

# Rouge Valley Health System and The Scarborough Hospital Facilitated Integration Process

## Due Diligence Workbook: Pharmacy (DRAFT)

A Facilitated Process of the Central East LHIN

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# 1. Current State Assessment & Leading Practice Review

## 1.1. Overview of Services/Programs

<p><b>Location of Service/Program</b>  <i>Where are the services/ programs delivered? At both hospitals? At specific sites?</i></p>	<p><b>TSH</b></p> <ul style="list-style-type: none"> <li>An inpatient pharmacy department is located in the General and Birchmount campus. There is a chemotherapy satellite located at the General campus to support the oncology program and a retail pharmacy, owned and operated at the Birchmount campus.</li> <li>Pharmacy is responsible for procurement and inventory management. Purchase orders are completed using the Meditech MM module, received by pharmacy staff and inventory is managed by our team. These activities are done at each campus.</li> <li>Our Group Purchasing Organization (GPO) is HealthPro, which issues RFPs and secures contracts for 95% of our products.</li> <li>Department Hours of Operation:</li> </ul> <p><u>General:</u>  Monday to Friday: 7:30 am - 7:30 pm  Sat, Sun &amp; Holidays: 7:30 am - 4:30 pm</p> <p><u>Birchmount:</u>  Monday to Friday: 7:30 am - 7:30 pm  Sat, Sun &amp; Holidays: 8:00 am - 4:00 pm</p> <p>After hours service includes a pharmacist on-call for each campus</p> <p><u>Out-patient Drug Store (Birchmount)</u>  Monday to Friday: 9:30 am - 5:30 pm  Saturday: 10:00 am - 2:00 pm</p> <ul style="list-style-type: none"> <li>Pharmacy supports all the inpatient and ambulatory clinics including the offsite nephrology clinics at Corporate Drive and Yee Hong with distribution and clinical services.</li> <li>A paper-based admission medication reconciliation occurs on all inpatients who are admitted via the Emergency Dept. and directly to the units. Transfer and discharge medication reconciliation occurs using Meditech and Iatric tools (pharmacist creates medication calendars). The process is shared between the pharmacist, nurse and physician.</li> <li>In nephrology, the pharmacists complete a Best Possible Medication History or BPMH for dialysis patients.</li> <li>In oncology, nurses and pharmacists complete the electronic Iatric BPMH.</li> <li>Birchmount has an outpatient Clozapine clinic that pharmacy supports through a retail pharmacy.</li> <li>Pharmacy supports and advocates for safe medication practices in a number of means; Drugs and Therapeutic Committee, Safe Medication Practice Committee, Quality of Care Committee, participation in PGS meetings, quality councils and conducts numerous quality audits which are distributed to Managers/CRLs</li> <li>Pharmacy supports the maintenance of smart pump drug dictionaries</li> </ul>
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	<p>for IV, epidural, PCA and oncology administration.</p> <ul style="list-style-type: none"> <li>• Pharmacy unit dose packages liquids for DI</li> <li>• Space: 3394 sq ft Birchmount, 2500 sq ft General</li> <li>• Regulated technicians – 50%</li> </ul>
	<p><b>RVHS</b></p> <ul style="list-style-type: none"> <li>• An inpatient pharmacy department is located at the RVA and RVC sites. There is a chemotherapy satellite located at the RVC site to support the oncology program.</li> <li>• Pharmacy is responsible for procurement and inventory management. Purchase orders are completed using the Meditech MM module, received by pharmacy staff and inventory is managed by our team. These activities are done at each campus.</li> <li>• Our Group Purchasing Organization (GPO) is HealthPro, which issues RFPs and secures contracts for 95% of our products.</li> <li>• Department Hours of Operation</li> </ul> <p><u>RVC:</u>  Monday to Friday: 7:00 am – 6:30 pm  Sat, Sun &amp; Holidays: 7:00 am - 4:00 pm</p> <p><u>RVA:</u>  Monday to Friday: 7:00 am – 5:00 pm  Sat, Sun &amp; Holidays: 8:00 am - 4:00 pm</p> <p>After hours service includes a pharmacist on-call for each site and one on-call for outpatient anticoagulation program.</p> <ul style="list-style-type: none"> <li>• Pharmacy supports all the inpatient areas as well as the outpatient Chemotherapy Clinic and the GAIN Clinic.</li> <li>• Antimicrobial Stewardship Program provided at RVHS with 0.5 FTE ASP Pharmacist at each site</li> <li>• RVHS has an outpatient Clozapine clinic that Pharmacy supports through its inpatient dispensary.</li> <li>• Paper-based admission medication reconciliation occurs on all inpatients who are admitted via the Emergency Dept. and directly to the Units. Transfer and discharge medication reconciliation occurs using Meditech as well as a paper-based Discharge Prescription and Summary form. The Pharmacy Department accounts for more than 90% of all Best Possible Medication Histories completed.</li> <li>• In the Chemotherapy Clinic, nurses and pharmacists utilize OPIS for all documentation, including completing the Best Possible Medication History.</li> <li>• Pharmacy supports and advocates for safe medication practices in a number of means; Pharmacy and Therapeutics Committee, Medication Safety Committee, Service Excellence Committee, Joint Medical/Hospital Quality Steering Committee, quality councils and conducts numerous quality audits which are distributed to Managers/Directors and Senior Management, support the smart pump dictionaries for IVs, epidurals, PCA's, chemo and syringe pumps</li> </ul> <p>RVC - 8,500 sq ft including 800 sq ft IV room (in central pharmacy) and 240 sq ft IV chemotherapy preparation area in Chemotherapy Clinic</p>

	<p>RVA - 2,200 sq ft including 160 sq ft IV room</p> <ul style="list-style-type: none"> <li>• Portering - combination: yellow or fax</li> <li>• Regulated-75% techs</li> <li>• Discharge and transfers are through Meditech and patient-based discharge and prescription summary form.</li> </ul>
<p><b>Volume of Activity</b>  <i>What is the current volume of activity? (e.g. service levels, patient volume)</i>  <i>Are there important trends? (e.g. growth, decline)</i></p>	

General

- Traditional doses/year = 123,864
- Unit doses/year = 904,164
- CIVA doses/year = 37,922
- TPN/year = 1,614
- Chemotherapy doses/yr = 10,968

Birchmount

- Unit doses/year = 890,539
- CIVA doses/year = 38,299
- TPN doses/year = 849

Total Drug Budget = \$ 20,272,000

Clinical Stats	Gen	Bir
# of Interventions	9687	1771
% Interventions Accepted	95	95
# Chemo Patients Counseled	1540	n/a
# of Med Recs (Adm/Trans/Dis)	9643	5223
# of Inpatients Counseled	6047	1301
Epo Counseling	725	n/a
# of Section 8 Pre-Admit Assessments	1296	835
# of Warfarin Dosing	6154	3443
Attendance Days (face to face)	13420	14116
Attendance (non face to face)	6388	3228
<b>Purchasing Stats</b>		
# Line Items Purchased	16223	10539
Inventory Turnover	27	12

RVC

- Traditional prescriptions /year = 16233
- Unit doses/year = 846,614
- CIVA doses/year = 33,142
- TPN/year = 1,305
- Neonatal/Paeds TPN/year = 703
- Chemotherapy doses/yr = 5,595

• Drug Budget = \$7,338,335 includes chemotherapy

RVA

- Traditional prescriptions/year = 12,824
- Unit doses/year = 594,690
- CIVA doses/year = 30,732
- TPN doses/year = 722
- Drug Budget = \$2,109,202

2012-2013 Fiscal Year		
Clinical Stats	RVC	RVA
# of Interventions	16416	15397
% Interventions Accepted	90	90
# New ChemoPatients Counseled	180	N/A
# of Med Recs (Adm) – Pharmacy only	4717	6524
# of Inpatients Counseled	1150	552
Pre-Admit Assessments	1452	1250
# Warfarin Patients dosed by Pharmacy	652	N/A
# warfarin doses by Pharmacy	5,294	N/A
<b>Purchasing Stats</b>		
# Line Items Purchased	9100	9649
Inventory Turnover	20	20

<p><b>Mode of Delivery</b>  <i>How are the services/programs delivered? (e.g. inpatient, ambulatory)</i></p>	<p><b>TSH</b></p> <ul style="list-style-type: none"> <li>• TSH utilizes a centralized pharmacy model whereby most medications are stored, packaged and distributed from the centralized pharmacy by pharmacy technicians with some limited quantities of doses maintained in wardstock on the units.</li> <li>• Automated Dispensing Cabinets (Acudose) machines are in the ED, OR, PACU, ICU at each campus and a night cupboard at Birchmount.</li> <li>• The General campus uses a traditional system for oral liquids and some injections whereas the Birchmount campus provides liquids in unit dose syringes.</li> <li>• NCR Physician Orders are written, transcribed onto MAR and the yellow backing is delivered to pharmacy via portering or pharmacist enters order on the unit</li> <li>• At the General, a McKesson Robot picks the first doses and cart fills. The medications are placed in totes and delivered daily to the units. The nursing staff transfer medications into their medication carts.</li> <li>• At the Birchmount, a manual unit dose cart fill system is used with a PACMED packaging machine for oral medications to be implemented by October 2013. The PACMED will support packaging of Robot ready unit dose tablets for the General campus.</li> <li>• There is a Centralized Intravenous Admixture (CIVA) at each campus which utilizes minibag plus (docking antibiotics/medications), prepares Parenteral Nutrition (PN) and complex IV LVPs. Minimal outsourcing of IVs is done. Birchmount campus also does the IV admixtures for the eye center.</li> <li>• Medications are delivered to units using portering services and pneumatic tubes.</li> <li>• Inpatient nursing units use a computerized Medication Administration Record (cMAR) in all areas except ICU/FMC/NICU.</li> <li>• Pharmacists enter all medication orders into Meditech PHA and these are filled by pharmacy technicians. In general, orders are entered on the units during the week and in central pharmacy on the weekend.</li> <li>• Clinical pharmacists are available on all inpatient units, ED and ambulatory clinics including CKD, HD, Home Hemodialysis, CCDC, GAIN, Oncology, Haematology and Pre Assessment Clinic.</li> <li>• Matrix reporting relationship Gain, CCDC and PPL pharmacists</li> <li>• Clinical pharmacist services include medication reconciliation, review of medication orders for appropriateness, resolution of any drug related problems, drug monitoring, discharge counselling, warfarin dosing, and provision of education services.</li> </ul>
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## RVHS

