Summary of Proposed Future Vision for Diagnostic Imaging (DI)

A Regional Diagnostic Imaging System will ensure the consistent delivery of safe and effective care for all patients, increasing patient and provider satisfaction. The focus is on providing seamless and standardized access to patient imaging across the regional hospitals, supported by a common Diagnostic Imaging Information System [e.g. Picture Archive Communication System (PACS) & Radiology Information System (RIS)] , which will contribute to the quality of patient care.

Brief summary of current state

Each hospital currently delivers its own Diagnostic Imaging program, with varying services, protocols, records, bookings and reports. Access to local or regional services are not standardized across the hospitals and wait times for the same service can vary significantly across the region.

While there is commonality of some diagnostic imaging information systems (e.g. 5 sites have similar PACS), there are still multiple systems in place across the hospitals which limits the ability to access patient clinical information, monitor results and quality metrics and manage wait times across the region. There are currently some challenges with recruitment and retention of imaging staff and physicians, particularly in sub-specialty areas.

Opportunities considered

Four key areas have been identified as foundational for effective regionalization of Diagnostic Imaging in the South East region.

- ***Regional Diagnostic Imaging Council.*** Establishing a Regional DI Council will improve access to high quality care through the development of a sustainable system of integrated Diagnostic Imaging services. The council is envisioned to have representation with the following key stakeholders: patient advisor, operational (front line) staff, administrative staff and radiologists. They will provide oversight and leadership to guide the development and implementation of the Diagnostic Imaging

regional strategy.

- ***Standardization.*** There is currently variation in medical imaging processes, including requisitions, patient preparation, protocols, policies and procedures. It is recognized that some separate protocols/policies will always be required for complex patients with tertiary imaging needs. These specialized cases aside, greater regional standardization will ensure utilization of best practices and provide a known approach for all sites. This, coupled with a robust regional quality program will allow hospitals to monitor common indicators including waiting lists, turnaround times, patient satisfaction, and program standards.

- ***Capital Equipment.*** Capital equipment planning on a regional level will allow for the following:
    - optimization of patient access to imaging,
    - economies of scale [financial (equipment cost and service contracts) and skilled/trained human resources]
    - planning with a link to regional priorities and service distribution (i.e. ensuring appropriate equipment to support clinical programs)
    - more effective recruitment and retention of radiologists and other DI professionals

- ***Regional PACS***. Opportunities related to Regional PACS are being explored with the Information Technology team and more information will be provided in a future update.

Working Group Process and Engagement

Since October 2015, a group of Diagnostic Imaging leaders from the 7 SE LHIN hospitals have been meeting on a monthly basis to explore the key priorities and opportunities identified in Phase 1 of the Health Care Tomorrow – Hospital Services Project. The mandate is to determine a robust plan in each of the key areas that will optimally support the regionalized approach to Diagnostic Imaging in the South East region.

The DI Working Group is well represented from across the region on both the operational and

medical side, as well as from tertiary and community hospitals. The group also has a representative from the Regional Patient Advisory Council. Of note, as we proceed with the business case increased involvement of radiologists in the community will be required.

With patient care at the centre of their mandate, members of the DI Working Group are devoting considerable time to the meetings, research and coordination with their peers to ensure they deliver a solid business case that is cost-effective but ultimately patient-centred.

Diagnostic Imaging Working Group

Team Leads:

- Dr. Annette McCallum – Head, Diagnostic Radiology, Kingston Hospitals / Queen's University
- Jeff Hohenkerk – VP/CHRO, QHC

Team Members:

- Dr. Annette Polanski – Chief of Diagnostic Imaging & Division Head Radiology, QHC; Medical Director Diagnostic Imaging, LACGH
- Brenda Carter – VP, KGH; Regional VP, Cancer Services
- Cathy Sharland – Corporate Manager, Diagnostic Imaging, QHC
- Debbie Wilson – Director, Diagnostic Services, Laboratory, Pharmacy & Infection Control, BGH
- Dr. Jonathan Lasich – Chief of Diagnostic Imaging Services, BGH
- Karen Pearson – Director, Imaging Services, KGH, HDH & LACGH
- Kerri Choffe – Manager, Diagnostic Imaging & Cardiopulmonary, PSFDH
- Dr. Nimish Parikh – Chief Radiologist, PSFDH
- Sue Bolger – Patient Advisor; Regional Patient Advisory Council Member

In addition to the regular group meetings, some of the members of the DI Working Group have engaged other hospital DI staff in brainstorming sessions for specific areas (e.g. Central Intake, Interventional Radiology and Nuclear Medicine Consolidation). Regional DI staff were provided with an update on the Working Group's progress and identified opportunities in April 2016. This was subsequently shared with all regional staff and physicians and 54 individuals

provided input through an open-ended survey tool. This input was discussed at a Working Group meeting and will be incorporated into the business plan as much as possible.

