area (HPSA);
  - a county that is not included in a Metropolitan Statistical Area (MSA);
  - or from an entity that participates in a federal telemedicine demonstration project that has been approved by (or receives funding from) the Secretary of Health and Human Services as of December 31, 2000.
- CMS has provided regulatory definition of "rural HPSA" for purposes of determining eligibility for Medicare telehealth originating sites to include HPSAs located in rural census tracts, consistent with the Office of Rural Health Policy/Health Resources and Services Administration (HRSA).

https://data.hrsa.gov/tools/medicare/telehealth

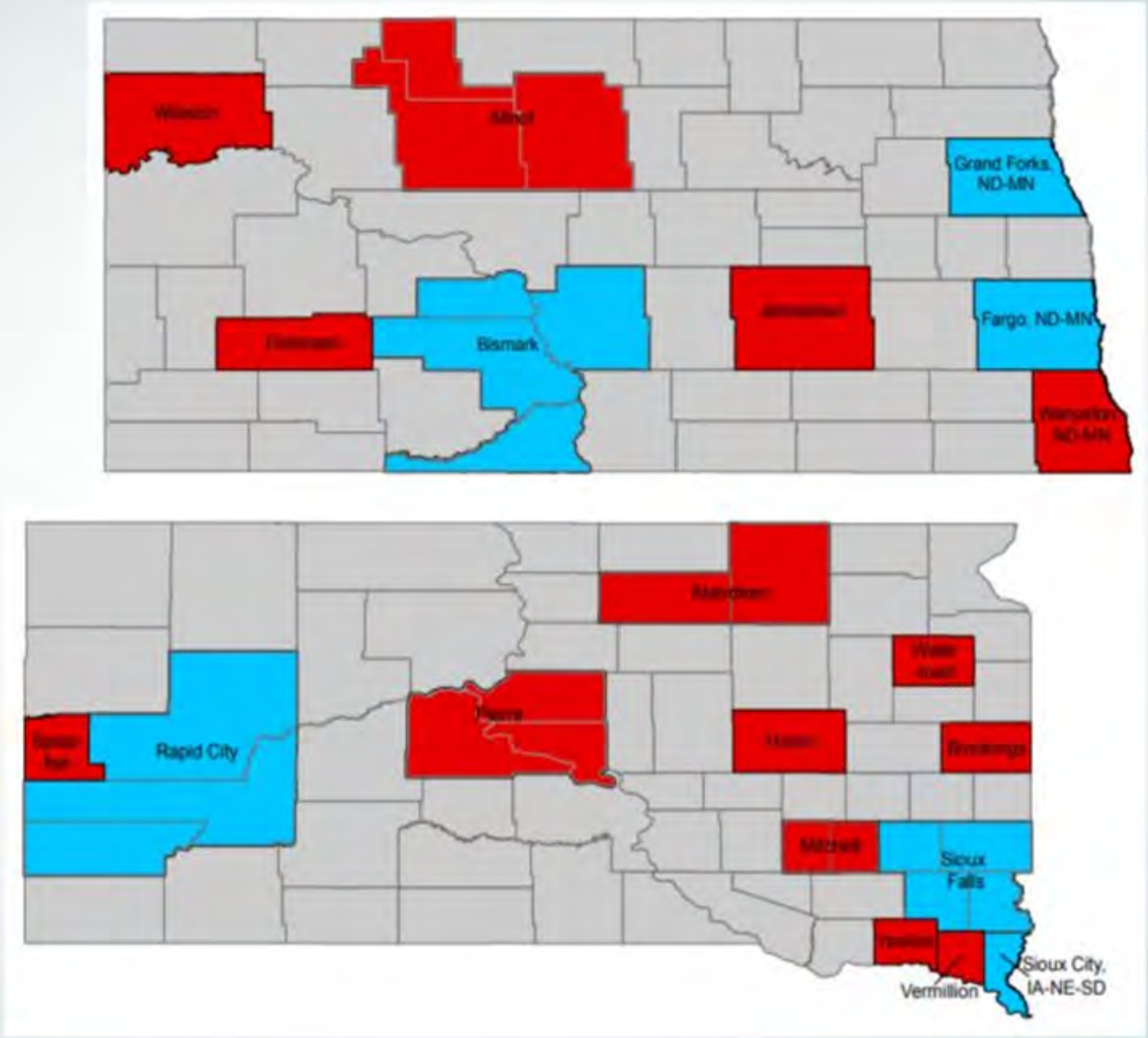

HRSA
Health Resources & Services Administration
Health Professional Shortage Areas (HPSA) - Primary Care
Data as of 11/28/2018
Alaska
Hawaii
Puerto Rico
American Samoa
Marshall Islands
Federated States of Micronesia
Northern Mariana Islands
U.S. Minor Islands
Guam
Republic of Palau
U.S. Virgin Islands
Legend
HPSA Score
1 - 13
14 - 17
18 and above
Non-HPSA
0 150 300 Miles
Scale bar only applies to contiguous U.S.
Prepared by:
Division of Data and Information Services
Office of Information Technology
Health Resources and Services Administration
Data Source
Please refer to data source page on Map Gallery
HPSA Scores are developed for use by the National Health Service Corps to determine providers for the assignment of clinicians.
Scores range from 1 to 25 for primary care and mental health, 1 to 26 for dental health. The higher the score, the greater the priority.

HRSA
Health Resources & Services Administration

Medically Underserved Areas/Populations



MSA and mini-MSA



https://data.hrsa.gov/tools/medicare/telehealth

Medicare Telehealth Payment Eligibility Analyzer

Check if an address is eligible for Medicare telehealth originating site payment.

Input address: 801 Broadway Fargo, Fargo, ND
Geocoded address: 801 Broadway N, Fargo, North Dakota, 58102

✖ No

No, the geocoded address is not eligible for Medicare telehealth payment.

