

# Building eConsult (Electronic Consults) Capability at an Academic Medical Center to Improve Efficiencies in Delivering Specialty Care

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## Abstract

As the COVID-19 health crisis continues to reshape healthcare, systems across the country face increasing pressure to adapt their models of care to expand access to care, while also improving efficiency and quality in the face of limited resources. Consequently, many have shown a growing interest and receptivity to the expansion of telehealth models to help meet these demands. Electronic consultations (eConsults) are a telehealth modality that allow for a non-face-to-face asynchronous consultation between a primary care provider (PCP) and a specialist aimed at facilitating specialist input without the need for a patient visit. The aim of this case study is to describe eConsults, how they differ from traditional in person models of care and other models of telemedicine and to review the evidence related to the effectiveness of eConsults by PCPs and clinicians from multiple specialties at the University of Colorado School of Medicine. We have worked to develop an infrastructure, delivery system integration, and care model adaptations that aim to improve delivery system performance by ensuring proper care in appropriate settings and lowering costs through reduced utilization. Lastly, we have increased care coordination, improved collaboration and better care transitions through strengthening of relationships between community-based PCPs and academic medical center-based specialists. This work has resulted in cost savings to patients and positive provider satisfaction.

## Keywords

access to care, cost-effectiveness, primary care, medical cost, health economics, telehealth, ehealth, healthcare reform

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## Background

The State of Colorado has deployed many of the policy options available to states under the Affordable Care Act: expanding Medicaid eligibility, building a state-based insurance exchange, and aggressive expansion of telemedicine. Colorado has held on to its record-setting uninsured rate of 6.5%, according to the 2017 Colorado Health Access Survey (CHAS).<sup>1</sup> According to this same survey, Colorado has also built strong primary care capacity—nearly 85% of Coloradans reported that they have a usual source of care. However, the story is different for specialty care. Ensuring patients have timely access to specialists is a challenge for many health systems, both public and private; and barriers include both indirect and direct costs associated with an in-person visit, geographic disparity due to an unequal (primarily urban) distribution of specialists, long wait times

and limited appointment availability. In addition, the average referral process between safety-net clinics and hospital systems has 20 steps and involves up to 8 people.<sup>2</sup> Each step is a potential point for a breakdown within the referral process.

Traditional telehealth tools have been established to help reduce these barriers, promoting increased access while ideally, lowering costs. And these benefits have never been more relevant than during the COVID-19 pandemic, that

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has spurred unprecedented increases in the use of telehealth. However, as healthcare organizations navigate the new normal required in a post-COVID environment that has driven virtual approaches unlike any event prior; they will also be reviewing data and evaluating patient and provider experiences while awaiting policy decisions that will determine if these adaptations will be sustained. Many are also evaluating how this crisis exposed weaknesses in the current care delivery system, including traditional telemedicine.

Peer mentored care models, including eConsults and Extension for Community Health Outcomes (ECHO), represent care pathways allowing PCPs and specialists to work as peers. PCPs and specialists more effectively share patient data and collaborate on decisions regarding which patients will benefit from direct care from a specialist (whether that be virtual or in person) and which patients can continue their care safely and efficiently in their primary medical home. Ideally this is an iterative process of data sharing, communication and deliberation—sometimes resulting in care level adaptation. But, most of all resulting in improved communication, right-leveling the care and reducing wastes related to resource use and time.

Prior to COVID, traditional telemedicine (synchronous video provider to patient) had been the prevailing approach to expanding specialty care to primary care patient centered medical homes, and primarily aimed at reducing time and travel for the patient. On the other hand, traditional telemedicine (patient to provider) does not always increase the efficiencies to the healthcare system or the provider as it still requires patients to schedule, attend, and pay for a tele-enabled face-to-face visit with a specialist. And, the time that each provider spends with a patient is largely unchanged and thus doesn't improve clinic availability or efficiency and may very well exclude the primary care provider as a critical partner in the specialty treatment relationship. eConsults, on the other hand, allow efficiencies in care delivery as a new gateway to care and ensure the right patients are moving through the medical neighborhood with the right data, while maintaining the primary treatment relationship between PCP and patient within a primary medical home. It has been reported that nearly 40% of specialty consults do not lead to a change in therapy for the patient.<sup>3</sup> This inefficiency makes a significant contribution to year-over-year health cost increase and has significant economic consequences for state budgets.

