Improving access to data to track and improve follow-up

Background

Follow-up of patients by primary care providers after hospital or ER department visits is a valuable way to improve patient outcomes. Many interprofessional primary care teams are developing local ways to do this. This paper describes some of the emerging local solutions, with special thanks to the QIDSS who are largely responsible for developing them.

Hospital data access strategies

1. Direct EMR access to hospital discharge data
   Primary care providers receive text based patient reports or results electronically directly from the hospital information systems to the primary care EMR. There are several solutions of this nature which are very similar to each other. They include SPIRE (LHINs 1 and 2), ClinicialConnect (LHINs 3 and 4), TDIS (LHIN 9), POI (LHIN 13 and some of 14) and Hospital Report Manager (all LHINs). While there are technical differences between these systems and distinct geographic boundaries of implementation, they all represent automatic mechanisms for near-real-time feed of hospital discharge information (among other information) directly into the EMRs and thus require some readiness on the part of the primary care EMR system to accept the feed. See Appendix 2 for description of how these services work to provide access to hospital data to primary care providers. The provincial solution being implemented by OntarioMD (ie Hospital Report Manager) has been impeded partly because of lack of readiness of some EMRs. However, the high level of penetration of all the other solutions in their respective geographies suggests that these EMR barriers can be overcome.

2. Semi-manual batch data on hospital discharges
   Primary care providers receive electronic lists of discharged patients on a periodic basis (eg daily, weekly, monthly) via a secure electronic file transfer process. In some teams, the process is at least semi-automated, with the report being produced by the hospital information system and transferred to primary care without human intervention. In other teams, the process is mediated by staff at the hospital. In all cases, the process requires direct negotiation with hospital management (for permissions) and health records or patient registration departments to define the reports required and set up the transfer process. The scope of the reports varies between teams from the perspective of which patients are included and how the hospital ensures that the reports are limited to only the patients from the primary care team (usually on the basis of the identity of the family physician of the patient as recorded in the hospital system). In all cases to date, the process of receiving and reviewing the report on the primary care side is manual and mediated by primary care team administrative and/or clinical staff. See Appendix 3 for examples of processes underway.

3. Near-real-time individual patient data on hospital discharges:
   Primary care providers are notified of the discharge of their patients on an individual basis via faxes or phone calls. In some teams, this is a routine process for all patients while in others, it is limited to patients for whom the hospital care team believes follow-up in primary care is necessary. This may be established via formal criteria in a discharge planning process or may be at the suggestion of the attending physician in the hospital. This solution is mostly limited to smaller hospitals with small

numbers of discharges per day and usually only those with close relationships with primary care providers which could be based on co-location or very close proximity and high degree of overlap between physicians in the hospital and primary care setting. The process is manual for both hospital and primary care providers.

4. Near-real-time review of hospital information systems by primary care provider
   Primary care providers access hospital information systems directly from within the primary care organization. This is limited to primary care teams who have negotiated permissions and logon credentials from their local hospital or hospitals, when there are several that serve the patients of the primary care organization. This process also depends on primary care providers having the necessary expertise or training in the use of the hospital information system. It seems to be most common among hospitals with "Meditech" systems. It requires human intervention on the primary care side (ie to log on, run the queries and record/extract the information) but no action on the hospital side once permissions have been established. See Appendix 4 for more information.
   Another tool providing near-real-time viewing of hospital events is ClinicalConnect (available in LHINs 3 and 4). ClinicalConnect is a secure web browser application that links and presents hospital (and other) information in real-time to participating providers, which included primary care organizations. The process is automated at both the hospital and primary care provider ends but may require human intervention to update primary care records. See Appendix 4 for more information.

EMR Data capture and extraction strategies

1) Tracking outside EMR
   Primary care providers maintain a list of patients requiring follow-up outside the EMR (eg via the lists of discharged patients received from the hospital) and record if and when a follow-up intervention was made by whom. This is an entirely manual process and therefore completely independent of EMR functionality or lack thereof. Extraction of these data for measurement purposes is straightforward since the tracking methods is purpose-specific (ie "follow-up spreadsheet").