- RVHS utilizes a centralized pharmacy model whereby most medications are stored, packaged and distributed from the centralized pharmacy by pharmacy technicians with some limited quantities of doses maintained in wardstock on the units.
- Each site provides Unit Dose drug delivery for its patients. Oral liquids in unit dose syringes continue to be added to the list of products provided as staffing permits.
- NCR Physician Orders are written including pre-printed order sets, transcribed onto MAR and the yellow backing is delivered to pharmacy via portering, or faxed to pharmacy or pharmacist enters order on the unit
- The Automated FastPAK (one at each site) dispenses approximately 80% of doses on the fill list while the remaining doses are picked manually from a picking station and placed in the patients' drawers. A list of up-dated orders to be filled is picked up manually by a technician and added to the orders. Delivery to the Units by Pharmacy Technicians is completed via centralized cart exchange.
- There is a Centralized Intravenous Admixture (CIVA) at each site. Pharmacy prepares IV antibiotics, SVPs, epidurals, Total Parenteral Nutrition (TPN) and complex IV LVPs. Minimal outsourcing of IVs is done.
- Medications are delivered to units using Pharmacy Technicians at assigned intervals during the day.
- Inpatient nursing units use a manual MAR in all areas.
- Pharmacists enter all medication orders into Meditech PHA and these are filled by pharmacy technicians. In general, a mix of order entry from the Units and Pharmacy occurs during weekdays and in central pharmacy on the weekend.
- Clinical pharmacists are available on all inpatient units, including the Outpatient Chemotherapy Clinic and the GAIN Clinic.
  - Clinical pharmacist services include medication reconciliation, review of medication orders for appropriateness, identification and resolution of any drug related problems, drug monitoring, discharge medication counselling, warfarin dosing, aminoglycoside and vancomycin dosing service, and provision of education services, and outpatient group education sessions (e.g. Cardiac, Pediatric Psychiatry, Adult Psychiatry).



<p><b>Innovations Planned and/or Underway</b></p> <p><i>What changes are planned or in-progress to improve the service/program?(e.g. new model of care, investment in new technology)</i></p>	<p><b>TSH</b></p> <ul style="list-style-type: none"> <li>• Implementation of PACMED packaging machine with Go live date, October. Plan to locate machine at Birchmount campus to improve efficiencies of cart filling at Birchmount and will package robot ready unit dose packaging for General.</li> <li>• Beta testing and upgrade of Connect Rx 8.1 Carousel, Robot and Acudose cabinets, September</li> <li>• Improvements in active directory and GTIN barcoding</li> <li>• Howard medication carts purchased for four nursing units that enable nursing to deliver medications to patient bedside (1 cart per 4/5 patients)</li> <li>• TSH- eMAR/BMV start up for 2013/2014 project</li> <li>• Antimicrobial stewardship- ABX alert software implementation</li> <li>• Computers accessible for pharmacists to take to bedside at TSH for decentralized order entry</li> </ul> <p><b>RVHS</b></p> <ul style="list-style-type: none"> <li>• RVHS- EDIS- Emergency Department online doc for MDS and clinicians</li> <li>• CPOE- funding- in 12-18 months</li> <li>• Iatrics software for medication reconciliation, not windows based and most recent version</li> <li>• Computers accessible for pharmacists to take to bedside at RVHS</li> <li>• Decentralized order entry at RVC, limited at RVA</li> <li>• Consideration of cMARS if CPOE delayed</li> </ul>
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<p><b>Key Metrics</b>  <i>Identify and describe the key metrics that capture the quality and performance of the services/programs.</i></p>	<p><b>TSH</b></p> <ul style="list-style-type: none"> <li>• ASP- S.aureus bacteremia rates and % of ASP consults, C.difficile rates, Abx usage (DDD), financial impact, ASP interventions (volume/type/acceptance rates)</li> <li>• Medication reconciliation - admission and discharge rates</li> <li>• VTE prophylaxis</li> <li>• Budget variance</li> <li>• Sick and OT time</li> <li>• Patient satisfaction</li> <li>• # of students- preceptors</li> <li>• OPIS – reduction of errors</li> <li>• Employee satisfaction</li> <li>• % regulated technicians</li> <li>• Inventory turnover</li> <li>• % moderate and severe medication incidents reviewed and action plans</li> </ul>
	<p><b>RVHS</b></p> <ul style="list-style-type: none"> <li>• Medication reconciliation – admission rates</li> <li>• C.difficile rates, Abx Usage (Duration of Therapy and Cost/Pt Day ICU, Total Dose), ASP interventions (number/type/acceptance rates).</li> <li>• VTE audits</li> <li>• Medication incidents – moderate and severe including action plans utilizing IRIS software</li> <li>• Dangerous abbreviations</li> <li>• ISMP/ Accreditation- audits</li> <li>• Staff and patient satisfaction</li> <li>• Sick and OT time</li> <li>• Budget variance</li> </ul>

**Other Information**

Provide additional service/program information (if required)

**TSH**

<b>General</b>	<b>Birchmount</b>
1 FTE Director	
1 FTE Practice Leader/Clinical Coordinator	
1.0 ASP pharmacist	
0.5 ASP data analyst	
1 FTE Manager	0.6 FTE Manager
1 FTE clerical	0.6 FTE clerical
<b>Distribution</b>	
5.56 FTE pharmacist	2.03 FTE pharmacist
15.06 FTE technician	10.94 FTE technician
0.1 FTE student	0.1 FTE student
<b>Clinical</b>	
10.08 FTE pharmacist	8.14 FTE pharmacist
0.5 FTE technician	N/A
<b>Oncology</b>	
3.0 FTE pharmacists	0.4 FTE Manager
1.3 FTE technicians	1.33 FTE pharmacist
<b>Nephrology Outpt</b>	
3.7 FTE pharmacist	
1.58 FTE technician	
<b>Nephrology Inpt</b>	
0.99 FTE pharmacist	
0.2 FTE technician	
<b>External to Pharmacy</b>	
1.0 FTE pharmacist GAIN	
0.5 FTE pharmacist CCDC	
0.5 FTE pharmacist, Regional Oncology	

**RVHS**

- 1 FTE Director (Manages RVA Site)
- 1 FTE Administrative Assistant

**RVA Site**

- 10.4 FTE Pharmacists
- 12 FTE Technicians

**RVC Site**

- 1 FTE Manager
- 17.2 FTE Pharmacists
- 17 FTE Technicians

Note: above staffing includes allocation to oncology - 1.6 FTE pharmacist, 1 FTE technician, GAIN - 1 FTE pharmacist, Clinical Lead 50% direct patient care at each site for RVHS (50% ASP/clinical coverage/P&T/DUE).

## 1.2. Patient Profile

Use the following table to document the high-level patient profile related to the services/programs.

<p><b>Patient Value Statement</b>  <i>Identify the purpose of the service/program area and the value-added benefit that it offers from the perspective of the patient.</i></p>	<p>As a patient in the Scarborough community, I value pharmacy services that provide me with the right information and support to help me manage my medication safely.</p>
<p><b>Patient Characteristics</b>  <i>Describe the key patient characteristics; consider factors such as demographics, geography, complexity, etc.</i></p>	<ul style="list-style-type: none"> <li>• English as a second language – Scarborough</li> <li>• South Asians</li> <li>• Haemodialysis and peritoneal dialysis at TSH general campus</li> <li>• Elderly/aging</li> <li>• Complex medical conditions</li> <li>• Significantly high number of medications</li> <li>• Smaller number of inpatient paediatric patients (excluding Emergency Department)</li> <li>• Lower socio-economic population</li> <li>• Many patients do not have medical insurance coverage- Scarborough region</li> <li>• Large cardiology population at RVC</li> <li>• Many VTE patients do not have family doctors</li> <li>• High number of patients with diabetes</li> <li>• Outpatient cardiac rehab facility at RVC</li> <li>• lack of family practitioners in Durham/Scarborough which leads to poor medication compliance due to lack of follow up in the community and thus readmission to hospital</li> </ul>
<p><b>Population Need</b>  <i>Describe the key factors driving population need; consider factors such as social determinants of health, incidence/prevalence rates, demand (e.g. wait lists, people travelling outside CE LHIN for service/program), etc.</i></p>	<ul style="list-style-type: none"> <li>• Improved continuity of care</li> <li>• Oncology drug navigator- issues accessing expensive medications</li> <li>• Language barrier- require interpretation</li> <li>• Medication adherence</li> <li>• Discharge follow-up phone calls</li> <li>• Home Visits</li> <li>• Written information/signage in hospitals also need to be in other languages other than English</li> </ul>

### 1.3. SWOT Analysis

This section should summarize the SWOT analysis using the following table. For each Strength, Weakness, Opportunity and Threat identified, indicate the organization(s) to which it applies by placing an X in the appropriate box.

