UNIVERSITY HEALTH NETWORK (UHN)
QUALITY IMPROVEMENT PLAN

Discharge Summary Program
Contact information for administrative purposes
Please indicate the category that you are applying for.

X Quality improvement initiative(s) within an organization
☐ Quality improvement initiative(s) across a health system

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Title: Program Manager
Organization: University Health Network
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Phone: (416) 340-4800 x 6278
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Email: andre.d’penha@uhn.ca
Project title: UHN Quality Improvement Plan Discharge Summary Program
Start date of the project:
X This program was initiated within the past three years and has sustained itself for at least
18 months.

Contact information for publication
This will appear in the 3M Health Care Quality Team Awards booklet. If you do not wish to have
contact information published, please indicate “n/a” in the applicable fields.

☑ Please use the contact information provided in the nomination form.

Project title: UHN Quality Improvement Plan Discharge Summary Program

Prefix: Mr.
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Please list project team members, with job titles, including anyone seconded or invited onto the team from other departments/groups. Include a separate page if necessary.

<table>
<thead>
<tr>
<th>Name</th>
<th>Job Title</th>
<th>Role as it relates to the project</th>
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</thead>
<tbody>
<tr>
<td>1. Dr. Charles Chan</td>
<td>Executive Vice President &amp; Chief Medical Officer</td>
<td>Executive Sponsor &amp; Steering Committee</td>
</tr>
<tr>
<td>2. Dr. Flavio Habal</td>
<td>Gastroenterologist</td>
<td>Business Co-sponsor &amp; Steering Committee</td>
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<tr>
<td>3. Dr. Peter Rossos</td>
<td>Chief Medical Information Officer</td>
<td>Business Co-sponsor &amp; Steering Committee</td>
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<tr>
<td>4. Dr. Edward Cole</td>
<td>Physician-in-Chief</td>
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<td>5. Dr. Shaf Keshavjee</td>
<td>Surgeon-in-Chief</td>
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<td>6. Dr. Gaetan Tardif</td>
<td>Psychiatrist-in-Chief</td>
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<td>7. Dr. Susan Abbey</td>
<td>Psychiatrist-in-Chief</td>
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<td>8. Dr. Pauline Pariser</td>
<td>Lead, Mid-West Toronto Health Link &amp; Primary Care Lead, UHN</td>
<td>Steering Committee</td>
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<tr>
<td>9. Michael Caesar</td>
<td>Senior Director, Information Management</td>
<td>Program Leadership &amp; Steering Committee</td>
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<td>10. Andre D’Penha</td>
<td>Program Manager</td>
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<tr>
<td>11. Sarah Chan</td>
<td>Senior Analyst</td>
<td>Project Lead</td>
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<td>12. Bethany De Jong</td>
<td>Senior Analyst</td>
<td>Project Lead</td>
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<td>13. Sajini Pathmanathan</td>
<td>Project Analyst</td>
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<tr>
<td>14. Penny Hackenbrook-Rogers</td>
<td>Director, Information Management</td>
<td>Expert Panel</td>
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<tr>
<td>15. Tony Naval</td>
<td>Manager, Patient Care Management Systems</td>
<td>Expert Panel</td>
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<td>16. Rosemarie Lourenco</td>
<td>Manager, Health Records &amp; Transcription Services</td>
<td>Expert Panel</td>
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<td>17. Slaven Rakic</td>
<td>Director, Information Management</td>
<td>Expert Panel</td>
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<tr>
<td>18. Rene Villalon</td>
<td>Manager, Medical Informatics</td>
<td>Technical Manager</td>
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<td>19. Olavo Fernandes</td>
<td>Director of Pharmacy</td>
<td>Expert Panel</td>
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<tr>
<td>20. Monique Pitre</td>
<td>Manager, Pharmacy Clinical Informatics</td>
<td>Expert Panel</td>
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<tr>
<td>21. Elizabeth Chiu</td>
<td>Manager, Coding &amp; Abstracting</td>
<td>Expert Panel</td>
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<tr>
<td>22. Bonnie Kiddell</td>
<td>Senior Manager, Registration</td>
<td>Expert Panel</td>
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<tr>
<td>23. Barbara Mesic</td>
<td>Manager, Radiology Management</td>
<td>Expert Panel</td>
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<tr>
<td>24. Sue DeVries</td>
<td>Nurse Practitioner, Cardiovascular Surgery</td>
<td>Expert Panel</td>
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<tr>
<td>25. Dr. Laurel Bates</td>
<td>Staff Physician, Acute Brain Injury</td>
<td>Expert Panel</td>
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<tr>
<td>26. Dr. Mark Bonta</td>
<td>Staff Physician, General Internal Medicine</td>
<td>Expert Panel</td>
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<tr>
<td>27. Dr. Jackie James</td>
<td>Wightman-Berris Academy Director</td>
<td>Expert Panel</td>
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<tr>
<td>28. Dr. Rob Wu</td>
<td>Internist, General Internal Medicine</td>
<td>Expert Panel</td>
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<tr>
<td>29. Dr. Andrew Hope</td>
<td>Radiation Oncologist</td>
<td>Expert Panel</td>
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<tr>
<td>30. Dr. Sean Cleary</td>
<td>Staff Physician, General Surgery</td>
<td>Expert Panel</td>
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EXECUTIVE SUMMARY

