Annual Report to the Minister of Health

We Promised, We’re Delivering:
Value for Manitobans

Results That Matter
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We Promised, We’re Delivering: Value for Manitobans
LETTER OF TRANSMITTAL AND ACCOUNTABILITY

We have the honour of presenting the Annual Report for Diagnostic Services of Manitoba Inc. (DSM) for the fiscal year ended March 31, 2016.

This Annual Report was prepared under the Board’s direction and in accordance with The Regional Health Authorities Act and directions provided by the Minister of Health. All material including economic and fiscal implications known as of March 31, 2016 have been considered in preparing this report. The Board has approved this report.

Respectfully submitted on behalf of Diagnostic Services of Manitoba Inc.,

Ms. Arlene Wilgosh
Board Chair
BOARD GOVERNANCE

DSM operates under the direction of a Board of Directors, which in turn is accountable to the Minister of Health. The Board plans and makes decisions based on established strategic plans and, together with the Chief Executive Officer, reviews DSM’s measurable benchmarks to monitor performance.

Among the Board’s responsibilities are overseeing the realization of our Health Plan, the proper allocation of funds and our compliance with provincial legislation. To assist in achieving these goals, the Board has established the following committees:

- Quality and Patient Safety
- Finance and Audit
- Governance
- Executive

The Board’s three main roles are:
- Strategic Leadership
- Oversight
- Governance

Major Activities and Decisions of the Board of Directors:

New Members and Farewells

In 2015, DSM’s Board of Directors said farewell to its Chair, Ms. Marie Perchotte. Ms. Arlene Wilgosh was appointed Chair by the Minister of Health and assumed her role in October 2015.

Activities

Together with the DSM Senior Management Team (SMT), an annual Board visioning and strategic planning session was held in the fall of 2015 to outline the high-level strategic direction for the organization’s upcoming year(s) and ensure alignment with Government priorities. At each Board meeting, time is dedicated for ongoing high-level, strategic and generative discussions that provide DSM SMT with valuable direction and input. Oversight and governance include regular reporting from the CEO, an opportunity for a Question and Answer (Q&A) period as well as regular reports from Quality and Patient Safety Committee, Finance Committee and Governance Committee.

The Board’s five strategic priorities for 2015-2016 were:

Quality of Care and Patient Safety - The Board will continue to strengthen its role in providing strategic direction to and appropriate oversight of DSM performance in the provision of patient focused quality care and in ensuring patient safety; the Board will consider quality and patient safety in all Board decisions; the Board will assess itself regularly on progress in quality and patient safety.

Accountability/Dashboard - The Board prioritizes the development of a national-class accountability system which will include an informative dashboard of safety, quality and fiduciary metrics.

Provincial Leadership Diagnostic Services - The Board recognizes that DSM is uniquely positioned to provide leadership and drive innovation in diagnostics and to provide oversight and strategic direction to ensure consistency, coordination and integration of all diagnostic services across the province.

Engagement - To better understand and address the needs of DSM’s key stakeholders, the Board recognizes the importance of integrating an engagement philosophy that aims to generate and include feedback from staff, patients, families, providers and partners in the planning, delivery and evaluation of services offered by DSM.

Sustainability – The Board will advocate for appropriate funding and ensure that DSM balances the provincial need for diagnostic services within the overall resources available to ensure a sustainable service going forward.
Major Consultations with the Public and Other Stakeholders

In the fall of 2015, the Board held a public Annual General Meeting in tandem with the opening of DSM’s third Shaping the Future Quality Improvements in Pathology Conference. The conference was well attended by DSM staff, along with several stakeholder representatives, including the Minister of Health and President of the College of Physicians and Surgeons of Manitoba. In addition, DSM partnered with the provincial Health Authorities in their delivery of AGM events, visibly demonstrating that DSM builds strong relationships and works collaboratively to deliver and plan health care services.

The Board held its Annual Members Meeting with its sole shareholder, the Minister of Health, on October 9, 2015 as part of its strategic planning session. The Minister of Health expressed her appreciation for the exceptional quality and patient-centred work by DSM staff. The Minister of Health also acknowledged this was the last board meeting for outgoing Board Chair Marie Perchotte. The Minister thanked Marie for her years of public service.

Board Oversight

Primarily through its committees, the Board oversees its fiduciary responsibilities to ensure that funds are allocated appropriately to support the strategic priorities and monitor budget performance. The Board sets and monitors quality and safety performance measures, completes annual board performance evaluations and ensures legislative compliance.
Organizational & Advisory Structure

Changes through retirements and departures are inevitable, but through its leadership development and succession plans, DSM regards such changes as opportunities for renewal and strengthening of the organization:

- Petr Kresta replaced Paul Penner as Chief Operating Officer (COO) following Mr. Penner’s move to CancerCare Manitoba;
- Procurement and Contracts was formerly under the COO portfolio, but was made the responsibility of the Chief Financial Officer in 2015 to better align financial planning with respect to procurement and contract management; and
- Several retirements and farewells at the Director and Technical Director levels occurred, including Transfusion Medicine, Microbiology, Immunology, and Human Resources.

