INNOVATING through e-INTERFACING

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Background: Insurance companies and CPF Board request for medical reports from SGH for the purpose of assessing patient's application for insurance coverage and medical claims. These requestors had the option of sending their requests via mail, fax, email, or online. There were inefficiencies encountered in requesting for medical reports. At the insurers' end, mails and faxes sometimes got delayed or lost en route to SGH, thus resulting in unhappiness and frustration to patients whose reimbursement claims were delayed. At SGH's end, aside from the delay in receipt of the requests due to various reasons, much effort and resources were also spent in registering these requests and processing individual cheques per request-letter. Delays in sending out completed medical reports would sometimes arise when insurers sent a cheque for the wrong amount. At both ends, clarifications and checking status of requests had to be done via mail, fax or telephone which lengthened the medical reports turnaround time.

Medical Report request	Payment for Medical Report	Status Update	System Cross-talk
• Receipt delay due to mail issues • Lost requests • Follow-up clarification time waste	• Lost cheque • Inaccurate cheque amount • Payment follow-up inconvenience	• Difficulty in reaching the other party • Time consuming • Inaccurate communication	• Manual re-entry of details • No automatic status update • No 2-way communication system

Table 1: Challenges associated with the request for medical records

Figure 1: Ishikawa diagram to identify the root causes

Figure 2: Pareto Chart analysis to prioritize the issues to resolve

Figure 3: Flowchart for the medical report request process

Solution : After mapping out the work-flowchart, the Ishikawa schematic was used to identify the root causes of the delay in medical reports, as perceived by patients, CPF board and insurance providers. During the subsequent Pareto analysis, it was established that an inability to update the status of request for medical reports, inadequacy in terms of update content, difficulty in establishing communication channels with the requestor and incorrect details during the request process were all contributors to the delay in the provision for medical reports. Figure 3 illustrates the four phases in the medical reports request workflow. It was felt that realistically any reduction in the delay needs to be achieved through the reengineering of Phases I and II only. IT was relied upon to interface the two systems eMedicalHub (external) and MRTS(internal) as shown in Figure 4, such that requests could be made online in a structured manner and the requests were transmitted instantaneously, thus addressing the main causal-issues identified by Ishikawa and Pareto analysis.

Figure 4: System cross-talk (interface) regarding medical report request process
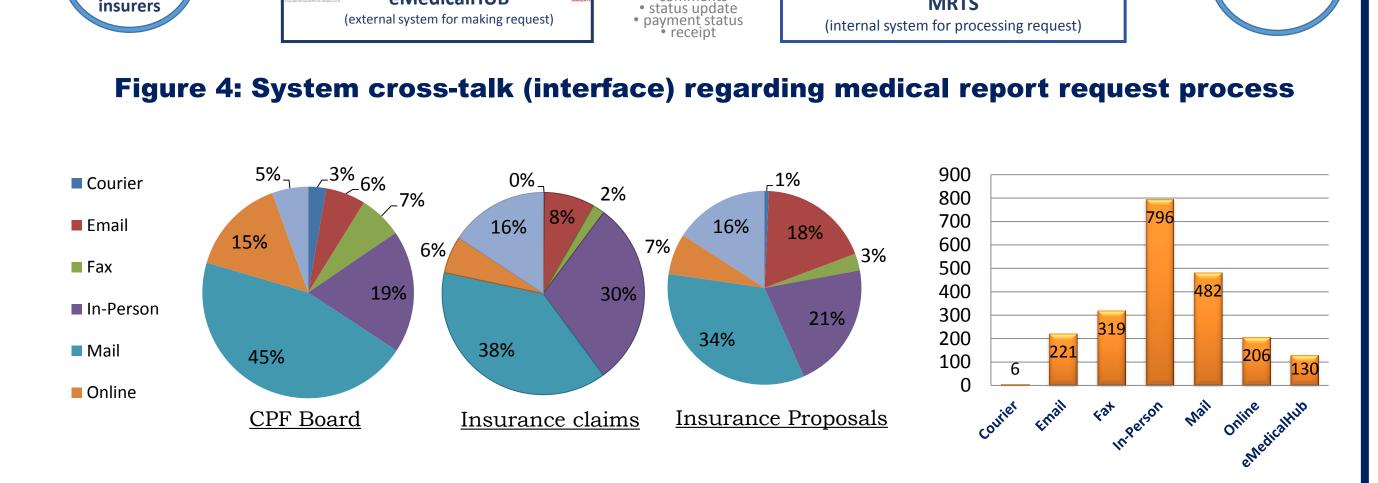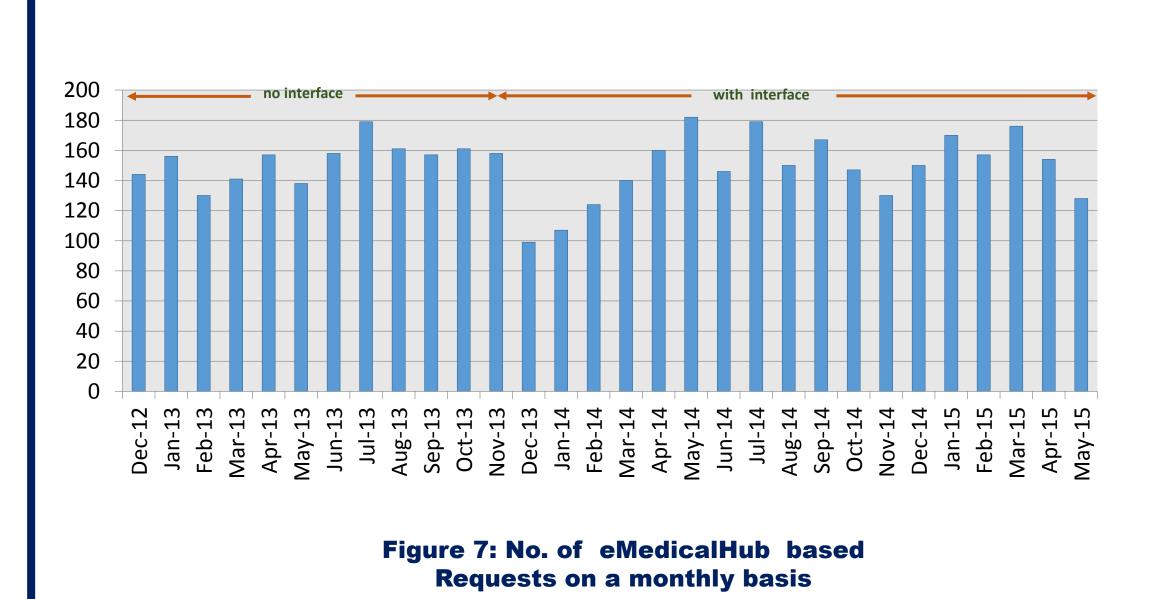