University Health Network (UHN) is Canada’s premier academic medical centre. Affiliated with the University of Toronto, UHN includes Toronto General and Toronto Western Hospitals, Princess Margaret Cancer Centre and Toronto Rehabilitation Institute, as well as The Michener Institute for Education at UHN. Representing a collective community of 30,000, including providers, researchers, employees, volunteers, and learners of all types, UHN is driven by a singular Purpose: transforming lives and communities through excellence in care, discovery, and learning.

Knowing that the Discharge Summary (DS) is a critical step in a patient’s journey, UHN launched its Quality Improvement Plan (QIP) DS Program to improve timeliness of completion and delivery, and quality of documentation. This has ensured fostering a tight-knit circle of care in the community we serve, communicating a summary of our patient’s hospital stay to community care providers, ensuring timely follow-ups, and preventing adverse events and readmissions for our patients that depend on us for safe and quality care.

Actively engaging patients and primary care has enabled UHN to deliver on its Primary Value – the needs of patients come first – and drive sustainable quality improvement for 4,700 clinicians across 51 Inpatient Units, resulting in a 70% increase in timely completion, 120% increase in timely DS delivery, and 64% of service visits experiencing fewer readmissions.

I am pleased to present this submission as an example of successful quality improvement with far-reaching impacts on strengthening collaboration with primary care, improving care transitions, and ensuring the needs of patients come first.

Sincerely,

Peter W.T. Pisters, MD, MHCM, CPE, FACHE, FACS
President & Chief Executive Officer, UHN
REPORT

A. ISSUE STATEMENT: QUALITY IMPROVEMENT INITIATIVE WITHIN AN ORGANIZATION

INITIATIVE IMPORTANCE TO THE ORGANIZATION
- The DS is a focus area on UHN’s QIP and Balanced Scorecard to create a positive patient experience and deliver high quality care
- The Toronto Central Local Health Integration Network (TC LHIN) has been advocating for a Standard DS to address disparate planning processes across area hospitals
- Ontario’s Health Links Program has been advocating greater Primary Care Provider (PCP) collaboration to ensure follow-ups within seven days post-discharge

RELATIONSHIP BETWEEN THE INITIATIVE AND ORGANIZATION TRANSFORMATION:
- To support UHN’s purpose of transforming lives through excellence in care, discovery and learning, the program focused on quality, safety, and innovation, to ensure safe, timely, and efficient care transitions
- UHN’s Medical Advisory Committee (MAC) mandates compliance for these elements, and holds physicians to standards that maintain safe and quality care
- The program strategically aligned with UHN’s principle of High Reliability to continuously anticipate failure in DS processes and ensure appropriate responses
- It also aligned with UHN’s mandate of becoming a Learning Health Organization, through the establishment of a continuous learning environment

KEY ISSUES FACING THE IMPROVEMENT INITIATIVE AND UHN:
- Improvements in DS quality, completion, and delivery directly impact over 35,000 inpatients discharged annually and over 46,000 DS reports delivered annually to their PCPs, greatly magnifying the challenge in fulfilling UHN’s QIP objectives
- At the start of the program (June 2014), only 50% of Discharge Summaries were completed within 48 hours of discharge and only 40% of reports auto-faxed
- The compound probability of a DS being completed within 48 hours and auto-faxed within three days was 25% (0.82 sigma), meaning that 3 in 4 PCPs had to wait longer than three weeks for a completed DS to be mailed to them
- Discharge Summaries sent to the wrong recipient constituted a proportion of privacy incidents, warranting an immediate need to reduce their likelihood
- A high proportion was completed by residents and students without formal DS best practice education, leading to issues with quality and value to PCPs

THE GOALS IN DEALING WITH KEY ISSUES:
- UHN committed to improving DS quality, and timeliness of completion and delivery, to strengthen connections with patients and PCPs, and enable more patient-centred care
• Program goals were to establish a standard UHN DS, enable 79% organizational DS completion within 48 hours post-discharge and 85% DS delivery to PCPs within three days, and ensure physician accountability for DS quality
• Scope included seven health professions in 51 inpatient units at seven UHN hospitals

PATIENT VALUES DRIVING THE NEED FOR IMPROVEMENT AND MEETING CUSTOMERS’ EXPECTATIONS:
• Patient outcomes driving the program included ensuring safer care transitions, and a decreased risk of re-hospitalization post-discharge due to faster follow-ups with PCPs
• The new electronic DS application enables clinically-driven value and standardization of practice, increasing UHN clinician willingness to adopt electronic clinical documentation
• As end-recipients of a DS, primary care now receive higher quality Discharge Summaries within three days from UHN, facilitating more timely follow-up care for their patients

