Telehealth and Quality Measurement

Ensuring the Future of Telehealth

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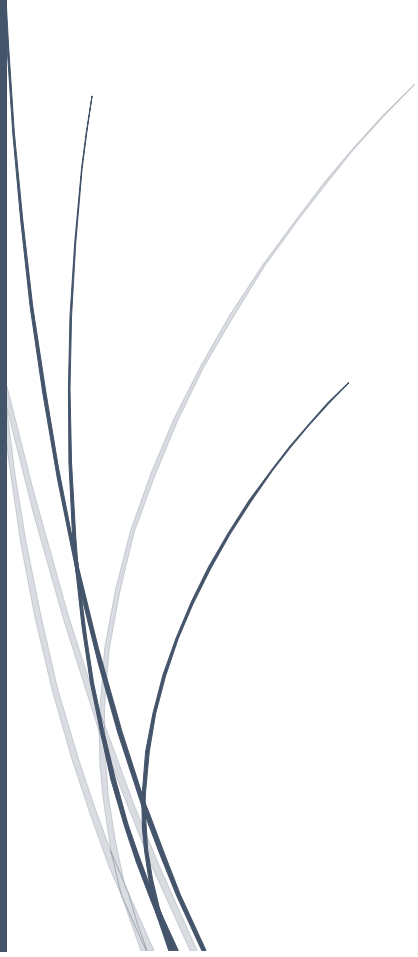

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Overview

Over the past decade, there has been a systemwide shift toward redesigning health care delivery to be more patient centered, outcome-focused, and cost-effective. The use of telehealth is an approach that has been increasingly used as a means of providing patient-centered care through telecommunication via different types of modalities and facilitating care that can be delivered to patients when and where they choose to receive it. It has been used in a variety of primary care and specialty settings as means of connecting patients, providers, and caregivers, through the provision of remote specialist consults, services to rural communities, and the monitoring of patients at home. The benefits of telehealth include the increased timeliness of diagnosis and treatment, improved access to care because of remote monitoring, and increased patient convenience because of reduced travel commutes. Although telehealth has been shown in multiple studies to positively impact patient experience, there has been minimal assessment of the impact of telehealth on more traditional clinical quality outcomes.

The Intersection of Telehealth and Quality Measurement

The need to measure the impact on telehealth on quality outcomes of care has never been greater, as the COVID-19 pandemic led to half (43.5%) of Medicare primary care visits being provided through telehealth compared with less than one percent (0.1%) in February before the public health emergency (PHE).[i] The Centers for Medicare and Medicaid Services (CMS) used waiver authority under section 1135 of the Social Security Act to lift geographic and site of service restrictions to allow telehealth services to be delivered wherever a beneficiary is located, including their home or temporary health care sites. CMS then used emergency rulemaking to add 135 services to the Medicare telehealth services list, and further waiver authority to expand the types of practitioners who can provide telehealth services. Internal CMS analysis has found that before the PHE, only 14,000 beneficiaries received a telehealth service in a week but during the PHE period from mid-March through early-July, over 10.1 million beneficiaries have received a telehealth service.[ii]

Further, a recent study conducted by FAIR Health that assessed the utilization of telehealth during the PHE found that mental health was the top telehealth diagnosis since March 2020. This was an increase of all telehealth diagnoses from July to August, with mental health treatment rising from 45.39% to 48.93%. Additionally, the report noted that telehealth has been used for a wider variety of conditions throughout the PHE, such as for hypertension, diabetes mellitus, developmental disorders, and upper respiratory infections.[iii] For over two decades, CMS has evaluated clinical outcomes of care across both mental health, chronic disease, and respiratory infections, but the reporting of quality measure comes directly from an in-person encounter from a variety of care settings and not via telehealth.

The use of telehealth as a delivery mechanism for care is not included as part of existing quality measures, and the elements identified by the NQF Telehealth Committee are not added into any measure to ascertain the impact that telehealth has on quality outcomes by assessing its unique impacts such as increased access to care, timeliness of care, and overall effectiveness.

