

FRONTIER COMMUNITY HEALTH INTEGRATION PROJECT

WHITE PAPER #2: CASE STUDY ON FRONTIER TELEHEALTH

I. CURRENT LEGISLATION AND REGULATIONS

Telehealth technology has the potential to improve access to a broader range of health care services in rural and frontier communities. Telehealth is a generic description for a range of technical applications. This can include standard teleconsultations in which a specialist, for example a dermatologist in a larger facility, usually described as a hub site, sees a patient in a distant location, usually described as a spoke site. Medicare and other payers have long paid for teleradiology services since this service does not require any level of direct interaction between the patient and the radiologist.

Telehealth, though, is broader than direct interactive video teleconsultations or teleradiology. It can also include applications ranging from tele-home monitoring, Electronic-ICU services (E-ICU), medication order review by a pharmacist, and store-and-forward applications in which a provider at a spoke site sends clinical information about a patient to a distant specialist who then reviews it later and provides consultation services. Telehealth equipment is also often used for distance learning for clinicians. New telehealth applications are emerging quickly including the new field of M-Health or Mobile-Health which uses hand-held devices such as smart phones or other devices with health-related applications on them.

While telehealth has great potential it still faces some distinct challenges. Not all public or private payers will reimburse for these services. For example, Medicare pays for a limited range of services as long as there is direct interaction between the patient and provider. It does not pay for store-and-forward telehealth services¹ nor does it cover home monitoring or E-ICU services. While Medicare began paying for telehealth services in 1998, the volume of services has remained fairly low and mental health applications are one of the higher use areas.²

State Medicaid programs can cover telehealth but not all states will cover these services and it is not known how many States are currently paying for any of these services.

The Frontier Community Health Integration Demonstration is authorized under Section 330A of the Public Health Service Act and is also guided by authorization of Section 123 of P.L. 110-275, the Medicare Improvements to Patients and Provider's Act of 2008 (MIPPA). The purpose of the Frontier Community Health Integration Demonstration is to develop and test new models for the delivery of health care services in frontier areas through improving access to, and better integration of, the delivery of health care to Medicare beneficiaries. The authorizing legislation defines a frontier Critical Access Hospital (CAH) as a CAH located in a county with a population of 6 people or fewer per square mile and a daily acute-care census of 5 patients or less. The legislation also identifies four "frontier-eligible" states: Alaska, Montana, North Dakota and Wyoming.

In response to the MIPPA legislation and subsequent funding by Congress, the Health Resources and Service Administration/Office of Rural Health Policy (HRSA/ORHP) awarded an 18-month cooperative agreement to the Montana Health Research and Education Foundation (MHREF) to inform the development of a new frontier health care service delivery model. Actual design and implementation of the demonstration are the responsibility of the Center for Medicare and Medicaid Services (CMS).

To better identify and communicate the challenges and solutions for health care delivery in frontier communities, a Framework Document and subsequent topical white papers are being developed by MHREF and shared with the CMS. This is White paper #2 in this series.

¹The Centers for Medicare and Medicaid Services currently permits asynchronous "store and forward" technology in Federal telehealth demonstration programs conducted in Alaska or Hawaii.

²The Medicare Payment Advisory Committee, June 2012 Report to the Congress: Medicare and the Health Care Delivery System. Pp. 142-143.

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Private payers have a similar patchwork in place. There are also ongoing concerns about licensure for those situations in which a spoke provider is in one state and the patient is in another state. Some states have developed reciprocity agreements or state compacts but many others require a telehealth provider to be licensed separately in the state in which the patient is located. There are additional barriers related to uniform standards and broadband capacity.

Despite some of the challenges in providing telehealth services, the technology could be a critical part of the proposed Frontier Health System (FHS) model.³ It could improve access to services for patients served by the demonstration participants and also provide important clinical backup services for the providers practicing in these underserved communities. And while there are challenges in leveraging the technology in a traditional fee-for-service environment given the variability in reimbursement, this demonstration could be a vehicle to aligning the use of the technology with new initiatives focusing on improving health care outcomes and reducing costs.