In April 2016, the radiologists across the region were provided an update on the HCT DI work to-date to solicit feedback, which will help inform the final business case. Four separate Radiologists sessions were held:

- QHC / LACGH – April 21, 2016
- BGH – April 22, 2016
- PSFDH – April 26
- Kingston – April 27, 2016

To further engage stakeholders, two additional focus sessions are scheduled to occur on May 24 and May 27, 2016. These sessions will primarily engage physician groups who highly utilize DI services for their patient population (i.e. Oncology, Surgery, Internal Medicine & Emergency Medicine).These will focus on the four key areas of the business model (i.e. Regional Council, Standardization, Capital Equipment, Regional PACS) and will solicit feedback and concerns related to potential impact to their practices.

Describe the Analysis Undertaken

The Diagnostic Imaging Phase 1 Report provided a solid base of information for the DI Working Group members. In the first few meetings of the group, key areas of change were re-visited and re-validated through the members' own professional experiences in their respective organizations. There is strong consensus among the members to move forward with a regional approach for DI. As keenly expressed by the members: "Given the current state in the region, working towards a Regional DI should be pursued despite Health Care Tomorrow."

As an initial step, task teams were formed and assigned to work on the following opportunities identified in Phase 1:

- Identify current state and gaps
- Gather data to help inform the business case (e.g. budgets, volumes, patient population, equipment list, staff demographics)

The Working Group members also reached out to the other LHINs to determine if similar models have been pursued in other areas. Regional models (specifically for DI) in other parts of Ontario and other provinces are also being reviewed. Key questions are: What led to successes and/or failures? What are the lessons learned?

Most importantly, the patient advisor sitting on the Working Group has shared invaluable insights that continue to provide patient perspective and guide the whole group in their analysis of current state and in their view of what the future state will look like under the regional model.

Summarize the proposed future state

The DI Working Group continues to meet to develop the possible future state that would provide safe, timely, effective, consistent care to better informed and more satisfied patients. They have envisioned that a regional service for Diagnostic Imaging will have the following characteristics and benefits:

- A Regional DI Council to provide oversight and leadership to guide the development and implementation of the Diagnostic Imaging regional strategy.
- Set of standardized requisitions, patient preparations, protocols, policies and procedures with accountability between the hospitals and strategic leadership.
- Common approach to equipment and systems, including regional PACS and Radiology Information Systems, to create more effective communication pathways between radiologists and clinical partners.
- Region-wide multi-year capital planning for diagnostic imaging equipment to leverage the purchasing power of the regional hospitals and ensure standardization of equipment.

The four key areas described above will provide the foundation for the other future areas of improvement.

- Review of the distribution of services across the region to support the clinical service plan.
- A regional program for sub-specialized services and equipment testing (e.g. physicist).

- A regional human resources strategy for DI staff and radiologists.
- A regional central intake system to ensure more timely access to care and increase patient choice.

Future state – Functional Chart

Shared Service Organization Leadership Service Contracts Central Intake Project Management Quality Assurance PACS Support Transcription/Voice Recognition	
Services Available at Each Hospital Organization X-ray Ultrasound Mammography Bone Mineral Density	**Services Available at Some Hospitals and Accessible to All** Computed Tomography Magnetic Resonance Imaging Interventional Radiology Nuclear Medicine

Further analysis and validation of the functional chart above will be included in the business case. DI service delivery across the region would be determined based on Clinical Service Planning.

Key benefits of proposed future state

The development of a 'Sustainable System of Integrated Care' in Diagnostic Imaging will ultimately improve access to high quality care; increase satisfaction for patients and families; and increase efficiencies through an improved workflow for clinicians and staff members.