B. INNOVATION IN HEALTHCARE DELIVERY & SYSTEM INNOVATION

CONTRIBUTIONS TO SYSTEM IMPROVEMENTS IN HEALTH SERVICES DELIVERY:

Figure 1: Improving the DS along the continuum of care

• The program set a precedent for DS quality improvement by casting a wider lens on the DS process throughout the patient’s care continuum, and not just at discharge, to ensure a holistic view and resolution of fundamental issues
• Execution and delivery through a programmatic approach, utilizing focused communications, and ensuring data-driven decision-making, created a unique learning environment, caused a positive change in clinician behaviour, and an organizational awareness of the importance of a quality and timely DS
• The program has enabled UHN to now be considered by the TC LHIN as the Gold Standard in Discharge Summary value to patients and primary care

INNOVATIVE TOOLS, TECHNOLOGIES, AND PROCESSES UTILIZED:
• The Minimum Viable Product (MVP) approach was used to create an innovative electronic DS solution that supported safe and collaborative practice, and value-add to patients and PCPs
• Partnership with the University of Toronto and Wightman-Berris Academy created an interactive Transition To Clerkship seminar and innovative education resources for residents and students (https://www.uhnmodules.ca/DischargeSummary/)
• Collaboration with the Royal College of Physicians and Surgeons of Ontario resulted in a first-of-its kind Quality Module for UHN physicians to conduct peer DS reviews based on a quality checklist, and receive credits to maintain their certification
• Innovative reporting mechanisms for physicians and leadership ensured transparency, accountability, and focus on areas for improvement
• The program took the lead in strengthening hospital-primary care partnerships by establishing quarterly touchpoints with PCPs to ensure ongoing value to DS recipients, feedback on improvements implemented, and safer patient care transitions

C. IMPLEMENTATION

THE EXTENT TO WHICH TARGETED APPROACHES WERE APPLIED:
• The program utilized the Institute for Healthcare Improvement’s (IHI) Model for Improvement to accelerate scalable change, resulting in significant improvements to the quality of care

Figure 2: Quality improvement framework

• With data functioning as the backbone to drive decisions and inform overall learning, the program applied Plan-Do-Study-Act (PDSA) cycles for each change implemented
• A programmatic approach ensured alignment between the three program work-streams – Provider List, Clinician Practice and DS Standards, established appropriate processes to ensure progress towards goals, and identified achievable outcomes

PROCESSES BEFORE CHANGES WERE MADE:
• Completed Discharge Summaries were not being auto-faxed to intended recipients due to missing fax numbers and practice license IDs in UHN’s Provider List
• Since UHN has a teaching and research focus in addition to consisting of seven hospital sites, ten clinical programs, and 33 clinical services, each involving complex clinical environments and multiple clinical professions, it was difficult to influence consistent changes and coordinate incremental improvements
• A lack of standardization of clinical practice, and historical trending towards customized stand-alone systems increased the difficulty of obtaining organizational data and further complicated data-driven decision-making
• This was compounded by a lack of transparency into organizational DS performance, and a lack of clarity on organizational policies and clinical expectations

HOW PROCESS CHANGES WERE MADE:
• Leveraging the IHI framework, the program created an engine of change through project management, clinical evidence and expertise, and change design, to ensure sustainable change through incremental improvements

Figure 3: Multiple approaches to learn and support improvement

An environment of learning and innovation was created through program management to brainstorm, trial, and optimize ideas prior to implementation

Figure 4: Extrapolating learnings out of the classroom and into practice
Each change was aligned with organizational policies, vetted thorough engagement, tracked via monthly indicators, and communicated to all stakeholders.

To ensure an innovative electronic DS solution that supported practice, a focused group of clinicians used a framework of iterative functionality and real-time feedback.

**HOW WAS PROGRESS MONITORED AND ADJUSTMENTS MADE TO THE PLANNED PROCESSES?**

- UHN chart completion performance was provided to physician leadership on a monthly basis for discussion and targeted improvement.
- Program progress was tracked monthly and provided to all stakeholders *(Appendix A: Monthly Program Progress Tracker and Appendix B: Monthly Program Status Report)*.
- Adjustments to scope, schedule, and budget were completed monthly based on leadership direction and program progress.
- Frequent patient partner engagement ensured an overarching patient focus to improve care transitions and influence positive outcomes.
- Ongoing PCP engagement functioned as an indicator of progress, and ensured value-add for timely and appropriate follow-up care.

