

HIT Policy Committee
Meaningful Use Workgroup
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Biography

Michael LaMantia, MD, MPH is a Clinical Instructor of Medicine at the University of North Carolina School of Medicine, a research fellow in Geriatric Medicine at the UNC Center for Aging and Health, and a post-doctoral fellow at the UNC Institute on Aging. Dr. LaMantia's research focuses on the transitional care of elderly patients. He is interested in how older patients transfer between nursing homes, emergency departments, and hospitals. At the present, he is involved in a multi-disciplinary effort to improve care for vulnerable elderly as they transition across various sites of health care delivery. Dr LaMantia received his Doctor of Medicine degree from the Albert Einstein College of Medicine, his Master of Public Health degree from the University of North Carolina Gillings School of Global Public Health, and his Bachelor of Science degree from Duke University. He is a licensed physician, board certified in Internal Medicine and practices geriatrics in outpatient clinic, hospital, and nursing home settings.

Written Testimony

I would like to thank you for the opportunity to address the HIT Policy Committee's Meaningful Use Workgroup. This written testimony will speak to the questions raised by the workgroup and will serve as an outline for my verbal presentation.

Panel 2: Transitions and Care Coordination

What issues and deficiencies in care transitions can be effectively addressed by HIT?

In a 2003 position statement, the American Geriatrics Society defined transitional care as "a set of actions designed to ensure the coordination and continuity of healthcare as patients transfer between different locations or different levels of care within the same institution."¹ In the literature, effective transitional care has been envisioned as a summation of several key steps including communication between sending and receiving providers, reconciliation of patients' medication lists, preparation of the patient and caregiver for the transition, arrangement of an appointment for a patient with the receiving provider, provision of a means for follow-up of outstanding tests, and a discussion of warning signs that might require more urgent medical evaluation after the transfer.² Though the adoption of HIT may importantly and most obviously have implications for allowing the transmission of accurate medical information, the communication of medical information alone is inadequate to ensure effective transitional care for patients as they transfer between healthcare settings

As older adults account for a high percentage of transitions in care, they are highly affected by the quality of transitional care that is provided. Studies show that 23% of hospitalized elderly patients are transferred to another institution at hospital discharge

and that 19% of patients transferred from a hospital to a skilled nursing facility will be transferred back to the hospital within 30 days.² Frail, older patients, including those suffering from cognitive impairment, are often unable to participate in the transitions process and may consequently suffer through repeat hospitalizations, iatrogenic complications, and uncoordinated care.

HIT offers the opportunity to coordinate patient care and facilitate the electronic transfer of patient information during transitions in care. In a systematic review that I participated in with colleagues at the University of North Carolina, we identified five studies of interventions to improve the communication of medication lists and advance directives for older patients transitioning between nursing homes and hospitals.³ Though these studies differed in their methodologies, initial evidence from them suggests that structured patient transfer records may improve the frequency and the accuracy of transfer of medication lists and advance directives when patients transition between care settings. Future work, however, will be needed to determine the ideal amount of information to include on any patient transfer document and how to best effect its implementation. Additionally, further research will be needed to demonstrate the sustainability of these studies' results and the effectiveness of these interventions in a range of clinical settings.

Beyond simply enabling the transfer of patient information, the use of HIT may also potentially facilitate the accomplishment of the other actions necessary to provide effective transitional care. Within my own hospital, our electronic medical record (EMR) allows secure messaging that can be used to request patient appointments in our outpatient clinics, forwarding of test results to other providers within the hospital system, and sending of letters to patients with their test results. Our information technology team has also developed a system where providers outside of our medical system, by invitation, may receive access to the medical records of their patients seen in our hospital, including diagnostic studies, test results, discharge summaries with medication lists, and clinic notes. Ultimately, these features of our EMR may facilitate the more coherent provision of transitional care, though these functionalities have not yet been rigorously studied.

How is HIT being used, or will be used, within care to expedite referrals with a team, referrals outside of a team, and transitions between settings?

As outlined above, the EMR at the University of North Carolina Hospitals has multiple functionalities which facilitate the sharing of information as patients transfer between settings in our hospital system and indeed, beyond the immediate umbrella of our care network. A physician in our hospital has the ability to easily forward our medical records to a patient's providers or consultants outside of our hospital system. Additionally, our EMR allows the use of standardized sign-out sheets to smooth hand-offs between physicians at shift changes. More challenging, however, in practice has been the implementation of HIT to assist in the transfer of patients transitioning into our hospital system from unaffiliated, local nursing homes.

The literature has shown the capacity of standardized patient transfer records to assist in the communication of patient information, including via paper and electronic means, for nursing home patients who are referred to the emergency department.⁴⁻⁶ In 2007, our research group at UNC embarked upon the creation of a web-based, password protected referral page in collaboration with our hospitals' information systems department. For patients requiring transfer to our emergency department, nurses would complete the data fields on an on-line referral page and upon submission, this information was made available permanently in the patient's electronic medical record. While emergency department providers were consistently pleased with the information that they received via the electronic referral system, the implementation and consistent use of the system in the nursing home environment were more difficult than anticipated. Barriers to its use included the following factors:

- Technical issues.* Lack of availability/access to computers by nursing staff. Lack of network infrastructure and presence of corporate firewalls. Outdated certificates of authenticity.
- Staff specific issues.* Lack of computer literacy. High turnover rates among staff at some facilities requiring retraining in the system's use.
- Leadership.* Local leadership who could champion referral system's use was critical to its success.

Given these challenges from our experience, it is clear that implementing a web-based referral system is complex and likely involves a change in local culture, significant training of staff in referring health care organizations, and substantial investments in hardware and software.

How can HIT assist with care coordination in chronic disease management?

Previous respondents who have spoken before the committee have addressed this issue in more detail than I will provide here. From my knowledge of the literature and work in the field of transitional care, HIT may assist with care coordination in chronic disease management in the following ways:⁷⁻⁸

- Allow sharing of the medical record across different practice sites, facilitating coordination of care.
- Permit monitoring of drug therapies and review for potential medication interactions.
- Prompt physicians to perform indicated disease management testing at intervals.
- Facilitate monitoring of patients with select conditions or in institutional settings via telemedicine.

References:

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