CMS is currently encouraging Accountable Care Organization (ACO) models similar to the proposed FHS model. Like the proposed Frontier Health System model, a key goal for Accountable Care Organizations is to “coordinate care, through the use of telehealth, remote patient monitoring, and other such enabling technologies.”⁴

However, several parts of section 1834(m) of the Social Security Act contain barriers for the proposed Frontier Health System model to utilize remote patient monitoring and telehealth to better coordinate patient care, reduce unnecessary admissions and readmissions and reduce cost. Specifically,

- Section 1834(m)(4)(C)(ii) does not permit telehealth services originating from a Medicare beneficiary’s home or a hospice;
- Section 1834(m)(4)(E) does not permit telehealth services provided by PT, OT or speech therapists, and;
- Section 1834(m)(1) does not allow the use of store-and-forward telehealth services (such as transmission of medical images) except for Medicare beneficiaries in Alaska and Hawaii
- The Secretary of Health & Human Services has broad authority to waive Medicare regulations, including the telehealth restrictions contained in Section 1834(m) under Section 1899(f) of the Social Security Act. Waiving the telehealth restrictions in Section 1834(m) for the Frontier demonstration project would not only remove the restriction in providing the service but also provide reimbursement for the service.

Also, last year, CMS created a new process to credential and privilege telehealth providers. The final rule adopted by CMS May 5, 2011, changes Governing Body and Medical Staff credentialing and privileging Conditions of Participation (COP) §482.12 and §482.22. The change in the final rule allows the governing body at an “originating site” [where the patient is] “to grant privileges based on its medical staff recommendations, which would rely on information provided by the distant-site hospital [where the specialty medical provider is].”⁵ Despite the change, this methodology still poses a problem for frontier healthcare facilities. In order for a frontier CAH to rely upon, and accept the credentialing and privileging decisions of the distant site, several new administrative requirements are required to comply with the revised COPs, including:

³ See *Framework For A New Frontier Health System Model*, October 2011, Montana Health Research & Education Foundation, for a description of the proposed FHS model.

⁴ Section 3021 of the Patient Protection and Affordable Care Act, Public Law 111-148

⁵ Craig Billings, “Telehealth Credentialing and Privileging Final Rule from Centers for Medicare and Medicaid Services,” Center for Telehealth & e-Health Law, May 2011. www.ctel.org Accessed January 5, 2012.

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- a written agreement between the originating and distant telehealth sites must be completed and the written agreement must contain;
- a statement that the distant hospital participates in Medicare;
- a statement that the medical practitioner is privileged at the distant site;
- a list of current privileges held by the medical practitioner at the distant site;
- an internal review of the distant site medical practitioner's performance, and;
- the information sent to the originating site by the distant site regarding the medical practitioner must include all adverse events and complaints.

Although the revised credentialing and privileging COPs remove the direct administrative burden for a remote site to gather, verify and process credentialing and privileging documentation for telemedicine practitioners, the revised COPs require some additional administrative burden (i.e. written agreements, lists of privileges, documentation of practitioner performance and sending adverse event and complaint documentation to remote sites) in order for the remote site Governing Body and Medical Staff to rely on distant site credentialing and privileging. There may be ways to ensure appropriate oversight and review of telehealth providers without increasing regulatory burden on Frontier FCHIP providers with limited administrative resources.