**PROCESSES AFTER CHANGES WERE MADE AND METHODS USED TO ASSESS RESULTS:**

- Overall learning from each change and monthly data empowered program leadership to influence change, drive innovation, and alter direction to achieve targets.
- Quarterly stakeholder feedback cycles reflected on past progress and learnings to inform future program direction.
- Daily processes for UHN clinicians and PCPs now identify report delivery failures in real-time to prevent future occurrences, while weekly, monthly, and annual Provider List audits ensure timely delivery to intended recipients.
- A comprehensive educational curriculum on DS best practice has been established for clinical learners across UHN and other TC LHIN hospitals.
D. TEAM LEADERSHIP

THE ROLE OF TEAM MEMBERS AND SPECIFIC KNOWLEDGE CONTRIBUTED:

Figure 5: Program roles and responsibilities

TEAM DYNAMICS AND BARRIERS TO OVERCOME:
- The core program team consisted of five key individuals
- Challenges included limited allocated capital, tight implementation timelines, three simultaneous work-streams of effort and two quality studies, each with a growing list of stakeholders and deliverables
- Thousands of physicians, physician associates, nurse practitioners, clinical associates, pharmacists, residents, fellows, and students were impacted by improvements, creating additional challenges in ensuring focused communications, engagement, change management, and support

Table 1: Program team roles

<table>
<thead>
<tr>
<th>PROGRAM ROLE</th>
<th>RESPONSIBILITIES</th>
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</table>
| SR. DIRECTOR | • Ensure alignment with strategic objectives  
• Act as executive liaison and provide direction |
| MANAGER      | • Initiate, plan, and execute deliverables  
• Ensure engagement, motivation, and issue resolution  
• Ensure ongoing value and progress towards targets |
| LEADS        | • Plan and execute work-stream deliverables  
• Act as work-stream advocates |
| ANALYST      | • Design, develop, test, implement, and support changes |
INFORMAL PRACTICES TO OPTIMIZE TEAM PERFORMANCE:

- Selection of team members, stakeholders, and leadership was purposeful, with a preference for clinical informatics experience on similar organizational initiatives
- Co-location enhanced team productivity, while MS Lync and Skype facilitated inclusive discussions with off-site stakeholders
- Daily team huddles ensured awareness of priorities, alignment with targets, and highlighting of issues/risks
- Weekly tracking of program roadmaps, deliverables and indicators ensured a common understanding of progress, and informal celebrations of quick wins and major milestones
- Weekly touch-points with working groups, monthly work-stream discussions and quarterly Steering meetings ensured continued momentum towards targets

Figure 6: Program roadmaps and progress trackers

STEPS USED TO ANALYZE THE PROBLEM, DEVELOP AND TEST THE SOLUTION, AND IMPLEMENT CHANGES:

- The Define-Measure-Analyze-Improve-Control (DMAIC) approach and associated quality improvement tools were utilized throughout the program to ensure that objectives of quality, and timely completion and delivery were always met

Figure 7: DMAIC approach utilized
RESOURCE IDENTIFICATION AND RECEIPT:

- Physician leadership provided direction on areas and individuals to be engaged, while program leadership advised on data to be analyzed
- Division Heads, Department Chiefs, Medical Program Directors, and operational team managers provided additional stakeholders and subject matter experts to support program deliverables
- Program budget and staffing were allocated on an annual basis through UHN’s capital planning process

HOW THE TEAM WORKED WITH OTHERS OUTSIDE UHN:

- TC LHIN collaboration ensured that recommendations were incorporated and feedback provided
- TC LHIN hospital site visits enabled sharing of DS best practices, resources, and learnings
- University of Toronto and Wightman-Berris Academy collaboration ensured a comprehensive DS learning curriculum for all TC LHIN residents and students

Figure 8: Transition To Clerkship students using DS quality checklists

HOW THE TEAM WORKED WITH OTHER AREAS WITHIN UHN:

- Collaboration with Corporate Planning ensured alignment with UHN strategic objectives and tracking of program metrics on UHN’s Balanced Scorecard
- The program worked with Health Records for chart completion deliverables and with Transcription Services on DS delivery deliverables
- Operational teams involved for the DS delivery process included Privacy, Data Security, Patient Care Management Systems, Application and Decision Support, and the Joint Department of Medical Imaging
- Decision Support, Coding and Abstracting, and Enterprise Data Warehouse were engaged to provide coding, financial, and reporting data
- The Medical Education Office provided guidance on meaningful education resources, while alignment with UHN Public Affairs and Communications ensured focused multimedia communications
• Collaboration with the Registration and Scheduling Advisory Committee, Enterprise Health Records Clinical Advisory Committee, MAC, and Health Professions committees ensured UHN-wide representation and input on quality improvements
• Engagement with all 33 UHN clinical services ensured accommodation of clinical variations and proactive communication of upcoming changes

