Tearing down the barriers to care transitions

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UB researcher working to automate hospital discharge summary, potentially lower hospital readmissions

New research could soon automate hospital discharge communication, adding critical data and cutting the time it takes the information to reach community health care providers from weeks to hours.

The preliminary study, led by Sharon Hewner, assistant professor in the School of Nursing, could speed delivery of the hospital discharge summary to under 24 hours and potentially reduce the number of patients readmitted to hospitals.

The research, "Exploring Barriers to Care Continuity during Transitions:
A Mixed-methods Study to Identify Health Information Exchange Opportunities," is funded by a $35,000 UB Innovative Micro-Programs Accelerating Collaboration in Themes (IMPACT) grant.

"It takes too long to get the information to primary care," says Hewner. "If the summary comes in three weeks after the person has been discharged from a hospital, the chances are pretty good that they've already been back, either to the emergency room or for hospitalization."

A discharge summary is a medical record sent to a patient's primary doctor after the patient is released from a hospital that outlines the diagnosis, test results and prescribed treatments.

Although hospitals have been using electronic health records for nearly 10 years, most software is geared toward processing billing. The discharge summary still relies on "snail mail," or the U.S. Postal Service, largely because it is seen as the final step in medical care and, therefore, doesn't require quick processing.

Researchers will use observational data collected at Kaleida Health's hospitals on clinician workflows and documentation around care transitions between the hospital and community.

To create a discharge summary, hospital physicians dictate a report that includes a patient's diagnosis and medical treatment that is later transcribed and mailed to the patient's primary physician.

Current summaries often omit information from nurses, social workers or therapists that can make a difference in a person's ability to manage his or her own care. The records typically take 10-14 days to reach primary care providers, long after the 48-hour window for follow-up of high-risk cases has passed, says Hewner.
Common problems include duplication of medications already in the home and confusion about where hospitals should send the summary, she says.

"There's always a clock running on getting someone out fast enough that has a lot to do with some of the financial mechanisms that hospitals get reimbursed under," says Hewner.

"So some of the things that people think are nice but not critically important, like patient education or the reconciliation of medication, sometimes get pushed into the background."

Mistakes that could be minimized with an automated discharge summary that treats a patient's release from a hospital as the next step in the patient's care, rather than the final step, she says.

To ensure the electronic summary is accepted by all hospitals and doctor's offices, Hewner will model the summary after the continuity of care document—a medical record created by the Office of the National Coordinator for Health Information Technology in the U.S. Department of Health and Human Services—that all health record software programs are required to be able to read. To transfer the electronic document, a hospital physician would only need to modify and approve the record's existing data.

UB researchers taking part in the study include Scott Monte, clinical assistant professor, School of Pharmacy and Pharmaceutical Sciences; Li Lin, PhD, professor, Department of Industrial and Systems Engineering; Peter Elkin, professor and chair, Department of Biomedical Informatics and Medicine; Sabrina Casucci, doctoral candidate, Department of Industrial and Systems Engineering; and Sashank Kaushik, clinical informatics fellow, Department of Biomedical Informatics.