	RVHS	TSH
<b><u>Strengths</u></b>		
• Pharmacy team are key members of the health care team	X	X
• Technicians working towards Regulation	X	X
• Unit dose and Centralized Intravenous Admixture (CIVA) service	X	X
• Robot provides higher level of automation and safety		X
• Smart pumps for IVs	X	X
• Medication reconciliation on admission and transfers	X	X
• Medication reconciliation on discharge		X
• Deep Vein Thrombosis (DVT) prophylaxis and Antimicrobial Stewardship	X	X
• Oncology Patient Information System (OPIS) for Oncology	X	X
• Safe Medication Reporting System	X	X
• Hospitalist model		X
• Technician working towards full scope	X	X
• Shared accountability for medication safety- everyone owns it (system approach)	X	X
• Comprehensive quality improvement process	X	X
• PhaSeal closed system for Chemotherapy delivery	X	X
• Non Unionized staff		X
• Enhanced safety in different areas with Acudose		X
• Hospital operated outpatient pharmacy located at Birchmount campus		X
• Incident reporting system (RL Solutions) provides real time date, auto and manual reports and email alerts to management for monitoring medication errors	X	X
<b><u>Weaknesses</u></b>		
• Paper based system increase rate of transcription errors	X	X
• A large number of manual processes	X	x
• Resources limited for new technology	X	X
• Receiving of orders into pharmacy- errors, missing medications	X	X

	RVHS	TSH
• Space Limitation	RVA	General
• Staffing limits dedicated pharmacist to all areas	X	X
• Do not meet USP 797 standards for sterile products	X	X
• Lack of informatics support	X	X
• Challenge to obtain data from Meditech	X	X
• Lack of system interfaces	X	X
• Not on latest Meditech platform	X	X
• Lack of project management support	X	X
• Clinical activities limited on weekends	X	X
• No 24/7 pharmacy service	X	X
• No Computerized Medication Administration Record (cMAR)	X	
• Lack of single platform for electronic clinical documentation for Health Care Providers	X	
• Lack of Computerized Practitioner Order Entry (CPOE) and Electronic Medication Administration Record (eMAR)	X	X
• Quality of Medication Reconciliation (some rework required with shared model)	X	X
<b><u>Opportunities</u></b>		
• Ensure meeting of vision Canadian Society of Hospital Pharmacists (CSHP) 2015 to enhance best practice	X	X
• Expanded scope of practice	X	X
• Remuneration for cognitive services provided by pharmacists- potential for revenue generation and enhance patient care	X	X
• Integrated technology- increase efficiency and safety	X	X
• Increase involvement in academics	X	X
• Hire individuals with post graduate certification/credentials	X	X
• Better linkage (cross appointments) at Universities and Colleges	X	X
• Scanning of physician orders to pharmacy	X	X
<b><u>Threats</u></b>		
• Drug shortage- time, money and patient safety	X	X
• New expensive drugs and technology negatively impact budget	X	X
• Quality based funding may affect ability to provide pharmacy clinical services	X	X
• Constant pressure on decreased LOS and throughput - front end work	X	X

	RVHS	TSH
<ul style="list-style-type: none"> <li>• Time limitation increase workload and impacts ability and consistency of nursing double checks</li> </ul>	X	X
<ul style="list-style-type: none"> <li>• Challenge to keep up current therapies (rate of change)</li> </ul>	X	X
<ul style="list-style-type: none"> <li>• Impact of pharmaceutical manufacturers - drug coverage/access</li> </ul>	X	X
<ul style="list-style-type: none"> <li>• Constant pressure to do more with less</li> </ul>	X	X

## 1.4. Environmental Scan

*This section should contain a summary of key external factors (i.e. influences/trends) that should be considered in the due diligence process. At minimum, Working Groups should consider using a PESTLE framework for identifying external factors – Political, Economical, Social, Technological, Legal, Environmental. Note: Complete only for the sections of the framework that are relevant to your Working Group area of focus. For each of the sections that are relevant, focus on the key 2-3 external factors that are most important to consider.*

<p><b>Political</b> <i>Factors that include provincial strategies and/or programs, LHIN priorities/directions and other government trends</i></p>	<ul style="list-style-type: none"> <li>• Technician regulation</li> <li>• Sterile and non-sterile compounding requirements</li> <li>• HBAM funding model</li> <li>• Quality based funding</li> <li>• Expanded scope of practice</li> <li>• Focus on community-based care</li> <li>• Ongoing push for PharmaCare</li> <li>• Increase focus on smoking cessation</li> </ul>
<p><b>Economical</b> <i>Factors that include fiscal realities, funding models and other economic trends</i></p>	<ul style="list-style-type: none"> <li>• Drug Shortage</li> <li>• Research and Development decrease (in some areas)</li> <li>• Pharmaceutical Manufacturer patents running out with introduction of generics</li> <li>• Job uncertainty in community and hospitals</li> <li>• Cancer Care Ontario (CCO) Funding</li> <li>• Ontario Drug Benefit (ODB) Funding</li> <li>• De-listing of drugs</li> <li>• Increase generic companies</li> <li>• Affordability of new drugs</li> <li>• Price drop in generics to where it is not sustainable</li> <li>• Perception that cost of drugs is tied to the pharmacy profession</li> <li>• Decrease of funding support from pharmaceutical manufacturers (PAAB)</li> <li>• Remuneration of certain services in community</li> <li>• Cost of automation is high</li> </ul>

<p><b>Social</b>  <i>Factors that include demographics, socio-cultural trends, social determinants of health and other social/community trends</i></p>	<ul style="list-style-type: none"> <li>• Pressure on staff (sick time)</li> <li>• Flexibility/hours of service reduced</li> <li>• Aging population/work force</li> <li>• Language barriers</li> <li>• Low socio-economic population who can't afford to pay for non-funded drugs</li> <li>• Internet effect- in drug information</li> <li>• Decisions for end of life as population ages and disease treatment are more aggressive</li> <li>• Foreign graduate pharmacists</li> <li>• Trust of public in drug preparation and drug safety</li> <li>• Herbal/homeopathic trends</li> </ul>
<p><b>Technological</b>  <i>Factors that include information management and information technology trends, globalization, innovations in patient care and other technical trends</i></p>	<ul style="list-style-type: none"> <li>• Consolidation of pharmaceutical manufacturers impact drug supply</li> <li>• Utilization of technology devices to improve patient care</li> <li>• Internet resources affects patient knowledge and medication use</li> <li>• Use of cell phone to access healthcare professional easily and readily</li> <li>• eHealth enhances continuity of care</li> <li>• Implement Computerized Physician Order Entry (CPOE) to increase safety</li> <li>• ePrescribing- could be adopted in hospital</li> <li>• Robots to manufacture sterile preparations</li> </ul>
<p><b>Legal</b>  <i>Factors that include relevant legislation and other legal trends</i></p>	<ul style="list-style-type: none"> <li>• Health Canada - natural health products, not as rigid as “drugs”</li> <li>• Ontario College of Pharmacists (OCP) may regulate hospital pharmacies</li> <li>• Accreditation Canada, increased focus to ensure safe medication practices</li> <li>• Counterfeit drugs- challenged to ensure not in supply chain</li> <li>• Narcotic Monitoring system</li> <li>• Regulation of technicians- change scope of practice and change model of care</li> <li>• Change regulations of other health care professionals, increase number of prescribers</li> <li>• FDA regulations – contributing to drug shortage</li> </ul>
<p><b>Environmental</b>  <i>Factors that include attitudes towards “green” or ecological products/resources, corporate social responsibility trends and other environmental trends</i></p>	<ul style="list-style-type: none"> <li>• Lack natural ingredients (API) – impact drug supply</li> <li>• Disposal and destruction of drugs</li> <li>• USP 797 regulation (sterile compounding standards)</li> <li>• Cytotoxic drug handling</li> <li>• Should work towards a paperless environment</li> <li>• Impact of unit dose packaging</li> </ul>



## 1.5. Leading Practices

The Leading Practice Summary provided by KPMG is included for reference in the Appendix of the Workbook. The Summary is a high-level review of leading practice themes and is intended to be a conversation-starter for the purpose of assisting in the due diligence process in order to determine what benefits a merger of the two hospital corporations will provide to the Scarborough community.

The Leading Practice Summary is only one source to obtain ideas and insights related to leading practices. The Working Group is also encouraged to draw on their own knowledge, experiences and sources to complete the following section.

<p><b>Additional Leading Practices for Consideration</b> <i>Identify any additional leading practices based on the Working Groups knowledge, experience and sources.</i></p>	<ul style="list-style-type: none"> <li>• Clinical pharmacist/technician models</li> </ul>
<p><b>Leading Practices Already Implemented</b> <i>Based on the Leading Practice Summary and the additional leading practices listed above, identify those that are already in place at RVHS and/or TSH.</i></p>	<ul style="list-style-type: none"> <li>• Monitoring of patient care through medication reconciliation- both RVHS and TSH</li> <li>• Closed loop medication administration is halfway at the TSH General campus</li> <li>• Clinical/pharmacist/technician model at RVHS</li> </ul>
<p><b>Benefits of a Potential Merger</b> <i>Identify the leading practices that could be <u>adopted and/or enhanced</u> through a potential merger of the two hospitals?</i></p>	<ul style="list-style-type: none"> <li>• With the involvement of other areas, there is an opportunity for a closed loop medication administration</li> <li>• Monitoring of patient care through medication reconciliation on discharge for RVHS</li> <li>• Technology with regards to medication reconciliation would be an opportunity for both TSH and RVHS</li> <li>• Supply chain management through multi-facility collaboration</li> <li>• A more clinical pharmacist/ technician model</li> <li>• Increase collaboration between pharmacists and family physicians in the community through health links</li> </ul>

## Appendix: Leading Practice Summary (KPMG)

The purpose of this section is to highlight and identify high-level leading practices themes for the purpose of assisting in the due diligence review. The themes that have been identified in this document are from several sources and are meant to provide Working Group members with a broad view of the themes related to leading practices for **Pharmacy**. These sources include KPMG's own experience, global thought leadership and external sources (where identified).