THE RELATIONSHIP OF THE TEAM TO UHN LEADERSHIP:
• Program sponsors - the Executive Vice President and Chief Medical Officer, the Chief Medical Information Officer, and the previous Chair of UHN’s MAC – championed program objectives, influenced change at the leadership level, and provided direction
• Monthly meetings held with each sponsor set agendas and discussed work-stream progress prior to each work-stream meeting
• The Steering Committee consisting of the sponsors, five additional Physician Chiefs, and UHN’s Primary Care Lead, established program goals, set organizational targets, and ensured alignment with strategic objectives
• UHN Division/Department leadership collaborated with the program to ensure staff awareness of changes, and to drive and sustain improvements
• UHN’s MAC provided formal authorization for all policy and practice changes, while UHN’s Quality and Safety Committee of the Board ensured program accountability

RELATIONSHIPS WITH STAKEHOLDERS OUTSIDE OF UHN:
• Through UHN’s Primary Care Lead, the program ensured regular engagement with PCPs, and alignment with provincial and TC LHIN initiatives
• PCP inclusion at quarterly UHN Health Records Services discussions ensured ongoing DS value, as well as future sustainability of best practice and standards

COMMUNICATION STRATEGIES TO UPDATE TEAM MEMBERS AND KEY PERSONNEL:
• A focused communications strategy was used to preview, drive, sustain, and reflect on each change, to engage stakeholders, address perceptions, and influence behaviour
• Goals included UHN-wide communication of targets, policies, and practice changes, and awareness and adoption of quality improvements and the new electronic DS application
• A target audience of younger residents and students and busy clinicians meant that information had to be communicated frequently and succinctly
• To support clinicians through the changes implemented, the program provided leadership with key messages to proliferate down to staff, personal letters sent from program sponsors, news articles on UHN’s corporate intranet to celebrate successes, a whiteboard-style video, and an interactive device-friendly website
• Each communication and change was tracked centrally to ensure continuous evaluation of value-add and impact
• Daily team communications were primarily via email and in-person meetings, while stakeholder meetings were preceded with agendas and presentations and followed up with meeting minutes and action items
E. PATIENTS AND FAMILY ENGAGEMENT

PATIENT INCLUSION AND ENGAGEMENT:

- UHN Patient Partners were included in the program’s collaborative inter-professional approach to create patient-friendly DS documentation
- Periodic discussions with the TC LHIN Patient-oriented Discharge Summary initiative ensured alignment of DS value to patients
- Prescribers and Pharmacists participating in the pilot implementation of UHN’s new electronic DS application consulted with patients they provided care for, to ensure continuous feedback cycles

Figure 9: Patient partners, pharmacists, and project staff at a workshop

HOW THE NEEDS OF PATIENTS AFFECTED THIS PROGRAM AND THE OUTCOMES ACHIEVED:

Figure 10: Patient partners discussing DS medications

- Since patient care transitions are critical moments in the continuity of care, discharge planning sections of the DS had to ensure clarity for follow-up instructions
- To reduce the likelihood of patient readmission, Discharge Summaries had to be completed and delivered in time to PCPs to ensure appropriate follow-up care within seven days of discharge
- In order to reduce the likelihood of adverse events post-discharge, patient medication documents required additional focus

TIMING OF PATIENT INVOLVEMENT AND THE ROLE PATIENTS PLAYED:

- The program engaged three patients through the year-long development of UHN’s new DS application that allowed for electronic completion of Discharge Summaries and auto-generation of discharge medication documentation
Patients were selected to ensure a cross-representation of age, diagnosis complexity, and frequency of UHN inpatient visits, and engagement included communication and feedback via email, facilitated workshops, and one-on-one sessions.

The patients acted as program partners working alongside project, technical, and clinical teams, and as program advisors to ensure appropriate inclusion of recommendations.

**BENEFITS/OUTCOMES TO PATIENTS:**

- The new electronic application allows clinicians to customize patient medication and discharge information based on the patient’s preferences, and ensure standardized instructional content to improve patient safety during their transition to primary care – including auto-generating two separate prescriptions, patient medication schedules, and a wallet card medication summary.
- UHN prescriber/pharmacist contact information is now included in DS and medication-related documents for timely clarifications from PCPs/community pharmacies.
- The likelihood of adverse medication-related events and medication errors post-discharge is now reduced due to clearly marked medication purpose, status, dosage, and frequency information on patient copies of discharge medication documentation.
- Clarity now provided in DS follow-up instructions ensures a thorough patient and PCP understanding of the status of appointments and referrals required for follow-up care.
- Patients are now more likely to receive timely follow-up care from their PCPs who are now more informed about their patient’s UHN hospital visit.
- Timely DS completion and delivery have also contributed to 64% of UHN’s clinical services experiencing a reduction in re-admissions in 2015 due to more timely and informed patient follow-up care post-discharge.

**F. DATA AND METRICS**

**SELECTION OF DATA:**

- **SCOPING:** DS clinical, financial, and quality data was mined and selected to develop a greater understanding of UHN’s current state.
- **SUPPORT OF TARGETS:** Through the program duration, data was selected for analysis based on deliverables to be completed within each work-stream and to achieve overall program goals.
- **BENEFITS REALIZATION:** Throughout the program, additional data was selected to quantify benefits realized and identify measurable outcomes.