Creating a Measure Framework for Telehealth

In 2016, the National Quality Forum, in response to a request from the US Department of Health and Human Services (CMS) convened a multi-stakeholder Telehealth Committee that was tasked with identifying a list of existing measures to assess care delivered by telehealth and developing a conceptual foundation to develop new measures for the assessment of the quality of telehealth care. The NQF project was led by Jason Goldwater, currently a Senior Research Scientist at Index Analytics, and was titled "Creating a Framework to Support Measure Development for Telehealth."[iv]

The report summarized the recommendations of the Committee into a four-domain model that adequately identified and organized the main components of telehealth requiring measurement. As shown in Figure 1, these domains were access to care, financial impact or cost, experience, and effectiveness.

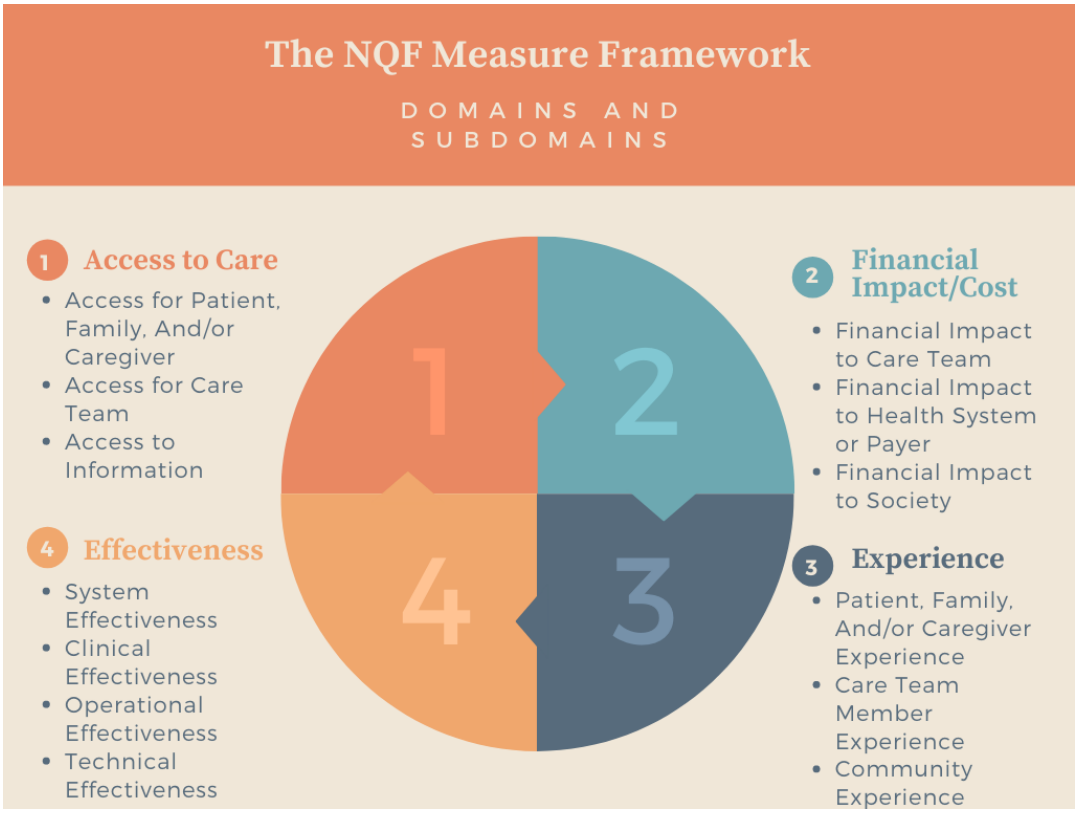

Figure 1: The NQF Telehealth Measure Framework

Quality of care was included within each of these domains as quality is intertwined within each of them (e.g., untimely care represents low-quality care, ineffective care represents low-quality care). The model was framed around the concept that telehealth modalities enable the delivery of health care to those who may not otherwise be able to receive care in a timely manner. This is critical, as it underscore a fundamental concept in measuring the quality of telehealth care – **that telehealth is not a new type of health care, but rather a new method for delivering already existing types of healthcare.**

Incorporating Telehealth Within Existing Quality Measures

As shown in Exhibit 1, a small sample of quality measures within the NQF Quality Positioning System (QPS), show outcome-based measures around clinical conditions such as diabetes, mental health, and hypertension, that have increasingly been diagnosed and treated using telehealth.