Provincial Teams

Provincial Diagnostic Teams provide expertise in all of DSM’s testing disciplines, guiding service delivery based on best practices, research and emerging trends and technology. As well as driving quality, standardization and continuous improvement initiatives, the Provincial Teams are a resource for all DSM sites across Manitoba, ensuring a high standard of excellence. The Teams are:

- Biochemistry & Genetics (Genomics)
- Clinical Microbiology
- Diagnostic Imaging
- Hematology
- Immunology
  - Transplant Immunology
- Transfusion Medicine
- Pathology
  - Autopsy and Forensic Pathology

Health Authority Liaisons

DSM works closely with its Health Authority partners through designated liaisons and participates in various provincial groups with Chief Executive Officers, Chief Medical Officers, Chief Operating Officers, Chief Financial Officers, Communications and other counterparts.

DSM Facilities

With 82 points of access to DSM’s provincial laboratory and/or medical imaging services, DSM is proud to be Manitoba’s leading provider of public laboratory and rural diagnostic imaging services. For a complete list of DSM sites, please visit our website at: dsmanitoba.ca.
Annual Achievements

Strategic and Operational Priorities

Provincial Leadership

DSM continues to live up to its role as Manitoba’s provincial diagnostic health services organization and has aligned its strategic planning process with MHSAL’s (formerly Manitoba Health, Healthy Living and Seniors) priorities and goals, identified provincial priorities for diagnostic services and identified organizational-level strategic priorities. DSM has defined its position as a leader in health care by focusing on finding internal operating efficiencies and collaborating with its partners and stakeholders. We believe that diagnostics can play a lead role in driving system improvements for patient care resulting in ‘downstream’ value across the health care system. For example, our investment in new technology (Liquid Based Cytology) will facilitate the earlier detection of cervical cancer and more accurate diagnoses for women leading to fewer colposcopy and surgical procedures; reducing wait times; and reducing system costs; patient costs and time associated with time off for surgeries. Liquid Based Cytology has already contributed to a three per cent reduction in the number of required repeat visits to a primary care provider due to unsatisfactory specimens; this means that approximately 5,000 women do not require re-sampling.

DSM has integrated services to operate a sustainable provincial model, decreased wait times for diagnoses (notable improvements in cancer diagnoses), bent the curve on volume growth, stabilized cost per test, invested in advanced technologies for laboratory testing, diagnostic imaging and information systems and created strong quality management systems that have improved patient safety and quality of care.

As Manitoba’s provincial diagnostic health services organization, DSM has worked to define this mandate through its philosophy of collaboration and relationship building with key stakeholders: MHSAL, Health Authorities, CancerCare Manitoba, Canadian Blood Services, Cadham Provincial Laboratory, community/private laboratories, Winnipeg Regional Health Authority (WRHA) and Brandon Diagnostic Imaging Programs, WRHA Departments and Department Heads in Medicine, Surgery, and Family Practice.

Over the past five years DSM has undergone a significant culture shift from primarily site based services to strategic provincial services; and from minor player to major driver of provincial strategies across the entire health care spectrum of services. Diagnostics touch everyone and have a profound influence on provincial clinical services planning.

Several fundamental tenets of DSM’s strategic revitalization have focused on provincial leadership, collaboration and relationship building and examining our business operations for efficiencies and cost savings. This includes developing a culture from within for delivering patient-centred, high quality, efficient, effective, accessible and sustainable diagnostic services. Nowhere is this more evident than in the role DSM has played in improving the cancer patient’s diagnostic journey and co-leading the Choosing Wisely initiative in Manitoba.

Diagnostic Services Manitoba: Delivering Value for Money

1. Cost Savings (Efficient)
2. Appropriate Utilization (Effective)
3. Reduced Wait Times (Accessible)
4. Coordinated Services – Province-Wide (Sustainable)
5. Province-Wide Quality Assurance Systems (Quality)

Quality is the foundation of DSM’s value proposition; research and education are key components of quality in the ever advancing world of diagnostic services. Efficiency (lowest possible cost), Effectiveness (providing the most appropriate service) and Accessibility (diagnostic services for all Manitobans)
are the three pillars of DSM’s value proposition. Finally, if we deliver efficient and effective diagnostic services that are accessible to all Manitobans and meet our high quality standards, then we will ensure the Sustainability of diagnostic services in Manitoba, ultimately delivering value for money.

In the 2015/16 fiscal year, DSM’s strategic planning was aligned with the priorities and goals identified by Manitoba Health, Healthy Living and Seniors - MHHLS (now Manitoba Health, Seniors and Active Living - MHSAL). DSM has also continued to work on provincial priorities for diagnostic services and organizational-level strategic priorities as identified in the Five-Year Provincial Strategy for Diagnostic Services in Manitoba (2016-21). DSM has developed performance metrics for the organization, which will be fully implemented in the 2016-2017 fiscal year.
Major Highlights of Our Achievements

MH HLS Objectives

Cancer Patient Journey (A.1)

Diagnostics play a critical role in the detection of cancer and its ongoing treatment. As such, DSM is a key partner in MH HLS’s In Sixty Cancer Patient Journey (CPJ) initiative. Since the start of this initiative, DSM’s goals have been to reduce the turnaround times (TAT) for test results, to make process and quality improvements and to look for innovations in testing with our key partners and stakeholders. Wherever and whenever possible, DSM strives to make improvements that benefit the long-term sustainability of health services while giving Manitobans the best health services available.