**USE OF DATA:**

- **DEBUNK MYTHS:** Walkthroughs at the point-of-care enabled honing in on key issues and eliminating assumptions.
- **DETERMINE CURRENT STATE:** Completion, delivery, and quality data were mined, and clinical workflow mapping and time studies performed to understand existing processes.
• **ESTABLISH PROGRAM STRUCTURE:** Based on evidence gathered, three work-streams were established; each led by an Executive Lead and an Expert Panel

• **ENABLE PROCESS TRANSPARENCY:** First-hand observations and data provided leadership with visibility into organizational performance and areas for improvement

• **ENABLE FACT-BASED DECISIONS:** Program leadership used data to drive decisions, determine new standards, identify constraints, and inform overall DS process learning

• **SUPPORT PRACTICE:** Policies were updated to inform practice, based on organizational chart completion and inter-facility patient transfer data

**USE OF COMPARISONS, BENCHMARKS, AND DATA TO SET TARGETS:**

• **DEVELOP TARGETS AND GOALS:** Extensive online research, environmental analysis, TC LHIN hospital site visits, and internal Balanced Scorecard and QIP benchmarks were collectively used to set targets

• **SET ORGANIZATIONAL FOCUS:** The Steering Committee established goals and set organizational focus based on shared reviews of scoping activities, stakeholder feedback, and peer hospital insights

• **DEFINE BASELINE METRICS:** To ensure progress towards targets, key metrics and indicators were identified and baseline data tracked

**METHODS TO MONITOR QUALITY IMPROVEMENTS:**

• **REFINE THE PROGRAM APPROACH:** Data and feedback obtained from rapid trials was used to correct the overall course of action in each work-stream

• **MONITOR ON-GOING PROGRESS:**
  - Monthly progress was tracked to ensure focused work effort, progress towards targets, and measureable benefits ([Appendix A: Monthly Program Progress Tracker](#))
  - Daily, weekly, monthly, and annual DS delivery audits were conducted to ensure accuracy of UHN’s Provider List and delivery to intended recipients

**G. ANALYSIS**

**PROJECT SIGNIFICANCE TO UHN AND THE COMMUNITY IT SERVES:**

• The program set new standards in, and renewed organizational interest in executing data-driven quality improvements, enabled greater collaboration with primary care, and garnered strong interest from clinicians, patients, students, and peer hospitals

• The program cultivated an organizational movement from knowledge to action, identified effective ways to execute and sustain complex healthcare changes, and equipped physician leadership to address similar transformation challenges

• Discrete data fields and integrated ICD-10 codes in the new DS application enabled more accurate coding and re-imbursement associated with the quality of care delivered

• Increased organizational engagement has led to improvements in collaborative clinical practice, while improved education resources for UHN learners has increased DS quality

• Comprehensive reporting has supported more accurate DS data, fewer follow-ups by Health Records, and meeting accreditation standards
• Updates to UHN’s Provider List and improvements in DS delivery have positively impacted over 38,000 Ontario PCPs
• Incremental quality improvements have collectively impacted 1,700 physicians, physician assistants, clinical associates, nurse practitioners, and pharmacists, and 2,935 medical students, residents, and fellows, across seven UHN hospital sites

HOW PROGRAM OUTCOMES IMPROVED PATIENT SATISFACTION:
• The program’s patient partners have thanked UHN for focusing on discharge documentation and the opportunity to participate, and have provided positive feedback on improvements made
• UHN patients now receive standardized discharge medication documents personalized to their preferences, that allow for clarity in follow-up instructions
• A 120% increase in timely DS delivery has enabled patient follow-ups with their PCPs within seven days of discharge
• UHN’s updated Provider List and auditing processes now support a highly accurate delivery rate and a reduction in privacy incidents due to delivery to the wrong recipient

Table 2: Reduction in privacy incidents

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<thead>
<tr>
<th>KEY METRICS</th>
<th>BASELINE</th>
<th>PRESENT</th>
<th>AVERAGE REDUCTION IN ERRORS</th>
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<tr>
<td>% Mail Return Rate</td>
<td>3.98%</td>
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<td>62%</td>
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<td>% Fax Return Rate</td>
<td>2.07%</td>
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CONTRIBUTIONS TO THE ADVANCEMENT OF CONTINUOUS IMPROVEMENT IN HEALTHCARE:
• The quality improvement approach utilized has been established as a framework for future UHN projects, and the program has since served in an advisory capacity for other similar organizational initiatives
• Implementation of a UHN DS standard has allowed for incorporation of TC LHIN recommendations in alignment with other TC LHIN hospitals, and allowed for shared learnings with the larger collaborative effort
• The updated Provider List established the framework for UHN’s role in an upcoming provincial OntarioMD Hospital Report Manager initiative to electronically deliver reports to PCPs