eConsults serve as a valuable telehealth tool that reduces the need for in-person specialty visits and promotes primary care driven patient centered medical homes. Through this approach, PCPs function as a primary medical home, yet have an additional set of tools in their tool kit to support care management, decision making and to more accurately decide which patients truly will benefit from a specialty referral. Better decision-making tools guide appropriate referrals, decrease unnecessary referrals and undoubtedly improve outcomes and decrease total cost. In a recent study,

**Table 1.** Percentage of eConsults sent to Specialty Department.

Department	Percentage (%) of all eConsults
Endocrinology	21.7
Clinical pharmacy	10.0
Cardiology	8.6
Gastroenterology	8.0
Rheumatology	7.3
Dermatology	6.8
Neurology	6.4
Infectious disease	5.9
Nephrology/Renal	4.5
Hepatology	4.3
Urology	3.4
Otolaryngology	2.8
Psychiatry	1.9
Sleep medicine	1.6
Pulmonary	1.5
Hematology	1.2
Obstetrics/gynecology	0.9
Ophthalmology	0.7
Pain clinic	0.7
Orthopedic	0.6
Medical oncology	0.5
Stroke	0.2
Survivorship	0.2
UroGynecology	0.2
Allergy	0.1
Physical medicine rehabilitation	0.1
Palliative care	0.1
Wound care	0.0

Anderson et al.<sup>3</sup> found that eConsults reduced the total cost of care after implementation across a range of highly utilized specialties and reduced the average specialty-related episode of care costs by \$82 per patient per month. In a recent analysis of our own data comparing eConsult enabled specialty care to specialty care not enabled by eConsult, Medicaid would see a 9.4% reduction in overall costs of care. These findings are consistent with other national data trends comparing specialties that adopted eConsults to those that did not, demonstrating over \$8,000,000 in savings by avoiding over 66,400 visits.<sup>4</sup>

### eConsult Data at the University of Colorado

Through our eConsult program, specialists have extended PCP knowledge, allowing appropriate patients with complex conditions or uncertain treatment protocols to be managed within their primary care medical home. Our structured workflow requires key lab results, tests and images that are clinically relevant be obtained by a PCP prior to sending an

eConsult or sending patients for an in-person referral. Two years of data suggests that we have improved access to specialty care while also creating a more efficient standard of care across a variety of measures.

From April 2018 to October 2020, over 7,000 eConsults were placed across 28 adult health specialties at the University of Colorado. Table 1 illustrates the distribution of eConsults across the adult health specialties. Of note, 23 pediatric health specialties, not represented in the data, have also incorporated eConsults into their model of care.

Our eConsult program continues to grow as we expand the use of eConsults to community providers across Colorado, a state with large rural and frontier areas. Thus far, estimates suggest the eConsult program has provided patients with over \$90,000 in gas savings alone through avoided trips to see the specialists at Anschutz Medical Campus. As this is expanded to other systems, this added benefit to our patients and reduced impact on the environment related to reducing carbon dioxide should only contribute to the known benefits of this approach.