DSM’s CEO Jim Slater continued as the Executive Sponsor of the Cancer Diagnostic Working Group and sits on the CPJ Steering Committee. In 2014, DSM formed several pathology working groups dedicated to meeting the established turnaround times and disease-specific pathways of In Sixty, Manitoba’s CPJ initiative, which continued to operate throughout 2015. Technical, medical and operational staff have been working to identify opportunities for process and turnaround time improvement within each of the gastrointestinal and colorectal, breast, lung and lymphoma cancer diagnostic journeys.

In 2015-16, DSM had significant successes that contributed toward the achievement of the CPJ goal of initiating treatment within 60 days of suspicion of cancer or will play a role toward that achievement in the future:

Breast Cancer Working Group

The ongoing monitoring of breast TAT by DSM since January 2014 has allowed expedient interventions at the first appearance of perceived delays or downward trends. In addition, 2015 saw the full implementation of a Direct Referral system for patients who present with suspected breast cancer. Because of this new

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system, radiologists can refer patients directly to ultrasound based on an abnormal mammogram for more expedient and efficient patient care; when needed, biopsies are performed at the initial ultrasound instead of at a secondary appointment without further consult with the primary care physician, thereby delivering value by reducing visits to a physician when unnecessary.

To complement direct referral, a provincial breast pathology requisition was fully implemented in January 2016. This requisition provides additional visual and clinical details that assist pathologists in making a diagnosis, thus saving consult time between pathology and radiology and improving result turnaround while creating a more coordinated service across the province.

GI/Colorectal Cancer Working Group

Following a successful pilot study in Southern Health-Santé Sud, a colorectal flagging system was implemented in most Winnipeg endoscopy locations in November 2015. This system enables surgeons to identify cases with a high suspicion of cancer for priority pathological review. Preliminary data shows that flagged cases met the targeted seven-day timeline as per In Sixty’s colorectal pathway. In addition, clinicians commended the well-organized roll-out and positive change in practice for the benefit of patient care as well as to their own workflow. Earlier detection and improved flow will have positive impacts on the health system as they can contribute to appropriate test utilization and fewer surgeries.

Lung Cancer Working Group

Lung cancer TAT has been improving since 2014 with the addition of a second lung pathology specialist and process and workflow improvements. The pathway for lung cancer is particularly complex since the diagnostic material can come from multiple specimen types and subtyping the tumors by ancillary studies has become the standard of care for many clinical scenarios. The process is currently being re-assessed in the hope of developing a more realistic target timeline as all medical disciplines are challenged in meeting the currently defined pathway and its corresponding targeted timeline.

Lymphoma Working Group

DSM has built on the lymphoma protocols by adding a case flag that has allowed improved monitoring and follow-up of these cases; because lymphoma testing can originate from multiple tissue types, it was difficult to track and extract data specific to this pathway.

Continuing Care (A.2)

Diagnostic Services are an essential support for all health care service delivery. For continuing care, this includes patients with chronic diseases and disabilities who may have a higher than average need for diagnostic services and ongoing monitoring. In 2015-2016, DSM continued to play a collaborative and supportive role by engaging in the planning and implementation of the 'Advancing Continuing Care' blueprint in Manitoba.

Wait Times & Access (A.3)

As Manitoba’s provincial diagnostic health services organization, DSM provides a coordinating/leadership role in addressing wait times. Wait Times and Access in diagnostic services are primarily focused on CT, MRI and Ultrasound with respect to diagnostic imaging. DSM is well-positioned to improve these diagnostic wait times by taking a lead role in the development of an integrated provincial diagnostic imaging service.

In Laboratory Services, wait times and access are primarily related to pathology (see Cancer Patient Journey In Sixty), Genomics (molecular and cytogenetic testing) and select tests for 'urgent' testing (Emergency and Critical Care departments).
Family Doctors for All (A.4)

Primary health care providers rely on diagnostic testing for the information they need to correctly diagnose and treat patients’ illnesses, disorders and diseases. Adding additional primary care providers increases the volume of lab tests and imaging procedures. Over the last year, DSM has continued working with MHSAL, the Health Authorities and other professional groups to ensure capacity and access to diagnostic services for all family doctors and medical practitioners, while simultaneously encouraging appropriate utilization.

Examples of such opportunities include:

- Diagnostics on a mobile healthcare bus
- Point-of-Care-Testing (POCT) in rural/remote Manitoba
- Remote support for laboratory services (e.g. new technology allows test review and reporting remotely)
- Diagnostic Services for First Nations, Métis and Inuit Diagnostics Strategy - Pilot and research (e.g. phlebotomy at reserve clinics, POCT)

Other strategies include:

- Connecting the Primary Care branch of MHSAL into provincial diagnostic strategies
- Identifying issues and options for diagnostic services related to primary care networks and FD4A strategy (“My Health Team”) 
- Developing and implementing the Provincial Strategy for Appropriate and Effective Use of Diagnostic Services, including POCT
- Developing the Provincial Diagnostic Strategy for First Nations, Métis and Inuit
- Developing the DSM Workforce Planning Strategy.