Standardization, in particular, is a cornerstone to the regional model, providing the following benefits:

- Standardized requisitions will provide better access to DI services across the region and allow clearer directions for the patient preparations.
- Standardized patient preparations utilizing best practices will lead to further efficiencies for staff to deliver optimal image quality and for patients to receive optimal findings and obtain an accurate diagnosis.
- Standardized exam protocols using best practices, with input of site radiologists.

- Standardized policies and procedures will provide consistency and continuity for patients and their caregivers, staff, physicians and management. This will lead to increased productivity and free-up management time to devote to program delivery.
- Standardization enables a formal approach to monitoring and evaluating effectiveness.

Standardization will decrease duplication, reduce ambiguity, and provide clear direction to all stakeholders.

A regional capital equipment process will generate the following benefits:

- Reduction in the cost of equipment (through volume purchases)
- Potential for regional service contracts
- Standardization of equipment (where appropriate)
- Structure to ensure that capital equipment purchases by the individual hospitals are supporting clinical services
- Provide the ability for local foundations to fundraise for equipment purchases 5 years in advance

The benefits related to regional PACS will be added at a future date, in consultation with the Information Technology Team.

Key Risks

In undertaking the path towards a regionalized approach to Diagnostic Imaging, key risks have been identified as follows.

- Patient impact: possible loss of testing preference close to home. The lack of a regional transportation system could impact access to testing
- Staff impact: potential short-term impact on retention and recruitment with decreased satisfaction in response to the amount of change. Possible unwillingness to build and maintain a shared culture.
- Radiologist impact: possible changes in practice that could lead to short-term impact on retention and recruitment, with decreased satisfaction
- Perception of service:
    - Potential loss of services
- Impact to hospitals and/or system
    - Perceived lack of access to radiologists and services

- Potential lapse in oversight to ensure and maintain best practices
- One time financial capital investment at implementation
- Ongoing operational costs with limited funding
- Potential increased costs to smaller sites
- Multiple stakeholders may be a confounding factor

Potential for Foundation concerns which could impact regional financial support

Anticipated Phasing

The first priority is to establish a Regional DI Council. This will set the structure for oversight and leadership.

- If Board approval is received in June 2016, invitations will be sent to each hospital for patient advisory, operational, administrative and radiologist representatives. (August 2016)
- Regional Diagnostic Imaging Council co-chairs will be selected. (September 2016)
- Terms of Reference will be finalized and approved by council members. All Diagnostic Imaging Working Groups will report to the Council. (October 2016)
- Regional DI Council will be in place by Fall 2016.

The plan for Standardization will continue to evolve over the next several months. By Fall 2016, the Working Group will submit a step-by-step approach towards standardization in the region. Key areas that will be incorporated in the plan are as follows:

- Requisitions
- Patient preparations
- Exam protocols
- Policies and procedures

For Capital Equipment, the Working Group is proposing to purchase capital equipment on a regional basis and is proposing the following process. For a one-year period starting Fall 2016:

- Each hospital to review DI equipment list and evergreen strategies
- Regional Equipment list to be generated from the Hospital Equipment list
- Request for Equipment form to be completed by each hospital requesting capital equipment
- Regional DI Council to review / approve Capital Equipment list

- Capital Equipment List to be submitted to Foundations
- Foundations approved Capital Equipment List reviewed by Regional DI Council
- Regional RFPs to be developed in partnership with 3SO.

The phasing for the regional PACS will be determined at a later date, in consultation with the Information Technology team.

Human Resources

When developing the more detailed business case, the DI Working Group will use the guiding human resources principals that were endorsed by SECHEF. These include:

Service Considerations:

- Consider all people, including: patients, clients & families, employees (both unionized and non-unionized), physicians, volunteers and students;
- Manage any potential transitions to ensure the least amount of disruption to patient/client service;
- Treat all impacted people across the region in a fair and respectful manner with transparent processes.

HR Transition:

- Transparency – Open communications with respect to the HR practices and strategies and ensure clear, coordinated and consistent communication protocols and messages are in place;
- Consistency – Model best staffing practices and ensure fair treatment of employees at all levels;
- Compliance – Adhere to collective agreements, memoranda of agreements, employment contracts, relevant legislation and common law principles;
- Retention – promote the retention of key skills and competencies.