The below tables summarizes leading practices themes for Pharmacy.

Leading Practice Themes	
<p><b>Implementation of Closed Loop Medication Administration</b></p>	<ul style="list-style-type: none"> <li>• The goal of a closed loop medication management system is to automate all medication-related processes in an effort to reduce the number of errors experienced when clinicians administer medication to patients. Essentially, the medication management closed loop system follows the flow of medication to the patient from point of prescription to the physician's follow up.</li> <li>• At one US medical center, closing the loop led to a decrease in the number of steps in medication administration from 17 to five (a 70% improvement), in addition to a decrease in the rate of harm from ADEs from 3.5 per 1,000 to 0.52 per 1,000 patients (an 85% improvement). Furthermore, there was a decrease in order entry to medication administration from 92 minutes to eight minutes (a 91% improvement).<sup>1</sup></li> <li>• In Canada, North York General Hospital has achieved success in implementing closed loop medication management system and clinical decision support system to improve medication reconciliation rates on hospital admission and discharge. They improved medication administration turnaround time from 291 minutes to an average turnaround time of just 50 minutes (an 82% improvement). Additionally, the improved safety measures for medication administration prevented more than 2,300 incorrect medication administrations in the first year after go-live, involving approximately 1,500 patients.<sup>2</sup></li> </ul>
<p><b>Increased monitoring of patient care through Medical Reconciliation</b></p>	<ul style="list-style-type: none"> <li>• Medication Reconciliation processes are becoming more prevalent in the healthcare sector from primary care to hospitals and long term care facilities.</li> <li>• Medication Reconciliation is a process used in medication management whereby a healthcare professional will work with the patient or their caregiver to ensure all medications being added, changed or discontinued are documented and evaluated throughout the continuum of care. An accurate medication</li> </ul>

<sup>1</sup> Case Study: Closing the Medication Management Loop [http://www.pppmag.com/article\\_print.php?articleid=138](http://www.pppmag.com/article_print.php?articleid=138)

<sup>2</sup> <http://www.cerner.com/newsroom.aspx?id=17179875490&blogid=2147483710&langType=4105>

## Leading Practice Themes

reconciliation will enable prescribers to make the best decision when treating a patient.<sup>3</sup>

- The joint report on Raising the Bar in Medication Reconciliation in Canada promotes collaboration with national organizations to drive technology to front line providers with an end goal of implementing medication reconciliation across the Canadian health system as communicating effectively about medications is a critical component of delivering safe high-quality care. The report also promotes the use of an interactive iPhone and iPad app to help Canadians manage their own health care and use their medication safely and appropriately.<sup>4</sup>
- Many healthcare organizations in Canada have adopted MedRec technologies, including London Health Sciences Centre's full implementation of MedRec at admission, transfer, post-op and discharge in their facility, and North York General Hospital's implementation of full electronic processing using Cerner.<sup>5</sup>
- Toronto East General Hospital use of Medical Reconciliation processes and technology has been recognized as a best practice by Accreditation Canada. They have implemented the use of MedRec during their admission process over the last few years. They evolved from a paper-based system to obtaining the best possible medication history through interviewing the patient, a family member, and/or care provider. In addition, TEGH has involved community pharmacies to obtain patients' medication history prior to elective surgery through the Ontario MedsCheck program. The progression to electronic MedRec at TEGH has been very successful, and is currently used in both inpatient and outpatient settings, utilizing the same process and electronic platform in different care areas throughout the hospital. A key benefit noted by TEGH from their experience using the MedRec system is the proactive process created when patients are ready to be discharged; through the use of MedRec, and involvement of nursing in their Virtual Ward discharge program, MedRec is now an inter-professional practice used throughout the continuum of patient care.<sup>6</sup>
- The practice of utilizing Medical Reconciliation processes and technology to manage drug therapy may lead to better collaboration with patients, caregivers and other health care providers as well as empower patients in decision-making

<sup>3</sup> <http://www.ismp-canada.org/medrec/>

<sup>4</sup> Accreditation Canada, the Canadian Institute for Health Information, the Canadian Patient Safety Institute, and the Institute for Safe Medication Practices Canada. (2012). Medication Reconciliation in Canada: Raising The Bar – Progress to date and the course ahead. Ottawa, ON: Accreditation Canada.

<sup>5</sup> Global Centre of Excellence

<sup>6</sup> <http://www.accreditation.ca/en/LeadingPractice.aspx?id=3379>

Leading Practice Themes	
	<p>about their health, both of which are in line with the Blueprint for Pharmacy's Vision for Pharmacy in Canada.<sup>7</sup></p>
<p><b>Increased Collaboration between Pharmacists and Physicians in Family Health Care Teams<sup>8</sup></b></p>	<ul style="list-style-type: none"> <li>Integrating Family Medicine and Pharmacy to Advance Primary Care Therapeutics (IMPACT) is a large-scale demonstration project supported by the Ontario Primary Health Care Transition fund that aims to improve drug therapy using a collaborative care model that integrates pharmacist into the primary health care team.</li> <li>During the IMPACT project, a pharmacist was placed into each of seven family medical practices across Ontario. The pharmacists role was to integrate within the inter-disciplinary family health team and to work directly with the physicians and provide advice on prescribing or managing medications when required.</li> <li>As a result of the IMPACT project, at the time the source article was written, 150 Family Health Teams had been created in Ontario, of which 67 have been approved to include pharmacist services. The future goal is for pharmacists to act as change agents, and to promote collaboration with hospital pharmacists, community pharmacists or clinical pharmacologists.</li> <li>It was noted that aspects of the IMPACT model can be applicable to other settings that could benefit from multidisciplinary teams such as hospital pharmacists, community pharmacists, or clinical pharmacologists.</li> </ul>
<p><b>Computerized Medication Notification System</b></p>	<ul style="list-style-type: none"> <li>The use of a computerized pharmacy medication notification system by the Security Forces Hospital Program has streamlined the dispensing process at the hospital. The new system prioritizes requests such that when a patient has been waiting longer than 20 minutes, the task of filling that particular prescription is prioritized. The hospital is also using a flat screen monitor to advise patients when their prescriptions are ready, thus decreasing the amount of time spent managing prescriptions and leaving more time for the pharmacists and technicians to perform value added work.<sup>9</sup></li> </ul>
<p><b>Improving supply chain management through multi-facility collaboration</b></p>	<ul style="list-style-type: none"> <li>The Winnipeg Regional Health Authority (WRHA) created a collaborative, multi-facility pharmacy approach to manage medication supply chain issues included as back-orders, shortfalls, and critical drug shortages. WRHA moved to a regional management process whereby various facilities share scarce inventory across the whole organization. The changes in process has resulted in better sharing of information about supply chain issues, improved patient safety and</li> </ul>

<sup>7</sup> <http://blueprintforpharmacy.ca/docs/pdfs/2011/05/11/BlueprintImplementationPlan.pdf?Status=Master>

<sup>8</sup> Integrating Family Medicine and Pharmacy to Advance Primary Care Therapeutics, Clinical Pharmacology & Therapeutics, June 2008

<sup>9</sup> <http://www.accreditation.ca/en/LeadingPractice.aspx?id=1580>

Leading Practice Themes	
	access to medication. A key improvement realized is that stakeholders are informed about any issues before patients or clients are directly affected by a critical shortage or a crisis. <sup>10</sup>
<b>Pharmacy in a Box</b>	<ul style="list-style-type: none"> <li>Sunnybrook Health Science Center has been piloting the use of “virtual pharmacies” or automated medication dispensing machines. When a patient receives a prescription for a commonly used medication, they simply scan the barcode at the machine, and the order is transmitted to a remote pharmacy. The patient picks up the phone to connect to the Med Center pharmacist to ensure the medication is appropriate, then the patient pays using a debit or credit card and the machine dispenses the medication and prescribing information. Reception of these machines has been positive at both Sunnybrook campuses.<sup>11</sup></li> </ul>

## 2. Opportunity Assessment

### 2.1. Overview of Opportunities

*This section should provide an overview of the portfolio of potential opportunities identified by the Working Group. Opportunities should be numbered for ease of reference to Detailed Opportunity Assessment section.*

Reference	Opportunity
1	Sharing of educational materials (via OTN) maintaining competency and skills
2	Pool resources for technology- CPOE/Smart pumps, implementation and ongoing maintenance
3	Pool resources for drug formularies, order sets and IV manuals
4	Centralized Intravenous Admixture (CIVA) service to best practice model(USP 797 standards)
5	Electronic Medication Administration Records (eMAR) and bedside verification supported by pharmacist remote order entry
6	Share expertise/resources related to IT software and technology

<sup>10</sup> <http://www.accreditation.ca/en/LeadingPractice.aspx?id=2921>

<sup>11</sup> <http://sunnyview.sunnybrook.ca/2010/04/its-getting-nasty-folks.html>