OUTCOMES OF THE SUSTAINED QUALITY IMPROVEMENT BASED ON KEY QUALITY MEASURES:
• The compound probability of a DS being completed within 48 hours and auto-faxed within three days is now 75% (2 sigma), meaning that 3 in 4 PCPs now receive a completed DS within three days post-discharge
Table 3: Outcomes achieved based on key metrics

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<th>GOAL</th>
<th>KEY METRICS</th>
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<td><strong>Timely Completion</strong></td>
<td>% Completion within 48 hours – - All Lengths of Stay (LOS)</td>
<td>50%</td>
<td>81.5%</td>
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<td></td>
<td>- LOS&gt; 2 days</td>
<td>78.3%</td>
<td>87.7%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>- LOS&lt;2 days</td>
<td>0%</td>
<td>74.5%</td>
<td>74.5%</td>
</tr>
<tr>
<td><strong>Timely Delivery</strong></td>
<td>% Ontario PCPs missing a unique identifier</td>
<td>32.8%</td>
<td>0%</td>
<td>49%</td>
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<tr>
<td></td>
<td>% Discharge Summaries sent within three days</td>
<td>40%</td>
<td>89%</td>
<td>120%</td>
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<tr>
<td></td>
<td>% Discharge Summaries mailed due to missing/no fax</td>
<td>50%</td>
<td>3%</td>
<td>94%</td>
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</table>

Figure 11: DS completion and delivery improvements

- 64% of UHN Service visits saw a decrease in 2015 re-admission rates as compared to 2014 (average re-admission rate reduction = 2.9%, min = 0.4% and max = 7.7%)
- 41-foot reduction in stacked paper printed due to successful DS auto-fax delivery
- Updates to contact information for 95% of PCPs in UHN’s Provider List
- 20% (4,617) PCP accounts updated from quality audits in just the past year
- Focused communications increased UHN DS best practice website traffic by 527% and individual page views by 681%
- A 182% average increase in completion within 48 hours across all clinical services
- 75% of UHN’s admitting services now performing at or above UHN’s target of 79% completion within 48 hours
Figure 12: Average service increase in completion within 48 hours to-date

Figure 13: UHN clinical service – quarterly DS performance report

UHN Chart Completion: Discharge Summaries
Year: 2016 Quarter: October – December

Quick UHN Statistics
UHN Target Completion Rate: 79%
Total # DS: 10,053
Overall Completion Within 48hrs: 88%

Completion rates for Divisions/Departments that complete fewer patient discharges are:
- Anesthesia – 70%
- Medical Imaging – 64%
- Obstetrics/Gynecology – 97%
- Rheumatology - 95%
- Emergency Medicine – 0%
- Endocrinology – 100%
- Ophthalmology – 66%

Significant improvements towards meeting UHN's target were observed in the following areas:
- Gastroenterology
- Gynecology/Oncology
- Thoracic Surgery
- Respirology

More than 10% off UHN Target
Within 10% of UHN Target
Meets/Exceeds UHN Target

The image above depicts all patient discharges at UHN over the last 30 days:
- Division/Department’s box size reflects the proportion of discharges within that area
- Division/Department’s box colour indicates Discharge Summary completion performance within 48 hours as related to the UHN target.
PROGRAM SUSTAINABILITY/REPLICABILITY:

- Having successfully reached its targets for DS completion, delivery, and quality, UHN is now engaged with the TC LHIN to share its approach and quality resources, and positively impact the broader GTA patient population
- Learnings have been shared with PhD students, quality improvement healthcare conferences, and with Sunnybrook Hospital, Peterborough Regional Health Centre, and the Scarborough Hospital, to contribute to overall improvements in care transitions
- Weekly, monthly, and annual audits ensure sustainability of organizational performance, while physician peer DS reviews ensure sustainability of DS quality
- Quarterly meetings with PCPs now allow for two-way communication with primary care and mechanisms to ensure ongoing DS value and feedback cycles

COMPARISON OF PERFORMANCE INDICATORS USED WITH BEST PRACTICE PERFORMANCE:

- In alignment with the Ontario Public Hospitals Act and best practice at other peer hospitals, program learnings informed UHN to look at the DS across the entire patient care continuum, and update policies and set indicators for timely completion within 48 hours for patients of all lengths of stay
- In alignment with other TC LHIN hospitals, UHN transitioned away from mailing the majority of its DS reports, and set indicators to measure timely auto-fax delivery within three days of discharge

LINKS BETWEEN PROGRAM GOALS AND STRATEGIC UHN PRIORITIES:

- An organizational transition in DS completion from 14 days to within 48 hours has enabled a greater UHN focus on safe and timely patient care transitions
- Anticipation of potential DS process failures and creation of reconciliation processes to prevent their reoccurrence support UHN’s High Reliability Organization mandate
- Establishment of a community of learners and discussions with primary care ensured alignment with UHN’s Learning Health Organization mandate
- The program’s focus on quality and timely Discharge Summaries has enabled a reduction in re-admission rates, supporting UHN’s primary value of Patients First, while patient partner involvement ensured alignment with UHN’s patient-centred approach to improvements in care
APPENDIX A: Monthly Program Progress Tracker