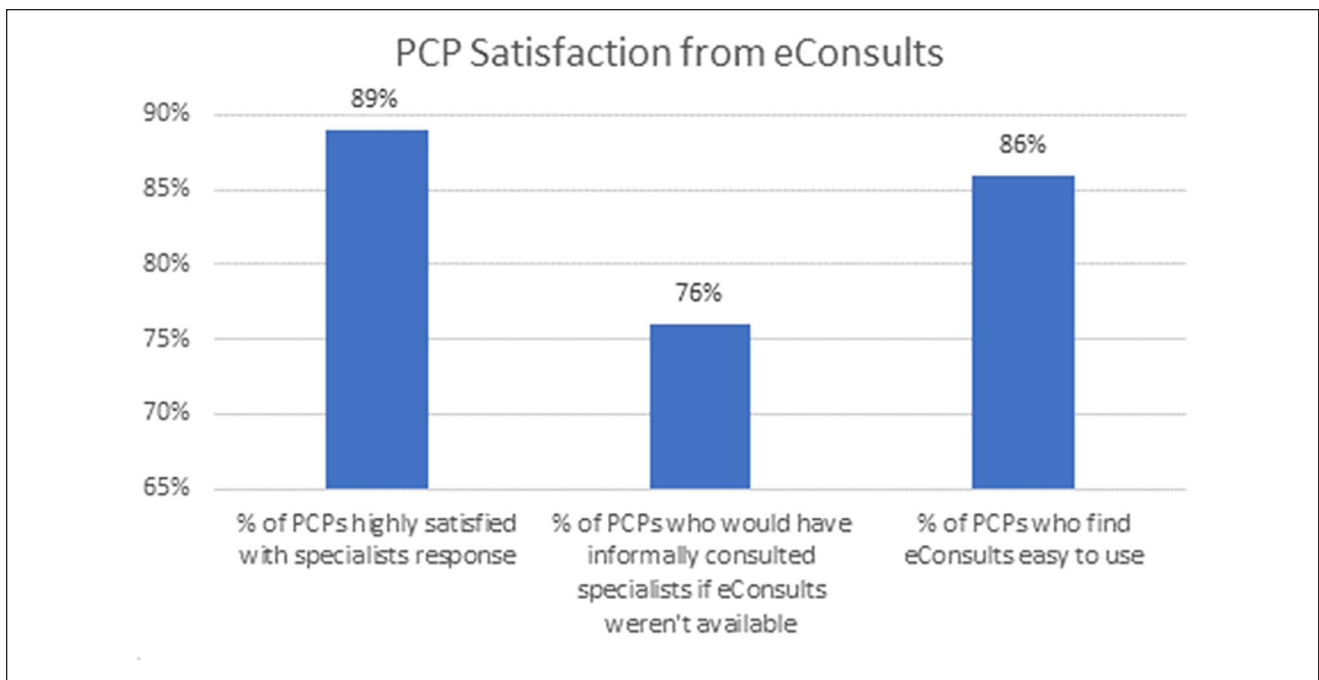
While there has been interest in the benefits of this model, there has also been reticence related to questions about the safety, timeliness, or effectiveness. According to our data, only 2.5% of answered eConsults resulted in an in-person visit within 30 days (indication of effectiveness).

No answered eConsults resulted in an ED visit within 30 days of it being placed (indication of safety). Finally, specialists are expected to respond to eConsults within 3 business days of receiving them. Eighty percent of eConsults are answered in less than 2 business days (indication of timeliness).

eConsults are highly structured, data rich exchanges that allow the PCP and specialist to develop consensus on level of care in rapid fashion. The potential disposition includes a completed eConsult, conversion to an onsite visit or a decline of the eConsult if the clinical question needs to be restructured.

### Provider Satisfaction

As indicated in the chart graphic below, 89% of our PCPs have been highly satisfied with specialist's responses to eConsults. If eConsults weren't available, 76% of PCPs would have either curbed side consulted the specialists or placed a standard referral. Lastly, 86% of PCPs find eConsults easy to use and as time efficient as placing a standard referral. In addition, the majority of all specialists surveyed, strongly or somewhat agree, that PCPs ask appropriate questions and include enough supporting documentation to make the eConsult experience valuable.



