Adoption of health information exchange in long term and post-acute care (LTPAC): Reflections from the Missouri Quality Initiative

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The Missouri Quality Initiative (MOQI), funded by the Center for Medicare and Medicaid Services (CMS) is testing a multidisciplinary model of care with APRNs to reduce avoidable hospitalizations among nursing home (NH) residents. Project dates are September 2012 to 2016. Our MOQI model guides the multidisciplinary team's interventions to reengineer 16 certified NHs with high hospitalization rates and populations of CMS beneficiaries to reduce rates of avoidable hospitalizations(1). MOQI interventions include implementation of standardized assessments that facilitate early recognition and management of conditions; integration of APRNs in each facility to model appropriate staff behaviors and communication about change in conditions; and implementation of information technology including tablets and a secure portal for health information exchange (HIE), CareMail, between each NH and its stakeholders. The purpose of this presentation is to share our experiences and preliminary findings from our 16 NHs regarding adoption of CareMail in LTPAC. We have contracted with Missouri Health Connection, who is Missouri's state HIE, recognized by the Office of the National Coordinator, to implement a secure portal for sharing personal health information. In the first 6 months of the project, we conducted an initial HIE readiness assessment for each facility. Following this, we implemented and trained staff to use 80 CareMail accounts across the 16 facilities. Each facility has 5 CareMail portals that serve the following staff roles: System Administrator, Nursing Staff, APRN-Medical Director, Social Services, and Director of Nursing. Since beginning the MOQI project, a maximum of 251 CareMail users have been assigned access to a portal. Since implementation, 469 total messages have been received and delivered through all CareMail portals. Nearly as many messages have been received (220) as have been delivered (249) by all portals. The majority of messages (119) have originated from the APRN-Medical Director's CareMail account, followed by Social Services (53), then System Administrator and finally Nursing Staff (47 and 41, respectively). The majority of incoming CareMail messages have been received by APRN-Medical Directors (78), followed by Social Services (60) and System Administrator (43). To assess usability and staff satisfaction, we used a short 10-item System Usability Scale to survey CareMail users at the end of year 1. We had a 39% survey response rate from users. The Grand Mean including surveys from all homes was 66.9% (range 0-100) for overall usability. The minimum and maximum usability scores for all homes were 12.5 to 100. Following usability assessment, we conducted 25 qualitative focus groups with CareMail users (N=124) to develop an understanding of how CareMail supports communication. Themes emerging from these interviews included: availability of IT in clinical settings, accessibility of CareMail at the point of care, internal IT support, including help desk assistance, and policies/procedures for secure personal health information. Additionally, six use cases were developed to describe best practices for HIE use, including Lab Specimen Reporting, Medication Reconciliation, Social Work Discharge Planning, Admissions, Pharmacy Ordering, and Scheduling Appointments. We have successfully identified challenges to HIE implementation in nursing homes and through use cases are overcoming barriers to implementation.