Figure 5: eMedicalHub use vis-à-vis other request modes by type of claim (May'15)

Figure 6: eMedicalHub use compared to other request types(May'15)

Adoption and Challenges: eMedicalHub and MRTS have been used steadily, at around 150 requests per month. Some insurers had started using this interface on a trial basis (one or two departments only), whereas others have been reluctant to adopt due to it being pay-per-use service for the requestor. However, utilization will gradually improve, because apart from time savings (1-2 days as shown in Figure 8), this interface also helps in reducing patient anxiety associated with their treatment costs.
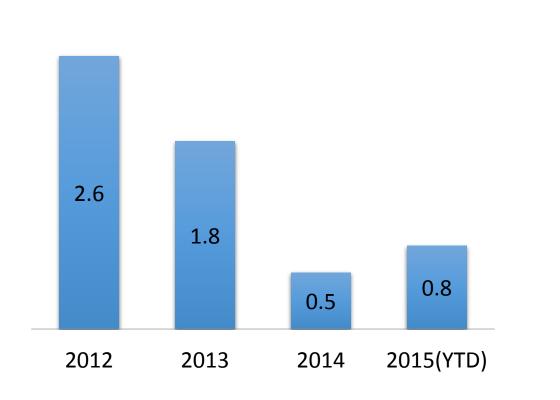

Figure 7: No. of eMedicalHub based Requests on a monthly basis

Figure 8: Delay in request processing (in days) from request received date

Conclusion: The implementation of integration between EMH and MRTS has benefited both SGH and requestors of medical reports (insurers). It has allowed requests to be processed faster, has improved communication between the parties and allows payments to be cleared more efficiently without taking up much time and resources. Categoric benefits have been highlighted below -:

Request details	Request details automatically transmitted to the hospital's medical rec. tracking system, thus ensuring no mistakes.
Use of Comments	HIMS staff can communicate real-time back with the requestor via 'comments', thus reducing clarification time.
Bulk payment	Payment can be made in bulk by requestor on a monthly basis, thus eliminating individual payment tracking time.
Status update	MRTS interfaces with EMedicalHub to give real-time status update of requests, thus saving time.
Processing time	Not relying on postal mails and fax for communicating means lesser time waste due to information lost in translation.
Patient anxiety	Immediate relevant updates mean patients are more aware with the correct information, thus reducing their anxiety.

1. MRO – Medical Records Office, 2.HIMS – Health Information Management Services, 3. MRTS – Medical Records Tracking System