Exhibit 1: Current Quality Measures that Can Incorporate Telehealth

Name of Measure	Description	Care Setting
Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	The percentage of patients 18-75 years of age with a serious mental illness and diabetes (type 1 and type 2) whose most recent blood pressure (BP) reading during the measurement year is <140/90 mm Hg	Outpatient Services
Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	The percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level taken during the measurement year is <140/90 mm Hg.	Outpatient Services
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)	The percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent HbA1c level is <8.0% during the measurement year.	Outpatient Services

The management and measurement of these conditions occurs within a specific setting (outpatient) during an in-person encounter. There is a growing body of evidence to support the use of telehealth in monitoring HbA1c levels in people living with type1 or 2 diabetes. Evidence from four systematic reviews found that telehealth interventions produced a small but significant improvement in HbA1c levels compared with usual care. The greatest effect was seen in telephone-delivered interventions, followed by Internet blood glucose monitoring system interventions and lastly interventions involving automatic transmission of SMBG using a mobile phone or a telehealth unit.[v]

Recent data suggest that the use of remote monitoring to manage blood pressure as part of chronic disease care is as effective, if not more so, than an in-person visit.

Additionally, in September 2018, the American Heart Association released findings that showed home monitoring of blood pressure readings is more effective than in-office monitoring. Through a study it conducted in tandem with Baylor Scott and White out of Texas, the study looked at data showing that 86% of patients using telehealth remote monitoring devices to chart blood pressure were able to keep their disease under control. The health system then provided free remote monitoring devices to 2,550 adults with chronic uncontrolled high blood pressure. The study found:

- By the third office visit, almost 67% of the patients in the study had better outcomes; physicians had more accurate readings and were able to bring their blood pressure back under control.

- Systolic blood pressures had decreased on average by 16.9 mmHg and diastolic fell by 6.5 mmHg on average at the end of the intervention.
- Six months after the study, almost 80% of participants achieved blood pressure control.[vi]

Developing Quality Measures for Telehealth

Given the dramatic rise in telehealth services during the PHE, it becomes possible to factor in telehealth as both a care setting and as a means of care delivery that serve as an adjunct to existing quality measures. Including telehealth as a mechanism of care delivery that is evaluated for a quality outcome at the point of the encounter has two advantages:

1. It recognizes telehealth as a means of providing care that is equivalent to that of in-person care as the quality measure itself **does not have to be altered in any way**
2. It provides a method to develop measure concepts for telehealth around groups of quality measures that allow for its independent assessment in accordance with the NQF Telehealth Committee.

A case study around hypertension and heart failure elucidates this point, as shown in Figure 2:

