

Electronic Healthcare Consultation System (E-Consults)

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Abstract:- One of the main issues in the modern society is maintaining health and so we make it modernized and self-usable for all people. The aim of this project is to bring healthcare to people in need. People in rural areas can use this system to connect to internet from a centre and answer some questions to get some medical advice and keep their health record clean. If it is minor it suggests medicines or also gives doctor contacts. E health care is a new trend that recently comes in to use with the availability of new electronic and software applications. We are developing a web-based healthcare system in order reach every single person who is in need. A Few software users in this are Java, PHP and MySQL. A brief description of this system, a patient in need logs in through an Id they create. Then the person has to answer a series of questions related to health. The system gathers all the answers, analyses and manipulates and gives a most appropriate answer. It either gives a health issue according to it the person could go ahead or if it thinks it's more of a serious issue it gives contacts of doctors related to it. This system also holds all the records of that particular logged in patient's account.

Keywords--- E health, Modernized, Self-Usable.

I. INTRODUCTION

Electronic consultations (e-consults) are a promising approach to the challenge of improving access to specialty care. E-consults offer a rapid, direct, and documented communication pathway for consultation between primary care and specialist. They may avert the need for a face-to-face visit between specialist and patient. As a result, they have the potential to enable cost-effective and convenient care for patients while improving access to and coordination of specialty care across the system. As such, they may offer an appealing new modality for rational appropriation of health care services. We define an e-consult as an asynchronous communication between healthcare providers that occurs within a shared electronic health record (EHR) or secure Web-based platform. Referring providers send a consultation request to specialists, who can respond by answering the consult question, requesting more information, and/or scheduling a specialist appointment. The concept of using provider-to-provider communication to precede, enhance, or replace specialty visits is not new. "Curbside" consultations are common, and telemedicine modalities such as email and videoconferencing are increasingly used, but each has limitations. Curbside consults are informal, undocumented

communications which do not imply specialist review of data and require synchronous communication. Email consultations are asynchronous, but are not integrated into the EHR and do not require data review. Videoconferencing between providers requires specialized equipment and synchronous communication. E-consults address many of these limitations; they formalize the consultant role, occur within a secure and dedicated platform, and do not require individuals to be present simultaneously. E-consults have been adopted at an increasing number of US academic centers, private health care settings, and in the Veterans Affairs health care system, as well as internationally, but research on their use and impact lags behind the enthusiasm for their implementation.

USES FOR E-CONSULTS:

E-consults are used for a variety of purposes, both within and across medical centers. The most commonly described use of e-consults is by PCPs to request clinical input from specialists on outpatient issues. Hematology and endocrinology are consistently among the top five specialties receiving these e-consults across systems. There are multiple examples of e-consults being adapted for other tasks. North et al. identified 7 alternative types of e-consults at the Mayo Clinic. After primary care-to-specialty e-consults (44%), inter-specialty (30%) surgical (8.7%), and intra-specialty (7.5%) e-consults were most common. One of

the less common types was the required e-consult for certain clinical situations (2.7%). For example, the transplant service at Mayo Clinic required a psychiatric review via e-consult of potential transplant patients' self-administrated psychological evaluations.

Specialty services can develop condition-specific e-consult programs. One endocrinology service encourages providers at their VAMC and affiliated clinics to refer all patients with a hemoglobin A1C > 9% or evidence of hypoglycemia for a team-based diabetes e-consult. At Mayo, an elevated ambulatory blood pressure monitor reading can trigger a hypertension e-consult to nephrology. Specialty services may also unilaterally initiate e-consults without a PCP request. For example, a group of 3 VAMCs in North Carolina used regional clinical data to identify patients with an osteoporotic fracture for automatic e-consults to a bone specialist for secondary prevention.