Provincial Strategies

Provincial Transfusion Medicine Services (B.1)

DSM continues to work in partnership with MHSAL, Office of Provincial Transplant and Transfusion Services (formerly PBPO), Canadian Blood Services (CBS), the Regional Health Authorities (RHA), Health Senior Leadership Council (HSLC) and the Provincial Medical Leadership Council (PMLC) to develop an integrated vein to vein provincial transfusion service. Over the past year, DSM has been assuming a greater clinical and operational role in Transfusion Medicine Services in Manitoba, focused on building relationships and collaboratives, defining roles and responsibilities, and strengthening the functionality of the Transfusion Practice Committee (TPC). DSM is well-positioned to deliver the next level of integration and deliver improved blood product usage with significant savings to the health system.

Best Blood Manitoba

Best Blood Manitoba (BBM) is a project completed in 2014 that we have continued to strengthen over the last fiscal. The BBM website (bestbloodmanitoba.ca) is an accessible resource for current information about transfusion medicine for patients and healthcare providers.

Collaborative Mapping to Standardize MTP

Massive blood transfusions, when required by patients, involve multiple departments and individuals. In order to coordinate this process, staff follow massive transfusion protocols (MTP). In 2015, DSM and staff from St. Boniface Hospital participated in a rapid improvement event to align the protocols at St. Boniface with those at Health Sciences Centre. The goal was to standardize the nomenclature and procure for this critical process across the sites.

Provincial Pathology Services (B.2)

Digital Pathology

Complex pathology cases now have rapid access to a second opinion with the implementation of Digital Pathology (DP) in Manitoba’s pathology labs. Manitoba is the first to implement a digital pathology system with a provincial approach and vision. DP
provides a platform that enhances the process for pathologist consultations, avoiding the hurdles and risks of physically shipping slides and generally making pathology practice safer. It is also having a significant positive impact on resident education, teaching and quality assurance activities. It has taken a lot of work to prepare for productive use of the DP platform, including training and validation for pathologists to ensure that a comparable diagnosis is reached through both conventional and digital methods. DSM anticipates that DP will be fully integrated by the end of 2016 and will contribute to the efficiency, effectiveness and accessibility of pathology services and expertise.

Shaping the Future of Quality Improvements in Pathology Conference III

DSM’s third Shaping the Future of Quality Improvements in Pathology Conference September 25-26, 2015, was met with positive feedback, noting varied and relevant topics, engaging speakers and thought-provoking presentations. As a leader in provincial pathology service delivery, DSM has been hosting this conference since 2013, offering a forum for innovation and process improvement within Manitoba’s provincial pathology system, as well as a continuing medical education opportunity for pathologists. The 2015 conference featured key-note speaker Dr. Pat Croskerry, Professor of the Department of Emergency Medicine and Director of the Critical Thinking Program at Dalhousie University in Halifax, who delivered a multi-disciplinary presentation that also engaged DSM’s partners and stakeholders.

Pathology LIS

Having selected a vendor and developed implementation, training and testing plans, DSM anticipates roll-out of this digital solution within 2016. Please read more about this initiative under the Information Systems and Information Management section.

Provincial Microbiology Services (B.3)

Improvements Made With MALDI-TOF

DSM implemented matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF) in April of 2015 as part of our Provincial Microbiology Strategy to ensure quality, sustainability and access for all Manitobans. With the ability to identify bacteria and yeasts in as little as 30 seconds and with increased reliability, this disruptive innovation is set to transcend DNA sequencing, which until recently, was the most definitive, albeit time-consuming and costly, method of microbial identification available. Conventional culture
results that used to take 24 hours or more are now available to physicians within half an hour, allowing patients to start the appropriate targeted therapy in a lot less time and with greater accuracy. Biochemical tests conventionally used to identify bacterial and fungal pathogens have been dramatically reduced, as has the cost of providing results. Tests that used to cost $7-$8 each are reduced to just pennies with MALDI-TOF. This new technology has resulted in an estimated savings of more than $90,000 across DSM microbiology over the past year. The discipline is on the verge of using MALDI-TOF technology to identify bacteria and yeast directly from positive blood cultures, further reducing the time to identification of these pathogens from critically ill patients and will soon expand MALDI-TOF’s application to include moulds, which currently require time consuming analysis using with conventional methods. Within a year, the discipline hopes to expand the use of MALDI-TOF to the identification of mycobacteria, which currently require expensive and time-consuming identification with DNA probes or referral to the National Microbiology Laboratory. The many applications of MALDI technology will result in continued innovation for microbiology testing.

16S rRNA Gene Sequencing Better Detects Bacterial Presence for Better Patient Care

DSM Microbiology has validated a new method, 16S rRNA gene sequencing, to identify bacterial pathogens infecting sterile tissues as a complement to the previously validated assay for sterile site fluids. This test is performed directly on selected patient tissue samples that have yielded a negative culture result and is typically used to guide treatment of critically ill patients receiving multiples courses of antibiotics.