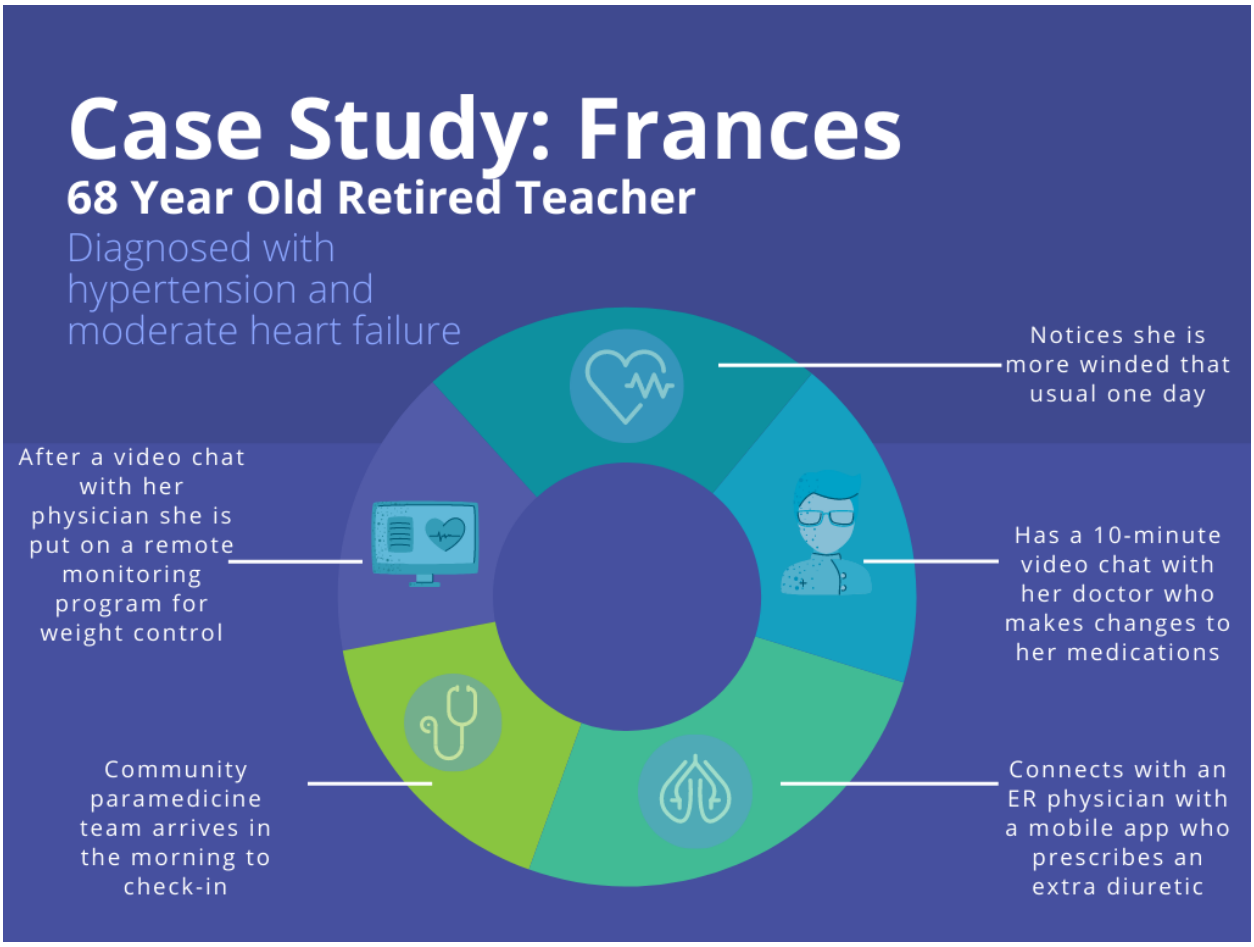

Figure 2: Case Study for Telehealth Quality Measurement

In Exhibit 2 a small sample of potential quality measures that could be used to evaluate this encounter are shown. Within each of these measures, the incorporation of a virtual visits as a care setting, and the use of various telehealth modalities as a means of delivering care can be seamlessly included in these measures without altering them in any fashion.

Exhibit 2: Potential Measures that are Applicable to a Telehealth Encounter

Measure Title	Description	Care Setting
Hypertension: Blood Pressure Control	Percentage of patients aged 18 years and older with a diagnosis of hypertension with a blood pressure <140/90 mm Hg OR patients with a blood pressure >= 140/90 mm Hg and prescribed 2 or more anti-hypertensive medications during the most recent office visit within a 12-month period	Ambulatory Care: Clinician Office/Clinic, Ambulatory Care: Clinician Office/Clinic, Ambulatory Care: Urgent Care - Ambulatory, Assisted Living, Home Care, Nursing Home / SNF, Outpatient.
Heart Failure: Patient Education	Percentage of patients who were provided with patient education on disease management and health behavior changes during one or more visit(s).	Ambulatory Care: Clinician Office/Clinic
Heart Failure - Use of Beta Blocker Therapy	The percentage of patients 18 years and older diagnosed with heart failure who are taking a beta blocker	Home Care, Inpatient/Hospital, Outpatient Services

In addition to the already existing quality measures, we can also use the case study to develop the following applicable telehealth measure concepts that can be derived from the primary domains and subdomains recommended by the NQF report, as shown in Exhibit 3.