II. EXPLANATION OF THE PROBLEM

For Frontier FCHIP providers, there are specific challenges that limit the use of telehealth services in these facilities that if removed, could allow for better care coordination of Medicare beneficiaries. F-CHIP facilities cannot be reimbursed for services provided via telehealth such as remote patient monitoring, video conferencing, medication management or certified diabetes educator patient education under current regulations in order to better coordinate care for Medicare beneficiaries with multiple chronic conditions, reduce unnecessary admissions and readmissions and lower cost. A recent study in the Health Affairs journal of an integrated telehealth and care management program, revealed significant savings among patients who used the Health Buddy telehealth program, which was associated with spending reductions of approximately 7.7-13.3 percent (\$312-\$542) per person per quarter.”⁶

Reimbursement to a frontier “originating site” (where the patient is) for approved telehealth medical practitioner-patient visits is insufficient. The originating site in a frontier healthcare facility receives only a \$24.44 telehealth site facility fee for hosting a patient visit with a specialty medical provider usually hundreds of miles away. This payment is inadequate to compensate for nursing and care coordination time in setting up the patient visit with the distant site and telehealth practitioner. In addition, the FCHIP participants would benefit from store-and-forward Medicare reimbursement (as is currently available in Alaska and Hawaii).

Broadband availability is another obstacle for FCHIP facilities. One F-CHIP facility CEO said, “*Our community only has slow dial-up internet access available and that’s a problem implementing remote monitoring for patients with chronic conditions.*”⁷ Another F-CHIP CEO commented, “*It was taking 30 minutes to upload CT scans to our*

⁶ “Integrated Telehealth and Care Management Program For Medicare Beneficiaries With Chronic Disease Linked To Savings,” *Health Affairs*, 30, no. 9 (2011):1689-1697. <http://content.healthaffairs.org/content/30/9/1689.html> (Accessed April 2012)

⁷ 26% of the 1,300 CAHs and 29% of Rural Health Clinics in the U.S. do not have access to high-speed broadband, defined as a connection speed of 4 Mbps or higher. In order to meet the broadband demands of EHR systems, teleradiology, telepharmacy, telemedicine physician-patient visits and other telehealth applications a hospital needs 100 Mbps broadband

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tertiary center ER after we installed our clinic and hospital EHR systems. Our T1 line couldn't handle it. We had to install fiber-optic cable and a direct connection with more broadband.”⁸ Improving access to affordable broadband services is beyond the scope of the demonstration authorized under Section 123, but is a critical issue. The Federal Communications Commission, in its National Broadband Plan, proposed reforming the current Rural Health Program that operates under the broader Universal Service program to expand affordable broadband in isolated frontier communities. While initial rulemaking on these proposals began in 2011, there has been no formal action on this issue since an initial draft rule was put out for comment.⁹

III. POLICY OPTIONS

All eight of the current Montana F-CHIP facilities have interactive audio-video capability.¹⁰ Six of the eight F-CHIP facilities participate in the Billings Clinic Eastern Montana Telemedicine Network (EMTN) in eastern Montana. EMTN utilization data for the six F-CHIP facilities shows 952 audio-video conferences for a one-year period with 55 classified as medical, 171 mental health, 235 administrative, 473 educational and 18 “community development.”¹¹ An estimated 1,269 telehealth audio-video conferences occur annually at the eight Montana F-CHIP facilities with approximately 301 classified as medical or mental health and the remaining 968 as administrative, educational and community development. None of the eight Montana F-CHIP facilities use telehealth for home monitoring or case management.

We recommend the Secretary of Health & Human Services use the waiver authority in Section 123 of MIPPA, to waive the telehealth restrictions contained in Section 1834(m) for Frontier Health System demonstration Medicare beneficiaries only. This would limit the expansion of telehealth services and reimbursement to the Medicare beneficiaries located in 71 potential Frontier Health System service areas in Alaska, Montana, North Dakota and Wyoming.¹² We recommend the Medicare program include in the demonstration under Section 123 the following changes:

- Allow Medicare reimbursement for both a primary care visit in a clinic and then a telemedicine specialist visit in a remote city on the same day.
- Allow Medicare reimbursement for asynchronous “store and forward” teleradiology consultations for frontier healthcare facilities in Montana, North Dakota and Wyoming, as currently authorized by the Medicare program in Alaska and Hawaii
- Change (or waive) the Medicare originating site definition to include a patient’s home for frontier healthcare facilities in Montana, North Dakota and Wyoming. This would permit Medicare reimbursement for patient self-monitoring or testing services via telemedicine in a beneficiary’s home where a medical

connection speed. See pp. 210-213, Chapter 10, *Connecting America: The National Broadband Plan*, Federal Communications Commission, 2010.

