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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

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with NAFLD in the United States is estimated to be approximately 30% and 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 Hepatology not only involves the number of specialists needed but also their geographic distribution. Traditionally, specialists, like hepatologists, congregate in major urban areas so access could remain limited for geographic reasons even with large increases in the numbers of specialists. Delivery of care should accessible to all patients regardless of their location.

Telemedicine is a natural solution. There are various forms of telemedicine which can be divided into those which involves direct interactions between the patient and the specialist or those which involve interactions between the primary care provider and specialists. Electronic consultations (eConsults) and ECHO (Extension of Community Healthcare Outcome) programs involve an interaction between primary care providers and specialists(3). eConsults occur asynchronously over secure electronic medium while ECHO programs occur synchronously (involving specialists and multiple primary providers) via video-conferencing. E-Consultations and ECHO programs have been implemented widely in Federally Qualified Health Centers and Veterans Administration Healthcare System (VA) 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. report [REFERENCE] 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 a 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 they 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 a eConsult case, this is likely dependent on the complexity of the case and difficulty in retrieving all of 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 under estimated as it can lead to more burn out in healthcare systems that are already strained by the lack of front time providers(5). In this study, primary care providers were given a credit of 0.5 RVU for placing the eConsult which was paid via grant funding[REFERENCE]. This type of reimbursement models is not widely available but should be seriously considered as it increases the incentive for primary providers to support a system that benefits all.

Not only are there benefits for the patients who did not have to needlessly travel to the specialists but also for those patients who subsequently had face to face visits. The authors report that of 44 (23%) patients who did have to travel to the specialist, 87% had already received the completed workup that was recommended in the E-Consultation making for a higher quality visit[REFERENCE].

In a field like Hepatology where a significant portion of care delivery involves thinking rather than procedures, electronic modalities like eConsults and the ECHO programs make a lot of sense. The majority of questions for hepatologist such as the management of liver enzymes, abnormal imaging, and viral hepatitis lend themselves well to a telemedicine modality[REFERENCE]. Not only can potentially unnecessary visits be avoided but by providing an interaction between the primary provider and specialist, there is transfer of knowledge to the primary care providers(6, 7). This transfer of knowledge decreases the "silo" effect that is often seen in specialty consultations and has significant implications. 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 for liver disease for patients within the Veterans Administrations Healthcare System, this led not only to improved access but more importantly improved survival(8). 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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