UHN QIP DISCHARGE SUMMARY
MONTHLY PROGRESS TRACKER

MONTH: 25
November 2016 Data

COMPLETION

3,468
Patients discharged

24.2%
Discharged from the Department of Surgery

75.8%
Discharged from the Department of Medicine

23,725
Non-UHN Providers in the EPR Provider List

DELIVERY

7.0%
No charge
are missing a fax number or have no dedicated fax
Target: 10%
Baseline: 40%

0%
of Ontario Providers missing a registration ID
Target: 0%
Baseline: 32.8%

4,981
DS Reports to be delivered

88.6%
reports successfully faxed within 3 days
Target: 85%
Baseline: 40%

3.0%
mailed due to missing fax number or no dedicated fax
Target: 9%
Baseline: 80%

8.4%
unsuccessful due to transmission errors
Target: 10%
Baseline: 10%
APPENDIX B: Monthly Program Status Report

**PROGRAM STATUS REPORT**

**PROGRAM NAME:** UHN OP Discharge Summary  
**Reporting Period:** from 12/1/2016 to 12/31/2016

**UHN Program:** UHN Corporate  
**Executive Sponsor:** Dr. Charlie Chan

**Project Lead:** André DuRoss  
**Clinical/Business Leads:** Dr. P. Rossos & Dr. F. Habel

**Committee Oversight:** UHN Discharge Summary Steering Committee

**Funding Source:** Capital  
**Approved Budget:** FY 14/15 - $150,000

**Start Date:** 1-Jul-14  
**Planned Finish:** 31-Mar-17

**Program Objectives:**
Meet UHN Discharge Summary targets for completion, review and delivery, support organizational adoption of a UHN Standard Discharge Summary, increase standardization of clinical practice, and improve the safety and quality of care.

**Outcomes & Benefits:**
1. 78% of Discharge Summaries completed within 2 days
2. MRP accountable for quality of all completed Discharge Summaries
3. 85% of Discharge Summaries faxed within 3 days

**Items that Require Attention:**
(Yellow and/or Red Indicators)

**Indicator Category**  
**Explanation of Yellow/Red**  
**Action Plan**

**Top 3 Accomplishments Since Last Report:**
1. Readmission Study & Quality Study: Readmission study report + Quality study pre-intervention completion
2. Discharge Summary Standards: PM/TR application go-live + Jan 2017 go-live planning + Bug fixes + Application refinement features
3. Clinician Practice: Program Reports – EPR Physician Service alignment

**Next 3 Major Activities:**
1. Readmission Study & Quality Study: Readmission study completion + Quality study pre-intervention results
2. Discharge Summary Standards: Jan 2017 application refinement features build/testing/go-live
3. Clinician Practice: EPR Physician and Patient Service alignment and user go-live training + TR

**OVERALL PROGRAM HEALTH:**
- Fill in color corresponding to the status selected

**KEY PROJECT INDICATORS:**
- Fill in color

**Program Health Trend & Phases**

<table>
<thead>
<tr>
<th>F16/17 Q1</th>
<th>F16/17 Q2</th>
<th>F16/17 Q3</th>
<th>F16/17 Q4</th>
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**Status:**
- Green: On target. Low-impact issues identified and well controlled.
- Yellow: Under control. High-impact issues identified, and plans for getting back on track are reasonable.
- Red: Off track. High-impact issues identified, and plans for getting back on track are unlikely. Escalation and mitigation underway.

**Distribution:**
Dr. Charlie Chan, Michael Nasser, Dr. Peter Rossos, Dr. Ed Cole, Dr. Pavel Hablot, Dr. Shaf Karan, Dr. Susan Abbey, Dr. Pauline, Park, Dr. Garrett Tow, Lydia Lee, Michael Gleasure, Candice Newell, Jason Chu, Jason Chan, Karen Haddad, Barb Madsen, Penny, Vincenzo-Rogers, Steven Reit, Tony, Naval, Rene Watson, Rosemary, Laurence, Esther Zhou, Mark Tung, Bethany, De Jong, Elizabeth, Chu, Dr. Bohdan, Leblanc, Dr. Robert Wai, Claudio Fernandes, Michael Kriche, Dr. Yael Lask, Dr. Andrew, Hase, Dr. Mark, Mihal, Richard, Dun, Fiona, Fong, Li, Debra, Brudzinski, Majid, Dobrev, Paula, Koss, Dr. Charal, Lint, Antonio, Ramkissoon, Dr. Dima Shrikin, Wai Lo, Karen Lo, Gared King, Dr. Mark, Bento, Dr. Sean O’Keary, Dr. John, Theng, Sue, Donley, Dr. Laurel, Santos, Dr. David, Frost, Linda, Byford, Greg, Hon, Abby, Deasy, Dr. Japhet, Praisman, Anchee, Sunnap.