⁸ See p. 213, *Connecting America: The National Broadband Plan*, *op. cit.* File size for a CT scan is 3,000 megabytes.

⁹ *Connecting America: The National Broadband Plan*, The Federal Communications Commission. 2010. Pp. 197-222.

¹⁰ See *Framework For A New Frontier Health System Model*, October 2011, Montana Health Research & Education Foundation.

¹¹ *EMTN Conferences By Location & Type* report for the Big Timber, Forsyth, Terry, Circle, Culbertson and Ekalaka frontier CAHs from July 2010 to June 2011; Billings Clinic Eastern Montana Telemedicine Network; accessed December 2011.

¹² See *Framework For A New Frontier Health System Model*, October 2011, Montana Health Research & Education Foundation, for the number of frontier-eligible entities in Alaska, Montana, North Dakota and Wyoming.

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practitioner “is only indirectly involved,” which is currently done by the Alaska Medicaid program (but not by Medicare).

- Allow Medicare reimbursement of physical, occupational and speech therapy provided via telemedicine, which is currently done by the Alaska Medicaid program (but not by Medicare).
- Allow Medicare reimbursement of diabetes education provided by a Certified Diabetes Educator provided via telemedicine.
- Increase the originating site facility fee to reimburse care coordination and nursing time as well as the technical expense of providing a specialty medical practitioner visit to a frontier patient to more fully cover the staffing and overhead costs associated with providing this service on the receiving end.
- Modify the credentialing and privileging regulations to allow a simple letter from a distant site to a remote site stating a) the distant hospital participates in Medicare b) the telehealth practitioner is privileged at the distant site and c) a list of current privileges held by the medical practitioner at the distant site. The remote site Medical Staff and Governing Body would rely on this information from the distant site to credential and privilege telehealth practitioners.

These actions would permit use of remote home monitoring and care coordination of frontier patients with multiple chronic conditions, which would reduce admissions and readmissions to ER, inpatient and long term care settings and also lower overall cost. Use of remote home monitoring would improve care by providing ongoing data concerning the health of a patient with chronic conditions and the level of decline or improvement instead of a single snap shot of a patient’s current condition while in a medical practitioner’s office. These actions would also allow more access by isolated frontier Medicare beneficiaries to telehealth services and reimbursement provided by Rural Health Clinic (RHC) Visiting Nurse Service (VNS) PT, OT and speech therapists as outlined in the Frontier Health System framework document.¹³

IV. DISCUSSION

A study produced by the University of Texas Medical Branch states that the U.S. healthcare system could save an estimated \$4.28 billion just from reduced transfer of patients from remote locations to tertiary hospitals and physician offices if telehealth infrastructure were more widely implemented in the country.¹⁴ The projections focused only on a subset of telehealth, primarily those in which there are healthcare providers at both ends of the tele-consultation, and did not consider remote monitoring or teleradiology applications.¹⁵ Identified cost savings included a 38% reduction in transfers to a tertiary hospital, a 14% cut in ER transfers, a 68% reduction in physician office visits and a projected \$3.61 billion nationally in savings from reductions in unnecessary or redundant diagnostic tests from widespread utilization of telehealth.¹⁶

¹³ See *Framework For A New Frontier Health System Model*, October 2011, Montana Health Research & Education Foundation.

