

WEDI
Healthcare Secure Messaging Subworkgroup

Secure Communication Use Cases

1. **ONC State Health Policy Consortium Project: Final Report (June 2014)**

Brief Summary

Behavioral Health Data Exchange Consortium consisting of representatives from Florida, Michigan, Kentucky, Alabama, New Mexico, Nebraska, and Iowa. Purpose of the consortium was to address legal and technical barriers to the exchange of behavioral health data between health care providers, among organizations, and across state lines and to execute successful pilot exchanges using the solutions developed. The objective of the consortium project was to execute at least one successful pilot demonstrating the ability of providers to exchange behavioral health data electronically across state lines.

Results:

- Florida and Alabama- Florida and Alabama HISPs administratively exchanged and imported their respective trust anchors to establish a connection between the Florida HISP and the Alabama HISP using the Direct Domain Name Server. Oct 2012, there was successful transmission from Alabama to FL.
- Nebraska and Iowa- Original pilot of sending messages interstate was not successful due to the short time period. Alternative pilot was successful and intrastate messaging was a success, setting up the frame work for future interstate messaging.

Lessons learned:

- Behavioral health data exchange is complex, but possible.
- Provider Education is key to success.
- Cooperation and Flexibility are invaluable when addressing complex problems.

2. **Houston TK, Sands DZ, Jenckes MW, Ford DE. Experiences of patients who were early adopters of electronic communication with their physician: satisfaction, benefits, and concerns. Am J Manag Care 2004 Sep;10(9):601-608 [\[FREE Full text\]](#) [\[Medline\]](#)**

Brief Summary

Study of 1881 individuals in which the objective was to explore the experiences of patients who were early adopters of email communication with physicians. 311 individuals reported using electronic mail to communicate with physicians. 95% perceived that email was more efficient than telephone. 21% reported using email inappropriately to convey urgent or sensitive issues. Concluded that patients that use electronic communication with physicians find the communication effective for disease management, but further patient education about inappropriate use of email for urgent issues is needed. Internet based survey of 1881 individuals and 56 indepth telephone follow up interviews with patients who used email to communicate with providers.

3. Heyworth L, Clark J, Marcello TB, Paquin AM, Stewart M, Archambeault C, et al. Aligning medication reconciliation and secure messaging: qualitative study of primary care providers' perspectives. *J Med Internet Res* 2013 Dec;15(12):e264 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]
Brief Summary

Qualitative Study with objective to describe primary care providers' experiences of ambulatory medication reconciliation and secure messaging between patients and providers, and to elicit perceptions of a virtual medication reconciliation system using secure messaging. Experiences and perceptions from providers during indepth interviews were organized into overarching themes: medication reconciliation experiences, perceptions on how to improve ambulatory medication reconciliation, and experiences with secure messaging. Of all the providers, about half reported using secure messaging frequently, but all felt that it improved clinical workflow. Concluded that in general, providers are enthusiastic about the prospect of using secure messaging for medication reconciliation, particularly during transitions of care, and believe that a virtual system like this could reduce adverse drug events. Study of 15 participating providers, 12 female, 11 that saw <10 patients in a typical workday.

4. Zhou YY, Kanter MH, Wang JJ, Garrido T. Improved quality at Kaiser Permanente through e-mail between physicians and patients. *Health Aff (Millwood)* 2010 Jul;29(7):1370-1375 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]
Brief Summary

Study of 35,423 people with diabetes, hypertension, or both with the objective to study the effects of use of secure patient-physician email on the patient experience. Concluded that the use of a secure messaging within a two month period was associated with a statistically significant improvement in effectiveness of care as measured by the Healthcare Effectiveness Data and Information Set (HEDIS). In addition, use of email was associated with an improvement of 2.0-6.5 percentage points in performance on other HEDIS measures (ie. Glycemic, cholesterol, blood pressure).