Standardization for DSM Influenza Testing

In the fall of 2015 the DSM Microbiology Laboratory at the Health Sciences Centre began offering a real-time PCR test to identify influenza virus from respiratory samples. This test, which has already been in place at St. Boniface Hospital and at Westman Laboratory in Brandon, yields quicker results than previous methods offering an improved service at these three urban centres.

Consolidated Provincial Mycobacteriology Testing Brings Standardization and Cost-Savings

All provincial Mycobacteriology testing is now performed at DSM’s Microbiology Laboratory at the Health Sciences Centre. As a result of this consolidation, the laboratory was able to acquire an upgraded culture system (BACTEC MGIT System), which permits faster culture results and ensures faster antimicrobial susceptibility testing turnaround times at a significant cost-savings of approximately $20,000 per year.

Integrated Laboratory Services (B.4)

As Manitoba’s provincial diagnostic health services organization, DSM provides a coordinating/leadership role in the development and implementation of a provincial strategic plan for the delivery of integrated Laboratory Services in Manitoba. Integrated Laboratory Services includes the core lab functions of Chemistry, Hematology and Immunology.

Linking Endocrinologists to the Lab

The Internal Medicine specialty of Endocrinology relies heavily on biochemistry testing, to the point where patients could not be diagnosed or treated without these results. So integral is this relationship that laboratory education is a fundamental requirement of training for this specialty. An expanded training curriculum was developed by the Provincial Biochemistry Team to deliver more comprehensive training to Endocrinology Fellows, building on the training that DSM’s Endocrinology Residency Training Program has provided for the past 30 years. This new four-week curriculum was delivered by both technical and scientific staff for the first time in spring 2015. The additional two weeks allowed for the study of more varied clinical cases and an additional focus on test
performance characteristics, quality assurance, post-analytical consideration and general overview of lab policies and procedures, all which will further benefit these specialists in providing care to their patients. These patients include those with illnesses such as diabetes, thyroid, pituitary and lipid diseases as well as transgendered patients.

**Trace Metal Testing**

A new and improved method for trace metal testing was implemented within biochemistry in January. IPC-MS (Inductively Coupled Plasma Mass Spectrometry) replaces Atomic Absorption with increased sensitivity that can detect trace metals in more diluted samples, which yields higher accuracy.

DSM is currently testing for copper and zinc with the IPC-MS platform. Patients who are tube fed or fed intravenously require ongoing monitoring of these metal supplements to determine dietary deficiencies.

**Province-Wide Scope for Protein Electrophoresis**

Early in 2016, the immunology laboratory at HSC took responsibility for all immunoglobin investigations in Manitoba, which are related to hematological cancers and immunological disorders. Standardizing the procedure across Manitoba offers clinical benefits by building an overall better detection system, improving diagnosis and follow-up care and increasing appropriate utilization by removing duplicate tests. Because of the change, physicians will be better able to monitor and trend their patients over time and the system will experience cost savings.

**New Technologies Offer Increased Efficiency in Immunology**

Last year, the immunology lab at HSC received a substantial technology upgrade called the Serum Protein Analyzer (SPA). The machine automates many labour-intensive tests related to immune system diseases and malignant hematological cancers like myeloma. The machine has significantly impacted the lab’s efficiency, allowing more tests to be completed and decreasing the turnaround times for certain time sensitive follow-ups. With the SPA completing many tests, the laboratory can also make better use of technologists’ time, allowing them to focus on complicated tests that require manual manipulation and interpretation. The SPA has made possible savings of approximately $30,000, in spite of the significantly increased test volumes that are now being completed.

At the immunology laboratory at St. Boniface Hospital, which acts as Manitoba’s centre for autoimmune testing, new technology called Bioplex Multiplex was implemented. The Bioplex is capable of handling 70% of the test menu with significant improvements to workflow, which enables technologists to focus on other tests that require more human intervention and involvement. The new technology had the unexpected benefit of improving working relationships with clinicians; as part of the implementation process, DSM revised the immunology requisition and engaged in proactive communication with clinicians, resulting in better test utilization and greater overall understanding of the ordering process.
Shedding Clinical Light on Diagnostic Specialties

Second-year medical students now have an improved framework to prepare them for the transition from classroom to clinical practice environment thanks to newly developed curriculum that introduces the critical role of laboratory and imaging in clinical diagnosis. Delivered as part of the consolidation portion of second year medical curriculum, the training was developed in partnership by DSM’s Biochemistry and Pathology Teams with support from the University of Manitoba’s Undergraduate Medical Education Program as well as clinicians and radiologists who participated in the sessions. Each Session presented patient symptoms leaving the students to determine, in small groups, how to approach the diagnosis as though they were seeing the patient in a clinic or hospital. The clinician, radiologist, pathologist and clinical biochemist then present the case and use it to emphasize key principles in the diagnosis and management of certain diseases. As well as increasing knowledge and understanding, this type of activity promotes improved collaboration and communication between clinicians and the lab, which is critical to effective patient care.