¹⁴ Alexander H. Vo, PhD; “The Telehealth Promise: Better Health Care and Cost Savings for the 21st Century;” University of Texas Medical Branch; Galveston, Texas; May 2008. <http://telehealth.utmb.edu/presentations/The%20Telehealth%20Promise-Better%20Health%20Care%20and%20Cost%20Savings%20for%20the%2021st%20Century.pdf> Accessed January 10, 2012.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

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A study by the Eastern Montana Telemedicine Network estimates \$917,947 in cost savings from the 952 annual audio-video conferences at the six Montana F-CHIP facilities served by EMTN.¹⁷ This translates to an estimated \$1,223,929 in annual cost savings for the 1,269 annual telehealth conferences at the eight Montana F-CHIP facilities and an estimated \$10,862,361 in annual cost savings for the 71 frontier-eligible facilities in Alaska, North Dakota, Wyoming and Montana.¹⁸ These estimated cost savings are from saved “windshield” or travel time by patients and telehealth practitioners.

Both of these studies are estimates provided by telehealth providers and did not appear in peer-reviewed journals. Additional study is needed to verify the estimates. Still, both studies show the potential for cost savings that CMS should consider in preparing the budget estimates for this demonstration.

In addition to travel time savings, there is potential for cost savings in the use of telehealth to coordinate care for patients with chronic conditions and reduce unnecessary admissions and readmissions for beneficiaries. As reported in the Frontier Referral and Admissions/Readmissions Patterns white paper, ten percent of Medicare beneficiaries account for 58% of spending.¹⁹ One study has identified a 7.7% to 13.3% range of spending reductions for Medicare beneficiaries with chronic conditions who received care management via telehealth.²⁰ Since the total Medicare “spend” for beneficiaries residing in the service area zip codes of the eight Montana F-CHIP facilities is \$22,657,159 (approximately \$2.8 million per Montana F-CHIP facility), an opportunity exists to save money by reducing unnecessary admissions and readmissions.²¹ Assuming the ten percent of F-CHIP Medicare beneficiaries who account for 58% of Medicare spending have multiple chronic conditions, using telemedicine to provide care management to frontier patients has the potential to save between \$123,000 and \$213,000 per frontier healthcare facility.²² Potential telemedicine savings for the eight Montana F-CHIP facilities are in a range of \$984,000 to \$1.7 million and \$8.7 million to \$15.1 million for the 71 frontier-eligible CAHs in Alaska, Montana, North Dakota and Wyoming.²³

Upfront capital will be needed by Frontier Health System organizations to cover the expense of purchasing remote patient monitoring devices for frontier Medicare beneficiaries. We would recommend all of the upfront expense (no depreciation) to purchase remote patient monitoring devices be allowed as cost based reimbursement for Frontier Health System organizations. As remote patient monitoring for patients with multiple chronic conditions is implemented and costs are reduced, the amount available for cost sharing with CMS in future years could be reduced to offset this upfront expense of purchasing remote monitoring equipment.

V. CONCLUSION

¹⁷ EMTN [Estimated] Cost Savings report for the Big Timber, Forsyth, Terry, Circle, Culbertson and Ekalaka CAHs from July 2010 to June 2011; Billings Clinic Eastern Montana Telemedicine Network; accessed December 2011.

¹⁸ \$1,223,929 in estimated annual savings for 8 Montana F-CHIP facilities equals \$152,991 in estimated annual savings per facility. There are 71 frontier-eligible CAHs (see p. 3 of framework document) in the four frontier-eligible states times \$152,991 equals \$10,862,361 estimated annual savings for the 71 frontier CAHs.

¹⁹ See *Frontier Referral and Admission/Readmission Patterns*, Montana Health Research & Education Foundation.

²⁰ “Integrated Telehealth and Care Management Program For Medicare Beneficiaries With Chronic Disease Linked To Savings,” *Health Affairs*, 30, no. 9 (2011):1689-1697. <http://content.healthaffairs.org/content/30/9/1689.html> (Accessed April 2012)

²¹ See *Frontier Referral and Admission/Readmission Patterns*, Montana Health Research & Education Foundation.

