whitepaper

Guide to high efficiency release of health information

Evidence on how a digitized release of information process enhances patient and staff experience while improving your hospital’s bottom line

Eliminate your hospital’s cost of printing, mailers, postage and CD burning for Medchart releases

see page 6 for Southlake case study results

Special thanks to our partners who made this whitepaper possible:
1.0 Table of contents
A snapshot of what’s in this whitepaper

1.0 Table of contents ................................................................. 2
2.0 Introduction ............................................................................ 3
3.0 Release of information deficit .............................................. 4
4.0 Southlake case study ............................................................. 6
5.0 Release of information best practices ................................... 8
6.0 Accelerating ROI request fulfillment ................................... 9
7.0 Enhanced patient and provider experience .......................... 10
8.0 Implementation ....................................................................... 11
9.0 Benefits estimates ............................................................... 14
10.0 Acknowledgment ................................................................. 15
11.0 Glossary ............................................................................... 17
12.0 Testimonial ........................................................................... 18

All information enclosed within this report is for educational purposes only. This analysis has been conducted based on self reported averages from a number of hospitals, varying in size, to create an analysis of current deficiencies and the estimated possible future return related to their release of information process. To accurately forecast your own return based on these figures please contact us for a comprehensive outline related to your specific organization.
2.0 Introduction

The importance of finding efficiency in ROI

Hospitals of all sizes and functions are under constant pressure to operate at high standards. On top of their core health care delivery services they are also mandated to provide required release of information services that inevitably operate at a loss to the institution. This is largely due to the fact that the release of information is a time intensive process with high material costs. Also, a majority of release of information (ROI) requests come from the circle of care for which there is no way to recover the costs incurred in that transfer. It’s imperative to find efficiencies in the release of information process to lessen the burden of this required service.

The release of information service is also burdened by increasing performance expectations with regard to the quality of services provided, patient experience and privacy compliance. Hospital obligations and liability to maintain the highest standards of privacy and security remain the same. Hospital management and healthcare providers are expected to find efficiencies in absolutely every aspect of their operations to mitigate these ever present burdens. It is also often difficult to adopt new innovations, that may be obvious solutions to front line staff, but don’t gain visibility from hospital management.

This whitepaper will present operational efficiency gains in comparison to the average ROI process at most healthcare institutions. Efficiencies were calculated for implementations with and without Health Information System (HIS) / Picture Archiving and Communication System (PACS) integrations. The enclosed data are based on both anonymized self reported hospital metrics as well as a specific implementation case study with Southlake Regional Health Centre (Southlake).

If you have any questions about the content of this report please contact Medchart at: contact@medchart.ca
3.0 The release of information deficit
Labour & material requirements without compensation

Clinicians and health information custodians have a professional responsibility, as well as a legal obligation, to release personal health information (PHI) when presented with an authorized request for information. In multiple surveys of medical institutions we have assessed the average custodial fee to be upwards of $100 for third parties and $30 for patients. In practice the efficiency and materials costs of release of information can be much higher.

This reality is compounded by the fact that any release of information or transfer of records within a patient’s circle of care must be performed without any custodian fee. Figure 3.1 shows that free record transfers across healthcare providers compose 70% of total requests on average. However, only approximately 30% of requests by volume are eligible for release of information fees. In at least 70% of releases the institution receives no compensation for their time and materials costs. These losses are compounded by third parties and patients who fail to pay outstanding release of information invoices.

Figure 3.1
Request monetization *

Figure 3.2
Paid request attribution *

* These figures represent the average distribution of requests from an array of hospitals with a minimum capacity of 100 beds and varied annual request volume. All percentages are self reported and anonymized to maintain privacy.
Procedural challenges with ROI

Release of information inefficiency does not stop with the lack of fees recovered for fulfilling requests. We’ve completed a deep operational analysis with regards to the ROI process in some of the largest institutions in Canada and found glaring opportunities for improvement. There are a number of challenges from an operational standpoint that cause both time and costs to rise dramatically:

- Fragmented information silos across institutional departments
- Manual processes increase the possibility of human error
- Multiple hospital entry points with variances in required documentation
- Uncoordinated release of information processes that are paper and time intensive
- Privacy and security compliance barriers
- Uncoordinated release procedures across hospital departments can create confusion for patients and third party requesters as well as extra work for hospital staff adhering to varied release requirements

Figure 3.3

Release of information #s

>300 million hours wasted annually on inefficiencies

70%+ of requests filled without any compensation

20 days average time required to fulfill a request

62% estimated 30 day fulfillment compliance level in 2015

[5] Source: Medchart in-field analysis and operational research
4.0 Case Study

Automating the release of information process

Southlake Regional Health Centre (Southlake) partnered with Medchart to streamline their medical records release of information process.