Implementation of Remote Review with Cellavision

In 2015-2016, the Provincial Hematology Team implemented technology that improves efficiency by automating certain manual processes and enhances quality with standardization. Cellavision has contributed to faster diagnoses for certain conditions by as much as three days because Winnipeg, Brandon and Thompson are now connected electronically, allowing peripheral blood smear images to be reviewed remotely rather than transferred by costly truck and air couriers.

Radiology and Diagnostic Imaging Services (B.5)

As Manitoba’s provincial diagnostic health services organization, DSM provides a coordinating/leadership role in the development and implementation of a provincial strategic plan for the delivery of radiology services, which has until now been delivered in a separate approach by DSM, WRHA, and Prairie Mountain Health (PMH). The three organizations are collaborating on multiple committees and initiatives that review technology, equipment, practice, accreditation and other operational components. DSM and these partners are continuing to work toward an overall provincial strategy that will ensure there is consistency and integration across all jurisdictions within Manitoba.

A significant accomplishment in 2015-2016 was the introduction of Digital Mammography in Manitoba. Working with members of the Digital Mammography Steering Committee, DSM played a lead role in bringing a truly coordinated approach to Digital Mammography for Manitoba, meaning that all providers across the province, whether public or private, are using the same technology. This enables digital images to be shared electronically with sites throughout the province, eliminating the need to transport film...
images to radiologists and resulting in a more efficient system overall. Patients can receive services closer to home and will receive equitable diagnostic services regardless of location. In addition, the ability to instantly acquire and view images without film process will contribute to decreased wait times for diagnoses. If cancer is suspected, additional images may be instantly acquired and shared, decreasing the need for follow-up appointments and wait times for diagnosis, thereby saving money in the health system. Sites with the new integrated approach include:

- BreastCheck, CancerCare Manitoba (CCMB)
- Mobile Breast Screening Program (CCMB)
- Brandon Regional Health Centre (BRHC)
- Breast Health Centre (BHC)
- Health Sciences Centre (HSC)
- Boundary Trails Health Centre (BTHC)
- Thompson General Hospital (TGH)
- Radiology Consultants of Winnipeg (RADCO)
- Manitoba X-Ray Clinic

### Appropriate/Effective Use of Diagnostic Services (B.6)

Momentum has been growing steadily for Choosing Wisely Manitoba (CWM) since DSM and the George and Fay Yee Centre for Healthcare Innovation (CHI) first partnered to form the initiative in early 2014. CWM is an early adopter of Choosing Wisely Canada and shares the national goals of reducing unnecessary tests, treatments and interventions, addressing locally what is a global issue of strain placed on the health care system as a result of over and inappropriate use of diagnostic testing.

Following grassroots engagement, education and collaboration with the physician and medical community to set a foundation for culture change and system transformation, CWM identified Manitoba’s priority initiatives and worked toward implementation of tangible changes within the 2015/2016 fiscal year.

### Appropriate Use of Vitamin D Deficiency Testing

It is estimated that approximately 90% of Manitoba’s vitamin D testing has been performed without providing clinical value to a patient’s treatment or health outcome and this testing has been increasing exponentially over the last eight years, from approximately 5,000 in 2006 to 50,000 completed tests in 2015/2016. In February CWM implemented new evidence-based medical criteria and a new requisition to improve the appropriate use of 25(OH) vitamin D testing. Initial data shows that 25(OH)D ordering met the target reduction of 50% within the first month of implementation and that orders continue to decline. The changes to ordering practice will be fully implemented in July 2016. It is hoped that this change will realize up to $800,000 in savings to be redirected to other areas of care.

**Vitamin D & Me**

Learn more about when you need Vitamin D testing and when you don’t.

The Vitamin D project included both information to help physicians reduce their use of vitamin D deficiency testing and handouts that physicians could provide to patients seeking Vitamin D testing.
With vitamin D testing largely being a patient request, a patient-education resource was developed to assist physicians in discussing appropriate testing, sources and supplementation with their patients.

**Improving Preoperative Diagnostic Testing**

Ophthalmology, Orthopedic and General Surgery account for 70% of unnecessary preoperative tests. Sustainable implementation of standardized, evidence-informed clinical practice guidelines to reduce unnecessary surgery delays, patient inconvenience, discomfort and stress is a priority focus for CWM. Approximately $400,000 can be repurposed to more appropriate areas of health care from these high-volume surgical specialties alone.

As part of this project CWM has collaborated extensively with orthopedic and general surgery to bring standardization and improved communication between surgery and primary care. A standardize preoperative package for orthopedic surgery was implemented and revised preoperative ordering guidelines (awaiting final approval and supported by Choosing Wisely Canada and the Canadian Anesthesia Society) will be incorporated into a new pre-operative history and physical form within the Winnipeg Regional Health Authority within 2016.

A revised history and physical for cataract patients has removed cues for unnecessary preoperative testing following a fall 2015 implementation.