7	Develop pharmacy informatics internally
8	Standardizing processes and procedures
9	Medication reconciliation- process and technology
10	Continuity of care - virtual ward
11	Economies of scale- location of program at one site (e.g. oncology)
12	Centralized purchasing
13	Opportunity to improve patient experience for pharmacy students- rotating through different clinical programs
14	Sharing of drug supplies and therapeutic alternative recommendations when products on back order
15	Larger voice/influence – Ontario College of Pharmacists
16	Sterile preparation facility, USP 797 standards – provide internal requirements as well as service needs of smaller hospitals/organizations . Potential revenue generation selling sterile products and/or training other organizations how to set up their own sterile preparation to meet USP 797 standards -
17	Making specialty medications (other than sterile products) – potential revenue generation
18	Sharing of drug information resources (electronic data base etc.)
19	Chronic Disease Management Programs (CDMP)- medication management
20	Decrease cost of translation of education materials in different languages
21	Pharmacist in CDMP Clinics to help prevent readmission
22	Partnership with outpatient pharmacies in communities

***\*\*Based on the opportunities identified from the above and the leading practices, work group members grouped similar items into a total of 10 opportunities. An individual voting took place where each member voted on their top 4 priorities, using the guiding principles as criteria. Opportunity assessments were conducted for the top 5 priorities identified (listed below)***

Reference	Opportunity (Top 5 ranked for further development)
1	Sharing of educational / training / drug information resources (e.g. order sets, translation, drug formularies, iv manuals, expertise, etc.) to maximize strengths and to reduce duplication of work
2	Pooling of technology-related resources to enhance service provision and to develop internal pharmacy informatics expertise (technology such as: eMAR supported by remote order entry, bedside medication verification and computerized physician order entry)
3	Develop a center of excellence for CIVA - USP 797 with revenue generation potential
4	Enhance medication reconciliation process and use of technology to increase patient safety
5	Enhance pharmacy clinical practice model to maximize efficiency and patient outcomes (also enhances student experience)

## 2.2. Opportunity Assessment

For each of the opportunities identified in Section 2.1, complete the table on the following page.

*Facilitation Tip: Prior to assessing the potential opportunities, work together as a Working Group brainstorming the possibilities. Encourage Working Group members to consider different ideas and different types of integration scenarios (e.g. consolidation, outsourcing).*

### Opportunity 1: Sharing of education, training, information, resources and expertise

#### Overview:

<b>Description</b>	Sharing of educational / training / drug information resources (e.g.. Order sets, translation, drug formularies, Intravenous (IV) manuals , expertise) to maximize strengths and to reduce duplication of work
<b>Anticipated Alignment to Guiding Principles</b> <i>Shade the relevant guiding principle(s)</i>	<ul style="list-style-type: none"> <li>• Collaboration</li> <li>• Accessibility</li> <li>• Sustainability</li> <li>• Excellence</li> </ul>

#### Potential Benefits and Risks:

<b>Potential Benefits</b>	
<i>Identify the most significant potential benefits. Where relevant, consider the following perspectives when identifying benefits: Patient, Community, Organization, Clinicians &amp; Staff.</i>	
<b>Patient</b>	<ul style="list-style-type: none"> <li>• Able to receive standardized care that is best practice to optimize patient care</li> <li>• Access to culturally sensitive information and services</li> <li>• Increase patient safety</li> <li>• Care close to home</li> <li>• Increase patient satisfaction</li> <li>• Potentially broader scope of services available</li> <li>• Standardized processes (when managing critical drug shortages or adopting alternative therapies)</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>• Access to culturally sensitive information and services</li> <li>• Confidence in services provided</li> <li>• Stronger links and collaboration</li> <li>• Easier access / referrals into programs</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>• Increase market share</li> <li>• Efficient use of resources</li> <li>• Less duplication</li> <li>• Standard/consistent work across all campuses</li> </ul>
<b>Clinicians &amp; Staff</b>	<ul style="list-style-type: none"> <li>• Less duplication of work</li> <li>• Assign appropriate individual(s) to assume responsibility for decision making for organization, thus providing clarity to staff</li> <li>• Frees up time for other clinical services (e.g. Medication Reconciliation on discharge)</li> <li>• Increase staff satisfaction</li> </ul>



	<ul style="list-style-type: none"> <li>• Ability to build area of expertise</li> <li>• Increase quality of work</li> </ul>
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<b>Potential Risks</b>	
<i>Identify the key risks that must be considered (e.g. high impact and high probability). For each risk identified, provide a proposed risk mitigation strategy.</i>	
<b>Risk</b>	<b>Mitigation Strategy</b>
<ul style="list-style-type: none"> <li>• Lack of buy-in</li> </ul>	<ul style="list-style-type: none"> <li>• Involve all stakeholders in discussions</li> <li>• Strong support by MAC and leadership</li> <li>• Set clear vision</li> </ul>
<ul style="list-style-type: none"> <li>• Time required for agreement</li> </ul>	<ul style="list-style-type: none"> <li>• Set realistic expectations</li> <li>• Ensure flexibility</li> <li>• Strong project management</li> <li>• Secure physician champions</li> </ul>
<ul style="list-style-type: none"> <li>• May impede process if one organization is ahead of other</li> </ul>	<ul style="list-style-type: none"> <li>• Aware of each organization's situation</li> <li>• Leverage strength of one organization to bring the other forward</li> </ul>
<ul style="list-style-type: none"> <li>• Unrealistic expectations</li> </ul>	<ul style="list-style-type: none"> <li>• Involve all stakeholders in discussions</li> <li>• Strong support by MAC and leadership</li> <li>• Set clear vision</li> </ul>
<ul style="list-style-type: none"> <li>• Lack of resources and funding</li> </ul>	<ul style="list-style-type: none"> <li>• Advocate for appropriate funding and prioritize</li> <li>• Ensure better and more efficient use of resources</li> </ul>
<ul style="list-style-type: none"> <li>• Knowledge/expertise with individuals</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure appropriate training and cross coverage in place</li> <li>• Ensure documentation of processes</li> </ul>

**Benefit Realization:**

<b>Estimated Timeline</b> <i>Shade the estimated timeline (choose only one)</i>	<ul style="list-style-type: none"> <li>• Short-term (up to 1 year)</li> <li>• Medium-term (1-2 years)</li> <li>• Long-term (3-5 years)</li> </ul>
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<b>Key Metrics to Measure Benefits</b>	<ul style="list-style-type: none"> <li>• Staff satisfaction</li> <li>• Patient satisfaction</li> <li>• Percentage of standardized order sets</li> <li>• Barcode utilization of order sets</li> <li>• Workload</li> </ul>
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**Feasibility Assessment:**

<b>Key Metrics to Estimate High-Level Financial Impact</b>	<ul style="list-style-type: none"> <li>• Additional pharmacy resource in the initial implementation phase</li> </ul>
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<b>Required</b>	<ul style="list-style-type: none"> <li>• One time investment: up to one dedicated Pharmacist FTE, required to mobilize</li> </ul>
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<b>Investments – Operating and Capital (if applicable)</b> <i>Identify the key financial investments (e.g. one-time costs) required to realize the benefits.</i>	implementation of order sets, formularies, and standardized manuals: \$100K for one year <ul style="list-style-type: none"> <li>Extent of investment dependent implementation timeframe: faster timelines would require more dedicated resources to support implementation</li> </ul>
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<b>Analysis</b>	
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<b>Anticipated Financial Impact</b> <i>Indicate the order or magnitude financial impact (stated in the \$100,000). Is this opportunity a financial investment or savings?</i>	<ul style="list-style-type: none"> <li>Financial benefits of improved workflow and staff efficiency hard to quantify.</li> <li>Dollar savings on software cost for drug information is immaterial</li> </ul>
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<b>Opportunity 2: Technology in Pharmacy Services</b>
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**Overview:**

<b>Description</b>	Pooling of technology-related resources to enhance service provision and to develop internal pharmacy informatics expertise (technology such as: electronic Medication Administration Record (eMAR) and bedside medication verification (BMV) supported by remote order entry and computerized physician order entry (CPOE))
<b>Anticipated Alignment to Guiding Principles</b> <i>Shade the relevant guiding principle(s)</i>	<ul style="list-style-type: none"> <li>Collaboration</li> <li>Accessibility</li> <li>Sustainability</li> <li>Excellence</li> </ul>

**Potential Benefits and Risks:**

<b>Potential Benefits</b> <i>Identify the most significant potential benefits. Where relevant, consider the following perspectives when identifying benefits: Patient, Community, Organization, Clinicians &amp; Staff.</i>	
<b>Patient</b>	<ul style="list-style-type: none"> <li>Increase safety</li> <li>Access to accurate documentation</li> <li>Decrease error rate</li> <li>Seamless and timely care</li> <li>5 R's (right drug, patient, dose, time and frequency)</li> <li>Optimize patient care</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>Improved confidence in services</li> <li>Seamless and timely care</li> </ul>

<b>Organization</b>	<ul style="list-style-type: none"> <li>• Increase efficiency for nursing and physicians</li> <li>• Quality, real time information for decision making</li> <li>• Increase reputation-a leading practice</li> <li>• Decrease risk i.e. lower HIROC cost</li> <li>• Magnet organization</li> <li>• Pool capital purchases and maximize investments</li> </ul>
<b>Clinicians &amp; Staff</b>	<ul style="list-style-type: none"> <li>• Recruitment and retention</li> <li>• Increase job satisfaction</li> <li>• Better use of resources</li> <li>• Standardizing best practices</li> <li>• Easy and timely access to patient care information</li> <li>• Enhance clinical decision support</li> </ul>