The Medicare Telehealth Payment Eligibility Analyzer uses a combination of data from the Rural Health Grants Eligibility Analyzer and Medicare Physician Bonus Payment Eligibility Analyzer tools to determine eligibility for Medicare telehealth payment. For additional details on these analyses, please see the results associated with the links below.

Reimbursement Hope

- The final rule for Medicare's 2019 Physician Fee Schedule (released 11-1 -18) signaled potential regulatory landscape shift to provide adequate reimbursement for telehealth svcs.
- The 2019 final rule requires MCAR to reimburse for brief virtual check-ins by phone or video for established patients.
- The final rule also includes coverage of evaluation of recorded image and/or video submitted by patients (ie, store and forward) as well as coverage for inter-professional consultation service and chronic care remote physiologic monitoring (eg, blood pressure).
- CMS is currently testing several models with telehealth waivers. These waivers include originating site restrictions as well as interactive telecommunication restrictions.

- When Medicare decides to reimburse for a service, private payers typically follow.
- Medicare's decision to reimburse for telehealth services may open doors on a state-to-state level to broaden telehealth coverage.

Model	Originating Site	Geographic Setting	Payment	Citations to Waived Statutory Requirements	Citations to Waived Regulatory Requirements
Next Generation ACO(NGACO) Model: Waivers of Originating Site Requirements	X	X	X	1834(m)(2)(B) 1834(m)(4)(B) 1834(m)(4)(C)	42 CFR 414.65(b) 42 CFR 410.78(b)(3)-(4)
NGACO Model: Waiver of Interactive Telecommunications System Requirements	X	X	X	1834(m)(1) 1834(m)(4)(C)(i)	42 CFR 410.78(b) 42 CFR 410.78(b)(4)
Bundled Payments for Care Improvement (BPCI) Initiative		X		1834(m)(4)(C)(i)(I)-(III)	n/a
Comprehensive Care for Joint Replacement Model (CJR)	X	X	X	1834(m)(4)(C)(i)(I)-(III) 1834(m)(4)(C)(ii)(I)-(VIII) 1834(m)(2)(A)-(B)	n/a

Reimbursement Hope

Telehealth Waiver Provisions Available to Select Models and Demonstrations

Delivery of virtual care in urban and suburban locations

Telehealth available to patients in the home

	Next Gen ACOs	Bundled Pmts	Comp Joint Care
Models/MSAs	44	89	34
Claims	1422	7	0