**aPTT Testing**

The suboptimal utilization of aPTT testing has been identified as a prevalent problem across all health regions in Manitoba. As part of Choosing Wisely Manitoba and as per the aPTT testing recommendations issued by Choosing Wisely Canada, DSM’s Provincial Hematology Team provided direction and new guidelines for the ordering of aPTT testing. Following this clinical practice change in October 2015 aPTT test requests have decreased provincially by an estimated 20,000 per month. It is anticipated that more than $57,000 will be saved in supply costs, allowing reinvestment within other areas of Hematology.

**Tissues for Disposal Only**

Human tissues removed during a biopsy or surgical procedure are typically sent to a pathology laboratory for diagnostic examination and testing. Under the framework of Choosing Wisely Manitoba, and with the support of Orthopedic Surgeon and Clinical Champion, Dr. Eric Bohm, DSM conducted a retrospective review of approximately 300 orthopedic surgery cases (representing one surgeon’s annual caseload) to correlate pathology findings with the original diagnostic imaging report. As evidence and experts had suggested, the results of the review supported the case that pathology testing on tissues removed from
the body during orthopedic procedures do not provide additional clinical data making the original diagnostic imaging report clinically sufficient. With no value added to patient care, these tissues are now recommended for exemption from requiring pathological review and instead recommended for immediate disposal. DSM has developed a Standard Operating Procedure which will be the basis for the Choosing Wisely Clinical Practice Change that will direct surgeons to mark these orthopedic tissues for immediate disposal. As a first stage of implementation, to take effect within the first half of the 2016/2017 fiscal year, tissues will be forwarded to DSM pathology labs for disposal, however, collaboration has already begun with surgeons to develop a process for disposal at the surgery site, which would further improve workflow and efficiency for these cases. It is estimated that reducing unnecessary pathology testing on orthopedic specimens alone could result in a potential savings of $10,000 annually. Reinvestment of these funds will be shared between DSM and the Winnipeg Regional Health Authority Surgery Program, allowing for additional diagnostics and procedures. This project will also serve as a framework to reduce unnecessary pathological testing from other areas of surgery within Manitoba.

A Growing Momentum for Choosing Wisely

Work and collaboration continues with priority preoperative groups as well as within other preoperative specialties. Other current and future planned CWM projects include D-Dimer versus Imaging for Deep Vein Thrombosis and pulmonary embolism, imaging for headache and head pain and fecal occult blood tests.

Genomics Strategy (B.7)

DSM is preparing for the next wave in diagnostic advances. Collaboration between the three diagnostic disciplines of Pathology, Hematopathology and Genetics has resulted in a unique multi-disciplinary service that will improve testing capabilities and access for testing in all three disciplines. DSM’s new FISH (Fluorescent in situ hybridization) Lab brings together the expertise of multiple disciplines, shares highly skilled staff and provides the infrastructure for FISH testing - genetic testing with growing applications, the development and implementation of new and future tests as well as fosters scholarly research. DSM was able to acquire two new and sophisticated technologies that would not have been possible as individual labs: a high capacity loader, which speeds up the process by automatically scanning slides with the appropriate FISH probes; and a SKY (spectral karyotyping) interferometer, which uses spectral karyotyping to solve complex chromosomal rearrangements on oncology samples, not identifiable by standard cytogenetic techniques. The numerous advantages of this multi-disciplinary approach make this a model project for other potential cross-discipline collaborations.

In 2016/2017, DSM will begin to plan for specialized and targeted treatments that improve the health outcomes of patients (called ‘personalized medicine’). Alongside our partners, DSM plans to be competitive and to provide an evidence-based, business-decision framework that optimizes and maximizes benefits to Manitobans.

Diagnostic Services for First Nations (B.8)

Diagnostic Services in First Nations facilities are typically outside the scope and responsibility of DSM. In the majority of situations, diagnostic services are provided by DSM through DSM sites, Health Authority, and Federal facilities to First Nations, Métis and Inuit communities. DSM is working with its Health Authority partners, First Nations Inuit Health Branch of Health Canada and with tribal health agencies to explore and implement alternative models for diagnostic services such as:

- Phlebotomy services on-site at First Nations Medical Clinics (e.g. Opaswayak Cree Nation, The Pas)
- Accreditation support and operational management support (e.g. Norway House and Percy Moore Hospitals)
• POCT at northern nursing stations and small, remote laboratory sites
• Integration of key facilities into the Provincial Diagnostic Services Information Systems.

Organizational Strategies

Information Systems and Information Management

The Provincial Laboratory Information System (PLIS) project consists of five closely interrelated provincial laboratory informatics sub-projects that continue to advance our goal of a sustainable diagnostic system for Manitobans. Over the last year, DSM has continued work on the five sub-projects of the PLIS initiative:

**Provincial Core Laboratory Information System**

Work began in early 2013/2014 with an estimated completion time of 48 months. As each site goes live with the Delphic Laboratory Information System (LIS), the labs benefit from the extensive infrastructure already in place and lab results immediately start transferring electronically to other systems such as eChart Manitoba and eHealth_Hub. A major application and technical upgrade was completed and the initial five LIS implementations occurred in 2013/2014. Another 13 DSM sites were implemented in 2014/2015, and in 2015/2016 the LIS was implemented at the following sites:

- Altona
- Arborg
- Carman
- Churchill
- Gimli
- Morris
- Pinawa
- Pine Falls
- Stonewall
- Teulon

**Anatomic Pathology LIS Replacement**

After completing an extensive Request for Proposal (RFP) review and contracting with the selected vendor in 2014/2015, a project team was formed and the preparation phase was initiated. In 2015/2016 the technical system environment for testing was developed, workflows were analyzed across the six DSM pathology laboratories, and the majority of the new Pathology LIS configuration was developed. The solution offers the benefit of:

- Synoptic pathology reporting;
- In-lab specimen tracking; and
- Medical quality assurance.