<b>Potential Risks</b>	
<i>Identify the <u>key risks</u> that must be considered (e.g. high impact and high probability). For each risk identified, provide a proposed risk mitigation strategy.</i>	
<b>Risk</b>	<b>Mitigation Strategy</b>
<ul style="list-style-type: none"> <li>• Resource intensive <ul style="list-style-type: none"> <li>• Implementation and ongoing informatics support</li> <li>• Maintenance (upgrades)</li> <li>• Capital</li> <li>• People</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Prioritize to fund projects accordingly</li> <li>• Well thought out project plan and project execution</li> <li>• Physician and nursing champions</li> <li>• Create pharmacy informatics team</li> <li>• Need support of strong informatics (IT)</li> </ul>
<ul style="list-style-type: none"> <li>• Change management</li> </ul>	<ul style="list-style-type: none"> <li>• Proper transition / staging of initiatives</li> <li>• Education to help staff on change management</li> <li>• Leverage on lessons learned</li> </ul>
<ul style="list-style-type: none"> <li>• Downtime</li> </ul>	<ul style="list-style-type: none"> <li>• Downtime procedures</li> </ul>

**Benefit Realization:**

<b>Estimated Timeline</b> <i>Shade the estimated timeline (choose only one)</i>	<ul style="list-style-type: none"> <li>• Short-term (up to 1 year)</li> <li>• Medium-term (1-2 years)</li> <li>• Long-term (3-5 years)</li> </ul>
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<b>Key Metrics to Measure Benefits</b>	<ul style="list-style-type: none"> <li>• Medication errors (e.g. omitted doses)</li> <li>• Compliance of scanning medications prior to administration</li> <li>• Compliance of order sets</li> </ul>
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**Feasibility Assessment:**

<b>Key Metrics to Estimate High-Level Financial Impact</b>	<ul style="list-style-type: none"> <li>• Cost of upfront investment in technology</li> <li>• Cost of upfront investment in staff training</li> <li>• Cost of ongoing incremental labour resources</li> <li>• Preventable adverse events from medication errors and associated reduction in patient days</li> </ul>
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<b>Required Investments –</b>	<ul style="list-style-type: none"> <li>• Initial investment of one to two FTE pharmacists for training and implementation</li> </ul>
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<p><b>Operating and Capital (if applicable)</b>  <i>Identify the key financial investments (e.g. one-time costs) required to realize the benefits.</i></p>	<p>for eMAR and CPOE (\$100-\$200K)</p> <ul style="list-style-type: none"> <li>• eMAR Bedside Medication Verification: <ul style="list-style-type: none"> <li>○ \$2M capital investment for TSH/RVHS based on \$1M for one hospital. \$1M estimate includes software, hardware, pharmacist FTE for two year, and training. Cost estimate does not include barcoding, labelling, and packaging</li> <li>○ \$1.5M for medication carts at both hospitals to support eMAR (for 1000 beds, approximately 150 carts beds @ \$8K each)</li> <li>○ \$250K for four FTE technicians working overnight - ongoing</li> </ul> </li> <li>• CPOE (must be interfaced with pharmacy system to achieve savings): <ul style="list-style-type: none"> <li>○ \$4-6M capital investment, hospital-wide (see IM/IT workbook)</li> <li>○ \$ 800K for 7 FTE Pharmacists ongoing</li> </ul> </li> </ul>
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<p><b>Analysis</b></p>	<ul style="list-style-type: none"> <li>• Used literature sources provided by pharmacy to estimate percent reduction in adverse events caused by medication errors after implementing CPOE and eMAR, and applied them to RVHS and TSH acute inpatient volumes to estimate effect on patient days and cost (see appendix in excel file for detailed calculations) <ul style="list-style-type: none"> <li>• Acute inpatient admissions <ul style="list-style-type: none"> <li>X rate of adverse events (7.5%)</li> <li>X proportion of adverse events that are preventable (37%)</li> <li>X proportion of adverse events that are medication-related (24%)</li> <li>X potential reduction in patient days due to adverse medication events using CPOE and eMAR (50-80%)</li> <li>X additional patient days per patient that had a medication-related adverse event (3.6 – 7.7 additional days)</li> <li>X direct cost per acute inpatient day</li> </ul> </li> </ul> </li> </ul>
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<p><b>Anticipated Financial Impact</b>  <i>Indicate the order or magnitude financial impact (stated in the \$100,000). Is this opportunity a financial investment</i></p>	<ul style="list-style-type: none"> <li>• Ongoing cost of seven pharmacy FTEs to support CPOE = \$800K</li> <li>• Conservative estimate of potential system savings of \$200K to \$700K as a result of saving 500 to 1,700 patient days (see Appendix for calculations)</li> </ul>
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**Opportunity 3: Centre of excellence for CIVA**

**Overview:**

<p><b>Description</b></p>	<p>Develop a centralized center of excellence for Centralized Intravenous Admixture (CIVA) service that is USP 797 compliant rather than upgrading CIVA facilities at all four locations. This model has potential for revenue generation by becoming a key resource and expert for training other organizations how to establish CIVA sterile compounding that meets new legislated standards.</p>
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<b>Anticipated Alignment to Guiding Principles</b> <i>Shade the relevant guiding principle(s)</i>	<ul style="list-style-type: none"> <li>• Collaboration</li> <li>• Accessibility</li> <li>• Sustainability</li> <li>• Excellence</li> </ul>
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**Potential Benefits and Risks:**

<b>Potential Benefits</b> <i>Identify the most significant potential benefits. Where relevant, consider the following perspectives when identifying benefits: Patient, Community, Organization, Clinicians &amp; Staff.</i>	
<b>Patient</b>	<ul style="list-style-type: none"> <li>• Increase safety and quality of end product</li> <li>• Better patient care through investments from revenue generation</li> <li>• Increase accessibility</li> <li>• Improve standard of care</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>• Access to expertise</li> <li>• Access to products</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>• Revenue for reinvestment</li> <li>• Reputation</li> <li>• Increase safety</li> </ul>
<b>Clinicians &amp; Staff</b>	<ul style="list-style-type: none"> <li>• Increase safety</li> <li>• Reduce nursing time preparing IVs on Units</li> <li>• Increase confidence</li> <li>• Increased Accessibility</li> <li>• Pride / increase morale</li> </ul>

<b>Potential Risks</b> <i>Identify the key risks that must be considered (e.g. high impact and high probability). For each risk identified, provide a proposed risk mitigation strategy.</i>	
Risk	Mitigation Strategy
<ul style="list-style-type: none"> <li>• Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Need to identify ROI → strong business case</li> <li>• Detailed project plan and execution</li> <li>• Fundraising</li> </ul>
<ul style="list-style-type: none"> <li>• Space requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Business planning → justify investment in space required through expected revenue generated</li> </ul>
<ul style="list-style-type: none"> <li>• Competition</li> </ul>	<ul style="list-style-type: none"> <li>• Proper planning and environmental assessment</li> </ul>
<ul style="list-style-type: none"> <li>• Potential future legislation with Ontario College of Pharmacists/Accreditation Canada</li> </ul>	<ul style="list-style-type: none"> <li>• Stronger voice → stronger advocacy</li> <li>• Involvement in discussion</li> </ul>
<ul style="list-style-type: none"> <li>• Drug supply</li> </ul>	<ul style="list-style-type: none"> <li>• Pool resources</li> </ul>
<ul style="list-style-type: none"> <li>• Transportation (costs, reliability, timing)</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a Business Case (RFP etc.)</li> <li>• Work with logistics</li> </ul>
<ul style="list-style-type: none"> <li>• Ensuring cold chain supply</li> </ul>	<ul style="list-style-type: none"> <li>• Requires appropriate transportation containers</li> <li>• Monitored fridges (in houses &amp; during transportation)</li> </ul>

**Benefit Realization:**

<b>Estimated Timeline</b> <i>Shade the estimated timeline (choose only one)</i>	<ul style="list-style-type: none"> <li>• Short-term (up to 1 year)</li> <li>• Medium-term (1-2 years)</li> <li>• Long-term (3-5 years)</li> </ul>
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<b>Key Metrics to Measure Benefits</b>	<ul style="list-style-type: none"> <li>• Revenue generation</li> <li>• Sterility testing</li> <li>• Quality assurance testing</li> <li>• Ongoing training and certification of staff</li> </ul>
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**Feasibility Assessment:**

<b>Key Metrics to Estimate High-Level Financial Impact</b>	<ul style="list-style-type: none"> <li>• Cost of infrastructure upgrades</li> </ul>
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<b>Required Investments – Operating and Capital (if applicable)</b> <i>Identify the key financial investments (e.g. one-time costs) required to realize the benefits.</i>	<ul style="list-style-type: none"> <li>• Upgrades to IV room and other infrastructure costs             <ul style="list-style-type: none"> <li>• \$300K investment required per IV room (five or six in total depending on whether it is an integration or full merger scenario)</li> <li>• \$50K investment required per site for other infrastructure costs (eg: replacing chemo hoods, venting, etc.)                 <ul style="list-style-type: none"> <li>○ In an integration scenario, IV room upgrades will be required for six rooms (includes chemotherapy rooms and general IV rooms at each hospital), totalling \$1.8M in addition to other infrastructure costs of \$50K per hospital. Total estimated investment = \$1.9M.</li> <li>○ In a merger scenario, IV room upgrades will be required for five rooms (three at RVHS and two at TSH), totalling \$1.5M. Additional infrastructure costs of \$50K per hospital. Total estimated investment = \$1.6M.</li> </ul> </li> </ul> </li> <li>• Ongoing transportation and refrigeration and cold chain management costs to be determined.</li> </ul>
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<b>Analysis</b>	
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<b>Anticipated Financial Impact</b> <i>Indicate the order or magnitude financial impact (stated in the \$100,000). Is this opportunity a financial investment or savings?</i>	
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## Opportunity 4: Medication Reconciliation