Medchart provided a secure, web-based platform within the Health Information Management (HIM) department at Southlake. Staff used Medchart to:

- Accept release of information requests from patients and third parties electronically
- Collect all necessary authorization forms and verified signatories in a digitized form
- Automatically require additional supporting documentation from authorizing signatories
- Accept online payment at the time of record request
- Centralize the release of information process to the HIM department
- Release health records and diagnostic imaging in multiple formats (PDF, DICOM, etc.)

Program overview

Implementation

20 month study period

Electronic release process

Request volume by source

68% Patient
20% Lawyer
12% Clinic
## Results analysis paid requests

<table>
<thead>
<tr>
<th>HIM internal project analysis</th>
<th>Capacity</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savings*</td>
<td></td>
<td>48%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average return comparison (days)</th>
<th>All</th>
<th>Consumer</th>
<th>Lawyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to Medchart</td>
<td>16.3</td>
<td>4.3</td>
<td>20.5</td>
</tr>
<tr>
<td>With Medchart</td>
<td>2.4</td>
<td>2.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Time reduction</td>
<td>-13.9</td>
<td>-1.6</td>
<td>-19.1</td>
</tr>
<tr>
<td>Request fulfillment waterfall analysis</td>
<td>48%</td>
<td>73%</td>
<td>99%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Turnaround</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Same day turnaround</td>
<td></td>
</tr>
<tr>
<td>Next day turnaround</td>
<td></td>
</tr>
<tr>
<td>30 day turnaround</td>
<td></td>
</tr>
</tbody>
</table>

* In this analysis material costs cover the material and equipment necessary to fulfill requests. Capacity savings are in reference to automation of release processes, billing automation and automated quality assurance of requests.

## Conclusion

The program successfully delivered on business goals and also improved overall patient experience. 99% of Medchart requests to the hospital were made online.

“I am so glad to be partnering with Medchart to make it easier for patients to access their own health information!”

**Arden Krystal, CEO**

CEO, Southlake Regional Health Centre
5.0 Release of information best practices

A guide to optimizing your ROI process

Eliminate direct expenses and material costs

Digitize the release of information process by using verified electronic signatures and digital consent forms to eliminate incoming paper. Capture any applicable release of information fees electronically and release all records digitally to reduce physical materials and costs for outbound releases.

Centralize the release of information process

One of the most important aspects of optimizing the release of information process is ensuring a single standardized point of entry for all ROI requests. Past implementations have shown that removing the burden from individual clinics or departments, and centralizing the ROI process under the HIM department, has greatly increased internal efficiency and reduced confusion among providers and patients.

Integrate ROI process with HIS and PACS systems

For the absolute best results it is highly recommended to integrate your existing HIS and PACS provider with your new digital release of information process. This generates additional increased capacity for the HIM department of at least 73%.

Eliminate accounts receivable

By implementing an automated ROI system you can also accept all payments electronically at the time of request. This ensures 100% fee collection and eliminates the need for invoicing, accounts receivable and the frustrations of not being paid for release of information costs.
6.0 Accelerating ROI request fulfillment

Fulfilling requests faster and more securely

By automating the release of information process it is possible to rapidly surpass government mandated 30-day turn around time (TAT) requirements. The metrics displayed in Figure 6.1 are real average field results when using Medchart for release of information requests. These rates represent near perfect 30-day compliance. Ontario’s Information and Privacy Commissioner’s 2015 report on ROI compliance rates, states that compliance sits at 61%[5]. That compliance rate is substantially lower than Medchart’s real world two-day TAT average.

Figure 6.1
Release benchmarks

\[
\begin{align*}
81\% & \quad \text{of records delivered within 2 days }^* \\
99\% & \quad \text{of records delivered within 30 days }^* \\
\end{align*}
\]

* Benchmarks are average release metrics derived from field produced usage statistics using Medchart for release of information

Consumer mediated data exchange

Implementing a consumer mediated data exchange (CME)[6], gives patients an advanced layer of privacy protection. A CME puts the consumer in control of their PHI. The Medchart CME allows them to share all or parts of their data with any individual or organization they choose.

“It’s the patients’ data, Medchart lets [patients] own it and do what they want with it ... and the software digitally enables good people to do good work, it’s really a no brainer.”