Exhibit 3: Proposed Concepts for Telehealth Quality Measures

Applicable Framework Areas	Applicable Areas
Primary Framework Domains	Experience Effectiveness Access Financial Impact/Cost
Applicable Framework Subdomains	Patient, family and/or caregiver experience System effectiveness Clinical effectiveness Technical effectiveness Access for patients, families, and/or caregivers Financial impact to health plans or payers
Potential Measure Concepts	Patient demonstrated increased understanding of care plan

Applicable Framework Areas	Applicable Areas
	Technologies were in a satisfying condition for providers to do their jobs The instructions for care were clear to the patient Able to provide care without admission to the ER

The incorporation of telehealth into existing quality measures and the development of new measures to evaluate various telehealth modalities offers a unique opportunity to examine telehealth as part of the quality framework that CMS maintains and administers, as well as initiating the first set of telehealth measures that objectively assess issues such as access to care, timeliness of care, and patient education.

The use of the data dictionary provides a standardized approach to testing the validity, reliability, and feasibility of these measures and would facilitate comparisons of outcomes across program to evaluate the effectiveness and utility of care delivered via telehealth versus in-person care.

The development of these measures is possible through the "**Center for Telehealth and eHealth Law (CTeL) Data Dictionary"** that identifies commonalities across different terminologies and provides a roadmap to articulate a common format with similar classifications will enable the type of data analysis necessary for measure development and implementation. This document, a combined effort by Index Analytics, LLC, the American Institutes for Research (AIR), and CTeL, serves as a centralized, specific information data source about telehealth programs that can be used for all analytical activities. It contains information on the data such as names, meanings, values, types, formats, sources, and their relationship between the elements used in specific programs and the terminology and format needed for more robust national analysis.

Benefits of Including Telehealth into Quality Measurement for CMS

Evaluating quality measurement both using telehealth to deliver care and the clinical processes and outcomes assessed within specific clinical areas, helps to further the mission of both CMS and the Center for Clinical Standards and Quality (CCSQ) as illustrated in Exhibit 4:

Exhibit 4: Using Telehealth Quality Measures to Benefit CMS Programs and Activities

Component	Description
Quality Improvement activities within Merit-based Incentive Payment System (MIPS)	Aligns with improvement activities (IAs) under MIPS, such as population management, expanded practice access, care coordination, beneficiary engagement, etc.
Care delivery within Accountable Care Organizations (ACOs)	Certain alternate payment models (APMs) facilitate the use of telehealth such as the Next Generation ACO, which has the flexibility to keep the waivers for originating site restrictions and allowing patients to receiving care at alternate settings, including their home.

Component	Description
Improving clinical practice within the Medicare Shared Savings Program (MSSP)	This model recognizes telehealth services as a clinical practice improvement activity (CPIA) and allows physicians who provide patients with equipment for remote patient monitoring to be eligible for fraud and abuse waivers, specifically, the programmatic waiver for telehealth.
Advancing the mission of the CMS Rural Health Council	The assessment of telehealth quality aligns with the focus of the CMS Rural Health Council, by evaluating whether telehealth can help rural providers deliver better health care by connecting rural providers and their patients to services at distant sites and promoting patient-centered health care.

[i] Data taken from https://www.ortholive.com/blog/defining-a-national-quality-standard-for-telehealth/ on January 5, 2021.
[ii] Data taken from https://www.cms.gov/About-CMS/Agency-Information/Emergency/EPRO/Current-Emergencies/Current-Emergencies-page on January 5, 2021.
[iii] Data taken from https://www.fairhealth.org/article/telehealth-and-covid-19 on January 5, 2021.
[iv] "Creating a Framework to Support Measure Development for Telehealth." National Quality Forum. Published online August 31, 2017.
[v] Lee, P.A., Greenfield, G. & Pappas, Y. The impact of telehealth remote patient monitoring on glycemic control in type 2 diabetes: a systematic review and meta-analysis of systematic reviews of randomised controlled trials. BMC Health Serv Res 18, 495 (2018). https://doi.org/10.1186/s12913-018-3274-8
[vi] Kuehn, Bridget M. "Telemedicine Helps Cardiologists Extend Their Reach." Circulation, vol. 134, no. 16, 2016, pp. 1189–1191., doi:10.1161/circulationaha.116.025282.