### Overview:

<b>Description</b>	Leverage shared models (among health professionals) for medication reconciliation at both organizations to ensure admission and discharge medication reconciliation is in place. In addition, leverage informatics team to implement medication reconciliation software that has been purchased by both organizations.
<b>Anticipated Alignment to Guiding Principles</b> <i>Shade the relevant guiding principle(s)</i>	<ul style="list-style-type: none"> <li>• Collaboration</li> <li>• Accessibility</li> <li>• Sustainability</li> <li>• Excellence</li> </ul>

### Potential Benefits and Risks:

<b>Potential Benefits</b>	
<i>Identify the most significant potential benefits. Where relevant, consider the following perspectives when identifying benefits: Patient, Community, Organization, Clinicians &amp; Staff.</i>	
<b>Patient</b>	<ul style="list-style-type: none"> <li>• Increase safety</li> <li>• Better continuity of care</li> <li>• Increase patient satisfaction</li> <li>• Reduce re-admission rates</li> <li>• Increase medication adherence</li> <li>• Timely access to medication administration</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>• Community care providers have access to correct information for patients</li> <li>• Better working relationships</li> <li>• Increase referral base (confidence in service provided)</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>• Accreditation standard compliance</li> <li>• Better scorecard results</li> <li>• Decrease time required looking for information</li> <li>• Decrease re-admits</li> <li>• Shorter length of stay</li> <li>• Decrease medication errors</li> </ul>
<b>Clinicians &amp; Staff</b>	<ul style="list-style-type: none"> <li>• Improve physician satisfaction</li> <li>• Improve staff satisfaction</li> <li>• Improve communication</li> <li>• Better flow of information through departments</li> <li>• Fewer medication errors → less time spent on administration reporting</li> </ul>

<b>Potential Risks</b>	
<i>Identify the key risks that must be considered (e.g. high impact and high probability). For each risk identified, provide a proposed risk mitigation strategy.</i>	
<b>Risk</b>	<b>Mitigation Strategy</b>
<ul style="list-style-type: none"> <li>• Time and resource intensive</li> </ul>	<ul style="list-style-type: none"> <li>• Share work required</li> <li>• Access to appropriate technology</li> <li>• Assign best resources to do work required</li> <li>• Maximize scope of practice</li> </ul>

<ul style="list-style-type: none"> <li>• Accuracy of work done</li> </ul>	<ul style="list-style-type: none"> <li>• Quality audits</li> <li>• Create standard work</li> <li>• Education and training</li> </ul>
<ul style="list-style-type: none"> <li>• No 24-hour pharmacy services</li> </ul>	<ul style="list-style-type: none"> <li>• Shift resources to focus on priority <ul style="list-style-type: none"> <li>• Timing</li> <li>• Workload</li> <li>• Complexity</li> </ul> </li> <li>• Sharing work with other disciplines</li> </ul>
<ul style="list-style-type: none"> <li>• IT resources required to properly build system</li> </ul>	<ul style="list-style-type: none"> <li>• Build internal pharmacy informatics expertise</li> <li>• Ensure IT assigns appropriate resources</li> </ul>
<ul style="list-style-type: none"> <li>• Technology downtime</li> </ul>	<ul style="list-style-type: none"> <li>• Downtime procedures</li> </ul>
<ul style="list-style-type: none"> <li>• Training required</li> </ul>	<ul style="list-style-type: none"> <li>• Proper training - self learning packages</li> <li>• Ensure system / process is user friendly</li> <li>• Online training</li> </ul>

**Benefit Realization:**

<p><b>Estimated Timeline</b> <i>Shade the estimated timeline (choose only one)</i></p>	<ul style="list-style-type: none"> <li>• Short-term (up to 1 year)</li> <li>• Medium-term (1-2 years)</li> <li>• Long-term (3-5 years)</li> </ul>
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<p><b>Key Metrics to Measure Benefits</b></p>	<ul style="list-style-type: none"> <li>• Accuracy of audits</li> <li>• Percentage completed electronically</li> <li>• Re-admits (by patient category)</li> </ul>
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**Feasibility Assessment:**

<p><b>Key Metrics to Estimate High-Level Financial Impact</b></p>	<ul style="list-style-type: none"> <li>• Cost of upfront investment in staff training</li> <li>• Cost of upfront investment in reports for existing software</li> <li>• Cost of additional ongoing staff</li> <li>• Preventable adverse events from medication errors</li> </ul>
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<p><b>Required Investments – Operating and Capital (if applicable)</b> <i>Identify the key financial investments (e.g. one-time costs) required to realize the benefits.</i></p>	<ul style="list-style-type: none"> <li>• Initial investment in reports</li> <li>• Two FTE pharmacists and six FTE technicians ongoing</li> <li>• Initial investment of up to one FTE Pharmacist for training and implementation</li> </ul>
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<p><b>Analysis</b></p>	<ul style="list-style-type: none"> <li>• Used provincial average compensation to estimate salaries</li> <li>• Used literature findings to estimate percent reduction in adverse events and associated increase in length of stay caused by medication errors after implementing medication reconciliation, and applied them to RVHS and TSH</li> </ul>
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	<p>acute inpatient volumes</p> <ul style="list-style-type: none"> <li>Medication discrepancies occur when the patient is taking different medications than what the physician prescribed. Adverse events can occur as a result, leading to an increase in length of stay. Medication reconciliation can correct these discrepancies before adverse events occur, thus reducing patient days and associated expenses.</li> <li>Savings estimated by: <ul style="list-style-type: none"> <li>Total inpatient discharges <ul style="list-style-type: none"> <li>X estimated # of discrepancies per patient (1.5)</li> <li>X estimated % of discrepancies resulting in adverse events (1%)</li> <li>X estimated % of discrepancies avoided through medication reconciliation (85%)</li> <li>X estimated patient days associated with adverse event (3.6 to 7.7)</li> <li>X direct cost per patient day.</li> </ul> </li> </ul> </li> </ul>
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<p><b>Anticipated Financial Impact</b>  <i>Indicate the order or magnitude financial impact (stated in the \$100,000).  Is this opportunity a financial investment or savings?</i></p>	<ul style="list-style-type: none"> <li>\$20K initial investment in reports</li> <li>Initial FTE investment of \$0-100K for up to one FTE pharmacists</li> <li>Ongoing cost of \$700K for two pharmacists and six technicians</li> <li>Annual potential systems savings \$780K-\$1.7M from a reduction of 2,000 to 4,000 patient days (see Appendix for detailed calculations)</li> </ul>
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**Opportunity 5: Pharmacy Practice Model**

**Overview:**

<b>Description</b>	Share professional practice resources to create a vision for pharmacists and technicians to practice at full scope (such as pharmacists prescribing in collaborative models)
<p><b>Anticipated Alignment to Guiding Principles</b>  <i>Shade the relevant guiding principle(s)</i></p>	<ul style="list-style-type: none"> <li>Collaboration</li> <li>Accessibility</li> <li>Sustainability</li> <li>Excellence</li> </ul>

**Potential Benefits and Risks:**

<p><b>Potential Benefits</b>  <i>Identify the most significant potential benefits. Where relevant, consider the following perspectives when identifying benefits: Patient, Community, Organization, Clinicians &amp; Staff.</i></p>	
<b>Patient</b>	<ul style="list-style-type: none"> <li>Increase safety and satisfaction</li> <li>Patient care optimization</li> <li>Increase accessibility</li> <li>Faster medication turnaround</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>More confidence in system</li> <li>Seamless care</li> <li>Healthier community</li> <li>Enhanced student experience</li> </ul>

<b>Organization</b>	<ul style="list-style-type: none"> <li>• Reduce re-admits</li> <li>• Excellence best practice</li> <li>• Advancing pharmacy practice</li> </ul>
<b>Clinicians &amp; Staff</b>	<ul style="list-style-type: none"> <li>• Increase satisfaction</li> <li>• Pharmacy prescribing in collaboration with physicians, reduces physician workload</li> <li>• Increased communication</li> <li>• Increase collaboration</li> </ul>

<b>Potential Risks</b>	
<i>Identify the <u>key risks</u> that must be considered (e.g. high impact and high probability). For each risk identified, provide a proposed risk mitigation strategy.</i>	
<b>Risk</b>	<b>Mitigation Strategy</b>
<ul style="list-style-type: none"> <li>• Resources required to build model</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure proper planning and prioritization</li> </ul>
<ul style="list-style-type: none"> <li>• Varying skill sets and competency</li> </ul>	<ul style="list-style-type: none"> <li>• Education</li> <li>• Training</li> <li>• Affiliation with university</li> </ul>
<ul style="list-style-type: none"> <li>• Staff resistance to change</li> </ul>	<ul style="list-style-type: none"> <li>• Involve staff throughout process</li> <li>• Provide information</li> <li>• Proper change management</li> </ul>

**Benefit Realization:**

<b>Estimated Timeline</b> <i>Shade the estimated timeline (choose only one)</i>	<ul style="list-style-type: none"> <li>• Short-term (up to 1 year)</li> <li>• Medium-term (1-2 years)</li> <li>• Long-term (3-5 years)</li> </ul>
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<b>Key Metrics to Measure Benefits</b>	<ul style="list-style-type: none"> <li>• Patient satisfaction</li> <li>• Staff and student satisfaction</li> <li>• Percentage of staff at full scope</li> <li>• Intervention</li> <li>• Workload</li> <li>• Interventions accepted</li> <li>• Other outcome measures (infection rates, medication errors)</li> </ul>
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**Feasibility Assessment:**

<b>Key Metrics to Estimate High-Level Financial Impact</b>	
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<b>Required Investments – Operating and Capital (if applicable)</b> <i>Identify the key financial investments (e.g.</i>	
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<i>one-time costs) required to realize the benefits.</i>	
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<b>Analysis</b>	
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<b>Anticipated Financial Impact</b> <i>Indicate the order or magnitude financial impact (stated in the \$100,000). Is this opportunity a financial investment or savings?</i>	
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### 2.3. Stakeholder Engagement Information

*This section should summarize the input considered from stakeholder engagement activities. Content in this section should be drawn from the Working Group's **Stakeholder Engagement Summary**. (Refer to the Guiding Framework for expectations).*

*Note: This section will be completed before final submission of the Workbook. Working Groups are to use the Stakeholder Engagement Summary as a tool to document and consider stakeholder input/feedback collected during the due diligence process.*

### 3. Recommended Integration Opportunities

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#### 3.1. Alignment to Guiding Principles

*For each of the recommended opportunities, complete the table on the following page. Specifically, for each of the recommended integration opportunities, Working Groups must clearly articulate a rationale that describes the degree to which the integration opportunity supports each of the Guiding Principles. In building this rationale, the Working Groups will use the most relevant measures/indicators based on the service/program.*

Scale 0-5	Opportunity 1	Opportunity 2	Opportunity 3	Opportunity 4	Opportunity 5
Collaboration	5	5	1.5	5	0.5
Accessibility	4	5	1	5	4
Sustainability	5	5	3	5	5
Excellence	5	5	5	5	5
<b>Total Impact</b>	<b>19</b>	<b>20</b>	<b>10.5</b>	<b>20</b>	<b>14.5</b>

Opportunities 1, 2 and 4 were selected as recommended opportunities as they have the potential to create the biggest impact.