²² \$2.8 million Medicare spend per facility times 58% = \$1.6 million times .077 and .133 = potential savings between \$123,000 and \$213,000 per facility.

²³ \$123,000 to \$213,000 potential savings per facility times 8 Montana F-CHIP facilities results in potential savings of \$984,000 to \$1.7 million for the Montana F-CHIP facilities and \$123,000 and \$213,000 times 71 frontier-eligible CAHs in the four frontier-eligible states results in potential savings of \$8.7 million to \$15.1 million.

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Telehealth promises improved outcomes and enhanced life quality for patients; it can expand access to quality healthcare despite geographic barriers and reduce the cost of healthcare by reducing unnecessary tests, in person visits to medical providers and patient transfers.²⁴ Expanded telehealth services could be used as a tool to provide better coordination of services to Medicare beneficiaries, especially those with multiple chronic conditions, to prevent admission and readmission of beneficiaries in all care settings (primary, secondary and tertiary). Significant shared savings opportunities may be available for CMS and Frontier Health System organizations, if telehealth use can be used to coordinate care. However, use of telehealth is restricted by section 1834(m) of the Social Security Act but the Secretary of Health & Human Services has the authority under section 123 to waive any part of 1834(m) to allow delivery of frontier telehealth services and improved reimbursement. We would recommend the following:

- The Secretary allow telehealth service delivery and reimbursement in the home for frontier Medicare beneficiaries only for the CMS frontier demonstration project.
- The Secretary allow frontier telehealth service delivery and reimbursement to include RHC/VNS physical, occupational and speech therapy services as well as store and forward services such as transmission of medical images
- Allow Medicare reimbursement of diabetes education provided by a Certified Diabetes Educator provided via telemedicine.
- An increase in the telehealth “originating site” facility fee to provide fair and equitable reimbursement for the nursing and care coordination expense as well as technical cost of providing a specialty medical practitioner telehealth visit for frontier patients.
- Medicare reimbursement to CAHs in all of the four frontier-eligible states (not just Alaska) for asynchronous store and forward teleradiology and to both the originating distant telemedicine sites for specialized medical practitioner encounters, including therapists.
- Allow frontier telehealth privileging and credentialing to consist of a letter from the “distant site” for each telehealth practitioner stating the practitioner is privileged at the “distant site” with a copy of the practitioner’s current license and a list of privileges (at the distant facility) attached.

²⁴ Alexander H. Vo, PhD; “The Telehealth Promise: Better Health Care and Cost Savings for the 21st Century;” University of Texas Medical Branch; Galveston, Texas; May 2008. <http://telehealth.utmb.edu/presentations/The%20Telehealth%20Promise-Better%20Health%20Care%20and%20Cost%20Savings%20for%20the%2021st%20Century.pdf> Accessed January 10, 2012.

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APPENDIX A. TELEMEDICINE PHYSICIAN LICENSURE REQUIREMENTS²⁵ THE FOUR FRONTIER-ELIGIBLE STATES OF ALASKA, MONTANA, NORTH DAKOTA AND WYOMING

State	Telemedicine Licensure Requirement
Alaska	Requires full and unrestricted license
Montana	Provides a temporary specialized telemedicine license
North Dakota	Need full medical license. However, if licensed in another state, physician can practice telemedicine for 4 reasons (member of organ harvest team, member of on-board air ambulance team, one time telemedicine consult for not more than 24 hours or provide pre-approved (by the ND Medical Board) consult to a “charitable organization.”
Wyoming	Telemedicine physician needs temporary, restricted, emeritus, volunteer or full medical license. Exception to the law if physician is licensed in another state and receives no compensation.

²⁵ From “Telemedicine Overview By State,” Federation of State Medical Boards. Last updated 7/28/2011. http://www.fsmb.org/pdf/GRPOL_Telemedicine_Licensure.pdf Accessed May 14, 2012.