2) Tracking by "task list" in EMR
   Primary care providers update their EMR with information about hospital discharges either manually or via automatic interfaces. The "task assignment" function within the EMR is then used to alert specific providers (Eg nurse or physician or other designated staff) to follow-up on discharged patients. In many teams, this is a manual process in which a staff member reviews all of the discharge notifications in the EMR and then chooses which patients need follow-up by which staff. Some EMRs (reportedly Accuro) have the technical capacity to automatically assign "follow-up" on the basis of the EMR having received hospital discharge information but the extent to which this is operational in any team is unknown. In any event, the completion of the follow-up intervention by the assigned staff member is then documented in the EMR. This may be done in a standard way or just as a routine update to the patient's record. Extraction of these data would require a search of the EMR for patients receiving "follow-up" intervention, assuming it was recorded in this way, or for patients with updates to their records within 7 days of hospital discharge, assuming this date was

recorded in a searchable way in the EMR. Neither assumption appears to be consistently valid across all health teams or EMRs.

3) Routine encounter tracking

Primary care providers enter data about the nature, timing, duration and other aspects of each encounter directly into the EMR or other software tool, usually primarily for the purposes of tracking data reportable to MOHLTC. Where data are entered into EMR, it is possible to extract data on follow-up via a query that searches for hospital discharge data in the EMR and presence of an encounter within 7 days of the discharge date and/or specifically identified as a "follow-up" encounter. For systems outside the EMR which may not be able to access hospital discharge date, additional data may need to be entered by the provider at the time of the encounter to identify "follow-up" visits for the purposes of extraction. It may be possible to merge the patient-specific encounter data from outside the EMR with EMR data to determine proportion of eligible patients receiving follow-ups but there does not appear to be a health team taking this approach at this time. See Appendix 5 for more information.

Appendices

1) Definition and issues existing follow up indicators (from QSC and Indicator Working Group materials)
   Primary Care Visits Post-Discharge = Percent of patients/clients who see their primary care provider within 7 days after discharge from hospital for selected condition. See Page 16 in HQO technical spec: http://health.gov.on.ca/en/pro/programs/ecfa/legislation/qualityimprove/qip_tech.pdf Data source: Admin data thru Health Data Portal etc
   The specific problems with the indicator that the Indicator Working Group suggested should to be addressed prior to inclusion in a membership-wide report of performance were as follows:
   - Excludes follow-up by anyone other than physician and therefore violates a key principle of team-based care
   - Excludes follow-up by any method other than office visit and therefore not consistent with best practice re: patient centeredness and access via email, phone and/or house calls
   - Lack of real-time data about hospitalizations prevents health teams from measuring and improving follow-up
   - Fails to exclude patients managed in and discharged from hospital by their primary care physician (who therefore might not need 7-day follow-up)
   - Consistent data (albeit old and flawed as above) are already available to all teams via HDB and QIP data sources

2) HRM-like tools
   The Physician Office Integration feed (POI) populates the discharge date as an actual (ie searchable) data element in the patients' record in the EMR. Providers could now go through their EMR and find patients who had been discharged from hospital on certain days. However, there was a problem with the dates being wrong. Health Sciences North has found a solution to the incorrect dates appearing on discharge and admission reports being received by POI. Telus Health PS Suite has therefore now closed the incident report and ticket number. Incidentally, this ticket was initiated under only one FHT but after launch of the QIDS program, the ticket was expanded first to 9 FHTs in the QIDSS partnership with the FHT initiating the ticket and then to other FHTs in the QIDS program, at which point, there was increased attention to resolution of the ticket and it was quickly completed.

3) Batch data from hospitals

   "We are working with the Thunder Bay regional to get a daily list of discharged patients who are marked as using Dilico as their primary care provider. The list will then be dumped into the EMR. Right now, this may be just a fairy tale but I'm confident we will come up with some way of getting it. This will allow DIlico to book 7 day follow ups for patients who require it and easily track how many get in".

4) Near real-time individual patient viewing
   See attachment b) above. Also, consider ClinicalConnect. ClinicalConnect (LHINs 3 & 4) is a secure online web portal that aggregates patient information in real-time from 28 hospitals throughout the HNHB and WW LHINs. It provides physicians and clinicians with real-time access to their patients' electronic medical information from regional hospitals, Community Care Access Centres (CCACs) and Oncology Centres. Physicians also have the option to electronically download hospital data into their office EMRs via the Hospital Report Manager feature. For more information see: http://info.clinicalconnect.ca/CC/about-clinicalconnect/ .
5) Encounter tracking:
   Patient Encounter Tracking system, East Wellington FHT (Contact information: Kevin Samson) and IMS tool, Guelph FHT (Contact information: Kirk Miller)