5. Zhou YY, Garrido T, Chin HL, Wiesenthal AM, Liang LL. Patient access to an electronic health record with secure messaging: impact on primary care utilization. *Am J Manag Care* 2007 Jul;13(7):418-424 [[FREE Full text](#)] [[Medline](#)]
Brief Summary

Study to determine whether patient access to secure patient-physician messaging affects annual adult primary care office visit and documented telephone contact rates. Concluded that patient access to secure messaging feature of KP HealthConnect Online was associated with decreased rates of primary care office visits and telephone contacts. Sample of 4686 adult members of Kaiser Permanente Northwest who have been registered KP HealthConnect Online Users longer than 13 months and had used at least 1 feature. Difference in primary care office visit and telephone contact rates was calculated in the pre and post periods (3-14 months before and 2-13 months after registration for KP HealthConnect).

6. Harris LT, Haneuse SJ, Martin DP, Ralston JD. Diabetes quality of care and outpatient utilization associated with electronic patient-provider messaging: a cross-sectional analysis. *Diabetes Care* 2009 Jul;32(7):1182-1187 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]

Brief Summary

Cross-Sectional analysis of electronic patient provider messaging over a 15 month period with the objective to test the hypothesis that electronic patient-provider messaging is associated with high care quality for diabetes and lower outpatient utilization. Study was set at Group Health Cooperative with participants all aged ≥ 18 with a diagnosis of diabetes. Concluded that frequent use of electronic secure messaging is associated with better glycemic control and increased outpatient utilization.

7. Liederman EM, Morefield CS. Web messaging: a new tool for patient-physician communication. *J Am Med Inform Assoc* 2003;10(3):260-270 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]

Brief Summary

Study of 8 providers and their staff and patients with the objective to evaluate the use of a web messaging system within UC Davis community Primary Care Network (PCN) clinic. Found that a majority of patients found the system easy to use and were satisfied. Clinicians were also favorable to the system and were not inundated with messages. Concluded that a patient-provider web messaging system which provides security and access controls, customized routing, rich knowledge content, and insurance reimbursement capability, is a useful addition to the array of communication options available to health providers.

8. Varsi C, Gammon D, Wibe T, Ruland CM. Patients' reported reasons for non-use of an Internet-based patient-provider communication service: qualitative interview study. *J Med Internet Res* 2013 Nov;15(11):e246 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]

Brief Summary

Qualitative study based on individual interviews with 22 patients with the objective of investigating patients' views of an internet-based patient-provider communication (IPPC) services that they could use from home to pose questions to nurses and physicians at their treatment facility, and their reported reasons for non-use of the service. Concluded that patients were satisfied with having an opportunity to send messages to health care providers through an IPPC, even if they didn't use the service. IPPC's should be offered to patients at an appropriate time and a live demonstration of the IPPC at point of enrollment might have increased its use.

9. Hassol A, Walker JM, Kidder D, Rokita K, Young D, Pierdon S, et al. Patient experiences and attitudes about access to a patient electronic health care record and linked web messaging. *J Am Med Inform Assoc* 2004;11(6):505-513 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]

Brief Summary

Online survey based study of 4282 members of the Geisinger Health System who are registered users of a secure messaging application which allows patient provider electronic communication. Study's objective is to evaluate patients' values and

perceptions regarding web-based communication with their primary care providers in the context of access to their electronic health care record. Concluded that Patients' attitudes about the use of Web messaging and online access to their HER were mostly positive. Patients were satisfied that medical information was complete and accurate. Minority was slightly concerned about confidentiality of their information. Clinicians were less positive about using electronic communication than their patients.

10. Dudas RA, Crocetti M. Pediatric caregiver attitudes toward email communication: survey in an urban primary care setting. J Med Internet Res 2013;15(10):e228 [[FREE Full text](#)] [[CrossRef](#)] [[Medline](#)]

Brief Summary

Survey based study with objective of assessing pediatric caregiver access to and attitudes toward the use of electronic communication modalities to communicate with healthcare providers in an urban pediatric primary care clinic. 74.6% of the 229 participants (caregivers) reported that they used email to communicate with others. 86.3% of those participants stated they would like to email doctors, although only 10.7% do so. Overall, concluded that caregivers of children would be interested in electronically communicating with health care providers, although lower socioeconomic groups and African-Americans were not as enthusiastic it.