E-CONSULTS' EFFECT ON WORKFLOW:

For the PCP, placing an e-consult is generally easy and convenient. Receiving the specialist's response, however, generates additional work that may have fallen to the specialist in the case of a face-to-face visit. In a simulation model, the PCP's ability to follow up on e-consult recommendations in a timely manner was influenced by covering for another PCP, the number of walk-in patients daily, the number of other electronic notifications received daily, and number of e-consults completed by specialists. Specialists may also experience increased work. In a VA report, specialists estimated that 27% of e-consults represented new work, i.e., consultations that would not have occurred formally or informally in the absence of e-consults. The time to complete an e-consult is usually less than 15 minutes, but could be much longer.

The e-consult platform impacts usability. In settings where providers do not share an EHR, logging on to a separate system may be slowed by insufficient equipment availability, spotty internet connections, or the need for multiple log-ins. With a shared EHR, although more patient data is readily available for the responding provider, pinpointing the relevant information from years of accumulated notes and test results can be challenging. The e-consult request may be templated to help support the consult question, but templates may be inadequately completed or not meet the needs of the requesting provider.

FUTURE RESEARCH DIRECTIONS:

Based on the state of the e-consult literature, we recommend five major directions for future research; studies of: 1) implementation;

- 2) appropriate use;
- 3) communication;
- 4) effectiveness; and
- 5) unanticipated consequences.

Implementation studies

Evaluative research on both new and more mature e-consult programs should explore facilitators and barriers to use of e-consults, including training and support requirements, usability, impact on workflow, and effect on provider communication. These factors are not well-described in the literature but are highly likely to impact provider efficiency and adoption.

Appropriate use

Achieving coordinated, high-quality and efficient care depends in part on providing the level of specialty input that matches needs of the patient and PCP. E-consults are but one modality for delivery of specialty care. As such, they may be more or less appropriate for certain specialties, clinical conditions, or patient types. A better understanding of patient complexity and preferences, and PCP, specialist and system factors in relation to e-consultation is needed.

Communication

Effective provider-provider communication is at the heart of e-consultation and strategies are needed to optimize it. For example, specialists can best respond to an e-consult when the provided data is sufficient, accurate, and usable. Further explorations of the use of templates or service agreements that specify details of bidirectional information exchange are needed.

Effectiveness

For policymakers and organizational leaders, the most pressing questions are about whether the reduced burden to patients and faster access to specialists translate to better outcomes. There are opportunities to rigorously evaluate the effect of e-consults on health care utilization, clinical endpoints, waiting times for specialty clinic appointments, and cost. Better metrics are needed for clinical outcomes and access, which have thus far been measured by primarily by provider perceptions rather than objective criteria.

Unanticipated consequences

Every change in health care delivery carries the likelihood of both positive and negative unintended consequences. For example, e-consults may increase PCP knowledge and skills; a positive impact. On the other hand, e-consults are used to solicit specialty advice for patients who may never be seen by the specialist, perhaps raising safety or satisfaction concerns; a negative impact. This issue has not been addressed in studies to date, but researchers should be open to recognizing such effects as e-consults evolve and their use expands.

Limitations

Most published studies originate from one of three integrated health care systems, so the generalizability of their findings is limited. By restricting our systematic evaluation to peer-reviewed literature we may have inadvertently overlooked additional publications of interest. We may have excluded relevant manuscripts in languages other than English. Nonetheless, to our knowledge the only review of e-consults was published in 2011, and that was not a systematic review. Considerable growth of e-consults has occurred since that time, necessitating our systematic review.

Patient benefits

- Increased satisfaction
- Improved continuity of care
- Improved access to specialty care
- Improved patient care
- Timeliness of results

II. CONCLUSION

An e-consult program could alleviate pressure on limited health system resources by improving access to specialty care at relatively low cost. There are multiple opportunities to investigate the benefits and costs of different e-consult models, which may encourage adaptation of payment strategies to cover e-consults in fee-for-service or accountable care organizations. This idea of paper is to eliminate corporate pricing and provide cheap healthcare to the needy just using the almighty web.

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