Dr. David Jaffray, UHN

EVP, Technology


7.0 Enhanced patient and provider experience

Improving the circle of care experience

By implementing a completely electronic and centralized release of information process your staff will find the new system easy and quick to use. Staff have more time to focus on high value tasks. This transition and increase in productivity will create a more satisfying work experience for HIM staff.

From a patient perspective it is crucial to offer multiple ways to access the release of information process. These access points include kiosks in the health records department, an online request system accessible from home, and the patient’s mobile device. Thus increasing capacity and saving costs for travel and parking for a possible one or three visits. In this way patients do not need to take a partial day off work to request records. As seen in Figure 7.1, our field implementations have shown patients will choose to request records remotely from the comfort of their own home if given an electronic request option. This saves them the time, cost and frustration of traveling to an institution with every information request.

Figure 7.1
Patient request statistics

73% of records requested after 4pm
49% of records delivered within the same day

Furthermore, because almost 49% of records are released within the same business day, those patients and requesters gain near instant gratification regarding their request for release.
8.0 Implementation
How Medchart works when implemented for ROI

Medchart is an HL7 FHIR®-based consumer-mediated exchange (CME) for PHI. FHIR® – Fast Healthcare Interoperability Resources (hl7.org/fhir) – is a next generation standards framework created by HL7. FHIR combines the HL7 international framework for secure health information transfers with the latest web standards and a tight focus on implementability. Medchart provides a technology platform for consent, identity, interoperability, data quality, data aggregation, storage, and sharing. Medchart improves patient access to PHI from all Health Information Custodians (HICs) and enables data sharing between patients, circle of care, third parties, and other HICs. Medchart uses an intuitive and powerful consent engine to put patients in control of sharing their health data to solve legislative, jurisdictional, and policy related consent challenges.

Functional overview of Medchart implementation

Connect health information (lab results, medications, etc.) from hospital information systems (HIS), diagnostic imaging systems (PACS), and provincial repositories to patients via Medchart.

Share PHI electronically with explicit patient consent in real-time. Export files, using the HL7 FHIR framework, in convenient sharing formats such as PDF and portable DICOM.

Record user-entered data or data from other sources relevant to patient care.

Display medical records, DICOM images, and user-entered data in user friendly formats.

Communicate between health records staff and requesters through secure messaging.

Healthcare providers and third parties who receive shared PHI from patients are required to have their own secure Medchart login credentials. Collection, use, and disclosure of data is performed in accordance to local privacy legislation and automated using a direct-to-patient (D2P) flow of information wherever reasonably possible (exceptions apply: e.g. mental health).
Users are equipped with granular controls which allow patients to set consent and sharing directives for all their data on Medchart. Consent modifications are logged and clearly visible to patients as a list of their personal records and who has current access. Patients are provided with the ability to cancel sharing relationships and revoke consent at any time within the online platform.

**Security and privacy safeguards for PHI**

- the PHI of Canadian patients resides within data centers in Toronto, Ontario with a geo-redundant backup in Quebec City, Canada;
- Medchart uses strong encryption to secure information at rest and in-transit. All databases containing PHI are fully encrypted;
- user actions within the portal are logged for security auditing purposes;
- all Medchart employees and independent service providers are required to complete privacy training and abide by the Medchart Privacy and Confidentiality Policy;
- the Medchart Privacy Officer closely supervises the activities of staff members and regularly reviews user/staff logs.
- Medchart will follow a detailed Privacy and Security Incident Management protocol in cases of potential privacy incidents
Medchart consists of three separate platforms for:

- **Third parties** (including circle of care) requesting health information with explicit patient authorization;

- **Consumers** requesting and sharing PHI;

- **Hospital/Clinic** request for information releases of PHI.

**Figure 8.1**

**Release Options Diagram**

**Option 1: Upload Records**

1. **APPROVE AUTHORIZATION**
2. **LOCATE RECORDS**
3. **UPLOAD RECORDS**

**Option 2: Integration**

1. **APPROVE AUTHORIZATION & RELEASE**
9.0 Benefits estimates

**Bottom line impacts of automating your ROI**

**Figure 9.1**

**Hospital process comparison**

<table>
<thead>
<tr>
<th>Current process</th>
<th>Medchart process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Manual request</td>
<td>1. Electronic request verified electronic consent; supporting documents;</td>
</tr>
<tr>
<td>2. Authorizations</td>
<td>2. Receive &amp; review request online payment;</td>
</tr>
<tr>
<td>3. Receive and review</td>
<td>3. Upload request</td>
</tr>
<tr>
<td>4. Search for records</td>
<td>4. Online delivery</td>
</tr>
<tr>
<td>5. Format for release</td>
<td></td>
</tr>
<tr>
<td>6. Deliver</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 9.2**

