

Electronic Consultations: Delivering Specialty Care Anywhere

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The need for specialty consultation in Hepatology is rapidly increasing due not only to rising rates of advanced liver disease and hepatocellular carcinoma but also rising rates of less “severe” liver disease, such as nonalcoholic fatty liver disease (NAFLD).⁽¹⁾ The number of patients with NAFLD in the United States is estimated to be approximately 30% and is likely to rise because of the obesity epidemic. Even this is a very significant underestimation of the problem.⁽¹⁾ The majority of patients with NAFLD are not recognized by their primary care providers to have the disease.⁽²⁾ It is highly unlikely that we will have enough hepatologists to see all these potential patients, and novel methods for care are needed to meet this increasing demand. Furthermore, ready access to services not only involves the number of specialists needed but also a suitable geographic distribution. Traditionally,

specialists, such as hepatologists, congregate in major urban areas; as a consequence, access could remain limited for geographic reasons even with large increases in the number of specialists. Delivery of care should be accessible to all patients, regardless of their location.

Telemedicine is a natural solution. There are various forms of telemedicine; these can be divided into those that involve direct interactions between the patient and the specialist and those that involve interactions between the primary care provider and the specialist. Electronic consultations (eConsults) and Extension for Community Healthcare Outcome (ECHO) programs involve an interaction between primary care providers and specialists.⁽³⁾ eConsults occur asynchronously over a secure electronic medium, while ECHO programs occur synchronously (involving specialists and multiple primary providers) by videoconferencing. eConsults and ECHO programs have been implemented widely in federally qualified health centers and the Veterans Administration (VA) health care system but less so in the private sector where there is less integration of health care systems.⁽⁴⁾

In this edition of *Hepatology Communications*, Bhavsar et al.⁽⁵⁾ report their results from the successful implementation of eConsults within a single tertiary center. They showed in a retrospective study of 187 eConsults that the majority (76%) were resolved without the need for an in-person visit. A total round-trip mileage of 10,599 miles, an average of 74.1 miles per patient, was saved with the use of eConsults. From a patient perspective, this is not an insignificant savings in time and money as patients would have been expected to travel at their own expense to the specialist. The authors reported a significantly lower consult response time measured in hours (22 ± 28 hours) rather than days (68 ± 55 days), but this may be artificial as this is likely dependent on assigned hepatologist availability. A truer measure of savings would have been to calculate the clinic resources (ancillary staff and space) needed for face to face visits rather than the actual hepatologist time. While it may take the hepatologist less time to review an eConsult case,

Abbreviations: ECHO, Extension for Community Healthcare Outcome; eConsult, electronic consultation; NAFLD, nonalcoholic fatty liver disease.

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this is likely dependent on the complexity of the case and difficulty in retrieving all the information needed. The latter would be dependent on the source data and what template consult information was given by the primary care provider. Much of the work in the consult is shifted from the specialist to the primary provider, who is then tasked with completing the recommended workup and relaying the information to the patient. Recognition of the burden shift to primary care provider cannot be underestimated as it can lead to more burnout in health care systems that are already strained by the lack of front-time providers.⁽⁶⁾ In this study, primary care providers were given a credit of 0.5 relative value units for placing the eConsult, which was paid by grant funding.⁽⁵⁾ This type of reimbursement model is not widely available but should be seriously considered as it increases the incentive for primary providers to support a system that benefits all. Both the patients who did not have to needlessly travel to the specialists and those patients who subsequently had face to face visits benefited. The authors report that of 44 (23%) patients who had to travel to the specialist, 87% had already received the completed


workup that was recommended in the e-Consult, making for a higher quality visit.⁽⁵⁾

In a field such as Hepatology where a significant portion of care delivery involves thinking rather than procedures, electronic modalities, like eConsults and the ECHO programs, make sense. The majority of questions for hepatologists, such as the management of liver enzymes, abnormal imaging, and viral hepatitis, lend themselves well to a telemedicine modality.⁽⁵⁾ Not only can potentially unnecessary visits be avoided but there is also transfer of knowledge to the primary care providers by providing an interaction between the primary provider and specialist.^(7,8) This transfer of knowledge decreases the “silo” effect that is often seen in specialty consultations and has significant implications (Fig. 1). It can expand the practice level of the primary care provider. This is clearly demonstrated in the ECHO model where primary care providers, particularly those who served patients from rural and underserved areas, became experts and administered hepatitis C treatment with equal efficacy to a specialist.⁽³⁾ Patients did not have to travel to the specialists and had expanded access to care. In the ECHO model



FIG. 1. Specialists and primary care providers often work independently in “silos” when caring for patients. Improved communications and interactions will decrease this effect and improve clinical outcomes. *Photo by AH Digital Studios from FreeImages.

for liver disease patients within the VA health care system, this led not only to improved access but also, more importantly, to improved survival.⁽⁹⁾ Given these significant benefits, it is clearly time for us to embrace these new models of care delivery so that patients can receive their specialty care anywhere.

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