**Recommendation 1: Sharing of education, training, information, resources and expertise**

**Description:** Sharing of educational / training / drug information resources (eg. Order sets, translation, drug formularies, Intravenous (IV) manuals, expertise) to maximize strengths and to reduce duplication of work.

**Alignment to Guiding Principles:**

	<b>COLLABORATION</b> <i>We believe that collaboration will lead us to better solutions.</i>	<b>ACCESSIBILITY</b> <i>We believe in providing accessible patient care to our community.</i>	<b>SUSTAINABILITY</b> <i>We believe that we must find new solutions to sustain our health care system.</i>	<b>EXCELLENCE</b> <i>We believe that we must never waver from our responsibilities to provide quality patient care and to be accountable to our stakeholders.</i>
<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Less duplication of work</li> <li>• Pooling of expertise i.e. cardiology for RVHS and nephrology for TSH</li> <li>• Higher standards of care by pooling resources</li> <li>• Opportunity for further specialization</li> <li>• Efficiency → faster access to information</li> <li>• Enhance team work</li> <li>• Improve patient care and patient outcomes</li> <li>• Increase staff satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Faster access to newly available and alternative drugs</li> <li>• Access to drug access navigator service (currently available at TSH)</li> <li>• Enhance access to information and education for community partners → better care for our patients</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce duplication of work</li> <li>• Less time required in development of order sets → more efficient use of time → more pharmacist clinical time</li> <li>• Increase in development of and adherence to standard work</li> </ul>	<ul style="list-style-type: none"> <li>• More standardization</li> <li>• Improve patient care and patient outcomes</li> <li>• Adherence to best practice → Improve patient outcomes due to adherence to best practice</li> <li>• More resources for quality improvement projects and research</li> <li>• Ability to build expertise within own departments</li> <li>• Access to higher quality information</li> </ul>

<b>Measures / Indicators</b>	<ul style="list-style-type: none"> <li>• Frequency and number of formulary reviews and order sets</li> <li>• Harmonization of formulary and order sets</li> <li>• Staff satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Time to access required medication and therapies</li> <li>• Patient satisfaction</li> <li>• Staff satisfaction</li> <li>• Physician satisfaction</li> <li>• Time spent by staff “accessing” required medication and therapies</li> </ul>	<ul style="list-style-type: none"> <li>• Pharmacist clinical time</li> <li>• Number of pharmacist patient care interventions</li> <li>• Compliance with order sets</li> </ul>	<ul style="list-style-type: none"> <li>• Readmission rates and length of stays for specific disease states</li> <li>• Customer satisfaction</li> <li>• Number of educational in-services provided</li> </ul>
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**Recommendation 2: Technology in Pharmacy Services**

**Description:** Pooling of technology-related resources to enhance service provision and to develop internal pharmacy informatics expertise (technology such as: electronic Medication Administration Record (eMAR) and bedside medication verification (BMV) supported by remote order entry and computerized physician order entry (CPOE))

**Alignment to Guiding Principles:**

<b>COLLABORATION</b> <i>We believe that collaboration will lead us to better solutions.</i>	<b>ACCESSIBILITY</b> <i>We believe in providing accessible patient care to our community.</i>	<b>SUSTAINABILITY</b> <i>We believe that we must find new solutions to sustain our health care system.</i>	<b>EXCELLENCE</b> <i>We believe that we must never waver from our responsibilities to provide quality patient care and to be accountable to our stakeholders.</i>
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<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Reduce duplication in investment, time and pharmacy informatics required</li> <li>• Pooling of resources for capital investments</li> <li>• Sharing of lessons learned in implementation (only one learning curve)</li> <li>• Sharing of expertise</li> <li>• Ability to bring forward improved technology standards across sites</li> <li>• Real time access to information</li> <li>• Better IT support → decreased downtime</li> </ul>	<ul style="list-style-type: none"> <li>• Seamless care</li> <li>• Flow of information across organization</li> <li>• Access to patient information across all sites</li> <li>• Faster delivery of medications</li> <li>• Access to correct medications</li> <li>• Real time clinical support for decision making</li> <li>• Access to better reports</li> <li>• Improved documentation of medication administration</li> </ul>	<ul style="list-style-type: none"> <li>• Better information on drug costs</li> <li>• Better drug utilization and cost</li> <li>• Improve efficiency</li> <li>• Cost avoidance due to medication errors</li> <li>• Potential to decrease HIROC cost</li> <li>• Better inventory management</li> </ul>	<ul style="list-style-type: none"> <li>• Improved patient safety</li> <li>• Aligned with Institute of Safe Medication Practice (ISMP) best practice</li> <li>• Improvement of staff recruitment and retention</li> <li>• Enhances hospital reputation (leading edge)</li> <li>• Better adherence to drug formulary</li> </ul>
<b>Measures/ Indicators</b>	<ul style="list-style-type: none"> <li>• Duration of downtime</li> <li>• Time required for implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Delivery of medication times (turnaround time)</li> <li>• Number of omitted doses</li> <li>• Time spent accessing patient information</li> </ul>	<ul style="list-style-type: none"> <li>• Drug utilization</li> <li>• Drug costs</li> <li>• Medication errors</li> <li>• Inventory turnover</li> <li>• Medication turnaround time</li> <li>• Inventory cost</li> </ul>	<ul style="list-style-type: none"> <li>• Medication errors</li> <li>• Non-formulary request</li> <li>• Staff turnover</li> <li>• ISMP Medication Safety Self-Assessment survey score</li> <li>• Adherence to best practice guidelines for specific disease states</li> </ul>



### Recommendation 3: Medication Reconciliation

**Description:** Leverage shared models (among health professionals) for medication reconciliation at both organizations to ensure admission, transfer and discharge medication reconciliation is in place. In addition, leverage informatics team to implement medication reconciliation software that has been purchased by both organizations.

**Alignment to Guiding Principles:**

	<b>COLLABORATION</b> <i>We believe that collaboration will lead us to better solutions.</i>	<b>ACCESSIBILITY</b> <i>We believe in providing accessible patient care to our community.</i>	<b>SUSTAINABILITY</b> <i>We believe that we must find new solutions to sustain our health care system.</i>	<b>EXCELLENCE</b> <i>We believe that we must never waver from our responsibilities to provide quality patient care and to be accountable to our stakeholders.</i>
<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Sharing of resources and lessons learned</li> <li>• Standard training program for technicians, nurses, physicians</li> <li>• Standard process</li> <li>• Standard quality audits</li> <li>• Sharing of electronic tools and reports</li> </ul>	<ul style="list-style-type: none"> <li>• Access to patient information for internal and external stakeholders</li> <li>• Seamless care externally and internally</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent readmission due to adverse drug events</li> <li>• Reduce rework</li> <li>• Reduce duplication of questions regarding patient medications</li> <li>• Ensure the most appropriate staff is conducting medication reconciliation</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce duplication</li> <li>• Improve patient safety</li> <li>• Aligned with Accreditation Canada's Required Organizational Practice</li> <li>• Enhance patient outcome due to patients receiving correct medication</li> <li>• Decrease Adverse Drug Events and medication errors</li> <li>• Flow of communication within the circle of care</li> </ul>

<b>Measures/ Indicators</b>	<ul style="list-style-type: none"> <li>• Number and percentage of medication reconciliations (Admission/discharge and transfer) completed</li> <li>• Quality of medication reconciliation</li> <li>• Number of staff trained</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of medication reconciliations completed on admission/transfer and discharge</li> </ul>	<ul style="list-style-type: none"> <li>• Cost related to readmissions</li> <li>• Patient satisfaction</li> <li>• Time required for medication reconciliation</li> <li>• Safer Healthcare Now! Safety audit</li> <li>• Number of amended/discrepancy medication reconciliation</li> </ul>	<ul style="list-style-type: none"> <li>• Medication errors</li> <li>• Length of stay</li> <li>• Decrease readmissions</li> <li>• Adverse drug events</li> <li>• Adherence to accreditation Required organizational Practice</li> <li>• Patient satisfaction</li> <li>• Staff satisfaction</li> </ul>
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## 4. Workbook Sign-Off

*Identify the individuals that were involved in the completion of the Workbook.*

Organization - Program	Team Member:
	Signature Print Name Date
	Signature Print Name Date
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Organization - Program	Team Member:
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