**Implementation benefits estimates**

These implementation benefits estimates are derived from real world working examples with hospital networks. The findings:

- **74%** material cost savings
- **48%** increased staff capacity without integration
- **73%** increased staff capacity with PACS & HIS integration

**Annual financial return per 10,000 requests**

<table>
<thead>
<tr>
<th></th>
<th>Revenue</th>
<th>Costs</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current process</td>
<td>$ 153,300</td>
<td>$ 218,900</td>
<td>- $ 65,500</td>
</tr>
<tr>
<td>Chart Assist Upload</td>
<td>$ 191,700</td>
<td>$ 118,800</td>
<td>$ 72,900</td>
</tr>
<tr>
<td>Chart Assist integration</td>
<td>$ 191,700</td>
<td>$ 55,400</td>
<td>$ 136,300</td>
</tr>
</tbody>
</table>

**99%** of requests fulfilled within 30 days
10.0 Acknowledgment

A special thank you to these great partners

Southlake Regional Health Centre is a full-service hospital with a regional, clinically advanced focus.

Southlake offers 426 patient beds and accommodates more than 113,000 visits to the Emergency Department, 24,000 in-patient admissions, and 530,000 out-patient visits each year. As a regionally designated site, Southlake is responsible for developing and providing advanced levels of care to the more than 1 million people who reside in York Region, Simcoe County, and in some cases, as far north as Muskoka.

This project is funded by the Government of Canada through the Federal Economic Development Agency for Southern Ontario. Its mandate is to strengthen the region’s economic capacity for innovation, entrepreneurship and collaboration, and to promote the development of a strong and diversified southern Ontario economy.

FedDev Ontario provided up to $15 million, under the Investing in Commercialization Partnerships initiative, to York University, in collaboration with Southlake Regional Health Centre and the University Health Network (UHN), as well as 36 partners, to develop and commercialize clinical applications and medical devices.
Health Ecosphere is a multi-partner collaboration led by York University and Southlake Regional Health Centre. Along with University Health Network (UHN), the partners work with businesses and other research institutes to develop personalized healthcare technologies and state-of-the-art enterprise solutions for customized health management and care. Technologies include healthcare apps, medical devices, and big data platforms. These solutions will provide connected and coordinated care across the system by integrating previously segregated markets; help patients with chronic disease change their behaviour; and leverage big data analytics to develop and commercialize predictive health solutions, leading to improved outcomes for patients and reduced healthcare costs.
11.0 Glossary

A quick guide to terms used in this report

- **HIS** Health Information System - any system that captures, stores, manages or transmits information related to the health of individuals or the activities of organizations that work within the health sector.

- **HIM** Health Information Management - information management applied to health and health care.

- **PACS** Picture Archiving and Communication System - a medical imaging storage technology

- **TAT** Turn Around Time - specifically with regard to release of information fulfillment

- **ROI** Release of Information - the disclosure process of confidential patient information to authorized individuals

- **HIC** Health Information Custodian - individuals or organizations who have custody or control of personal health information.

- **HL7** Health Level Seven International - not-for-profit, ANSI-accredited standards developing organization

- **FHIR** Fast Healthcare Interoperability Resources

- **PHI** Personal Health Information

- **DICOM** Digital Imaging and Communications in Medicine - standard for the communication and management of medical imaging

- **D2P** Direct to Patient

- **CME** Consumer-Mediated Exchange - allows patients to manage their healthcare information online and assist in coordinated care.
12.0 Implementation testimonial

“With Medchart the request can occur at any time as the service is available online. A patient or their designated representative can simply log in, make the request and receive records or diagnostic imaging within the same or next business day. The service charge is the same whether the request is made in person at the hospital or via Medchart online.

Our patients do this without leaving the comfort of their home, thus avoiding taking time off work, fighting traffic, and avoiding the cost of parking. They can be assured that their request is handled confidentially and securely.”

Barbara Stanek, CHIM
Manager, Decision Support & Health Information Services
Southlake Regional Health Centre
If you have any questions or would like a comprehensive analysis of your time, productivity and costs savings, with regard to optimizing your release of information process, please contact Medchart at:

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