### Approach as a Model of Health Care Reform

As this model has expanded across the country, there has been a great deal of variation in speed and range

of specialties included in implementation. In our model, eConsults serve as an efficient alternative to specialty care for PCPs, should they choose to utilize them. We have created an efficient and effective workflow embedded in the EHR that make eConsults a value-add to both the PCP and

the specialist—and place the empower the PCP as the decision maker as to, “which will be better, sending an eConsult or placing a referral.” Our workflow includes in-line decision support, a standard specialty response template, one step conversion structure and built-in critical communication flow—which are all critical to primary and specialty care efficiency and acceptance.

As our healthcare system navigates the new normal in a post-COVID world and considers the right size and approach for integration of telehealth in its model for improved healthcare delivery, a couple of things we do know is that patients like the convenience of care delivered in their home and PCPs have adopted telemedicine like never before. These factors along with a renewed discussion around healthcare reform, suggests that peer mentored models could play a major role in healthcare reform that improves access while restraining costs. Our growth is focused on expanding the use of eConsults to community-based PCPs. Providing an agnostic statewide system promoting alignment between payers, healthcare systems, their affiliated care networks and the PCPs in the state is a goal and one that would certainly lend the use of eConsult to care efficiencies and cost reduction. This alignment could be rapidly disseminated and shared amongst other academic medical centers across the country.

One unfortunate limitation is the lack of system wide reimbursement for peer mentored care models. Our program, like many similar at Academic Medical Centers (AMCs) across the country, is funded internally. Engaging health plans to reimburse for eConsults is a critical component for program sustainability, replication and scaling across the country. Our eConsult program, along with many other AMC’s eConsult programs, started off as a collaboration with the Association of American Medical Colleges (AAMC). As an aspect of that collaboration, we benefit from the continued national advocacy conducted by the AAMC on behalf of academic medical centers along with partnership and knowledge exchange with these entities as we each explore approaches for integration and payment for the model in our own states. As a result, there has been movement toward reimbursement by some payers in a few states, and more broadly nationally with Medicare through 2 new inter-professional consultation codes as outlined in the Medicare Physician fee Schedule (99451 and 99452).<sup>5</sup>

With these codes as a starting point, a number of systems have begun to bill for eConsults, both on the PCP and specialist side of an eConsult. Although Medicare is the only payer that has initiated nationwide reimbursement codes for eConsults, it seems clear that this model could have impact beyond Medicare, potentially generating even more substantial savings for these payers.<sup>6</sup> A few national analyses thus far have been focused on Medicaid cost-savings; however, our future research will focus on costs from an all payer database to demonstrate the applicability of the

approach for both private and public payers, their patients and providers. As payment reform efforts continue, the University of Colorado remains engaged in discussions with payers around the importance of eConsults and the added benefit they provide to multiple stakeholders from a quality, care, and cost perspective.

## **Conclusion**

Our case study outlines the efforts of the University of Colorado School of Medicine to implement eConsults and how that model of telehealth care delivery fits into an overall spectrum of care that promotes the quadruple aim—reducing costs, increasing access, improving patient and provider satisfaction and overall, assuring the right patient, the right care, at the right time and in the right place.

The development of our program and preliminary data have important policy implications for both payers and hospital decision makers. Many other academic medical centers are developing similar efforts as they look to expand virtual care approaches to increasing access to specialty care. Whether these programs contribute to reducing care disparities without unbearable costs, will undoubtedly determine whether eConsults become an accepted telehealth offering, reimbursed by payers and accepted as care provision and furthermore, whether the model informs policy changes state-by-state and for the U.S. as a whole.

In partnership with our state, we have the unique opportunity to improve access to specialty care via eConsults, telehealth, in person visits and broader provider education to promote specialty care access in primary care and non-traditional environments. In making the appropriate and timely investments in a new health care delivery model to improve the efficiencies of our state’s healthcare ecosystem, we will have created a model where patients have improved access to specialty care and fewer unnecessary visits. In addition, primary care partners receive timely input and expertise to help them practice top of scope and provide more comprehensive care locally, decreasing redundancy and allowing for whole patient care in the primary medical home. Our work has created the ability to develop, build and maintain networks of care that connect regionally, state-wide and nationally to increased capacity to solve their own local challenges.

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