**Electronic Synoptic Pathology Reporting**

This project has been included as part of the Anatomic Pathology LIS Replacement (above).

**Genomics Lab Information System (G-LIS)**

DSM completed an RFP for this project, identified a preferred vendor in 2014/2015 and completed a detailed value proposition to analyze project costs versus benefits and current workflows.

**Digital Pathology and Multi-Jurisdictional Telepathology (MJT)**

Digital Pathology will improve pathology consultation, tumour boards, and education in Manitoba with advanced communication and digital storage of patient

Mary Pat Jordan, a Medical Laboratory Assistant at DSM’s Laboratory in the Victoria General Hospital, shows their digital pathology machine.
specimens and information. Slide scanning equipment and information systems went live in 2015/2016, and pathologists and staff continue to be trained and validated on the new technology.

MJT offers the additional benefit of providing connectivity to support pathology consultations across other jurisdictions (Newfoundland & Labrador and University Health Network in Toronto). A vendor has been contracted for the over-arching information system; DSM is working with the other jurisdictions and the MJT vendor as well as the local vendor to integrate the technologies and enable cross-jurisdiction consultations and image viewing.

Research Strategy

In 2014-2015, DSM strengthened its commitment to quality as our driving principle by embracing research as an essential component of a solid quality foundation. Our Strategic Research Plan was developed over that fiscal year to support research being conducted in areas directly related to the services we provide.

The goals of DSM’s Research Strategy are to:

- Provide support for research activities that are relevant to the services provided by DSM; and
- Create research and innovation opportunities for DSM staff working independently or in collaboration with other researchers

This past fiscal year, DSM had several operational achievements related to the overarching vision for the Research Strategy:

Strategic Direction

With input and direction from DSM’s Board of Directors and Senior Leadership, the high-level strategic direction for DSM research and innovation activities was established.

Research Advisory Committee

DSM created plans for a DSM Research Advisory Committee to provide direction and guidance toward ensuring that DSM is supporting and encouraging research that meets the strategic direction.

Research Support Office

The DSM Research Support Office was established to provide a first point of contact for all researchers who need to access diagnostic services for their studies.

Summer Studentship Program

DSM created another type of research award by creating a program that creates opportunities for students to participate in research with the Summer Studentship program. In this first year, there will be two projects:

Project 1: Choosing Wisely Manitoba Initiative

Awarded to Andrea Kulyk and Youn Tae Chung
Supervisors: Drs. Ming-Ka Chan (University of Manitoba) and Eric Bohm (WRHA and CHI)

Choosing Wisely Canada’s campaign of promoting the use of appropriate test, treatments and interventions, along with the concepts of resource stewardship and
delivering value in health care delivery are not currently well covered in undergraduate medical education. The students will identify the gaps, understand how these concepts could best be integrated into UGME curriculum, develop appropriate learning materials to fill these gaps, and then implement these materials into the undergraduate medical education curriculum.

**Project 2: Isolation of Circulating Tumor DNA from Cancer Patient’s Blood**

Awarded to Karigan Sawchuk  
Supervisor: Leigh Murphy (CancerCare and University of Manitoba).

This proposal aims to develop a non-invasive blood test of tumour DNA that escapes into the blood of a cancer patient. This DNA is called circulating cell free tumour DNA. This DNA can then be extracted from the blood sample and genetic alterations in the cancer can be quickly identified by a technique called next generation sequencing. This result will help pathologists and oncologists to quickly diagnose each patient’s disease, establish how aggressive the cancer is, determine the treatments most likely to be beneficial for each patient and then follow closely to determine if treatments are working well.

**Procurement, Contracting Materials Management and Transportation**

**DSM Procurement**

DSM Procurement provides full-service contracting and procurement support for equipment and its related services and consumables. Through best practices in competitive bidding and strategic contracting, DSM Procurement has achieved the following savings and cost avoidances over the past year:

<table>
<thead>
<tr>
<th>Report Year</th>
<th>Total Savings &amp; Cost Avoidance</th>
<th>Years Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>$9,201,550</td>
<td>2013-14 through 2019-20</td>
</tr>
<tr>
<td>2015-16</td>
<td>$1,216,909</td>
<td>2014-15 through 2024-25</td>
</tr>
<tr>
<td>2016-17 (as of Apr 29/16)</td>
<td>$1,518,931</td>
<td>2016-17 through 2021-22</td>
</tr>
</tbody>
</table>

**Provincial Transportation**

DSM Procurement is leading a provincial review of transportation of laboratory specimens and other health care supplies. DSM has arranged with the Asper School of Business to include this project as part of their semester program for the MBA Industry Project.

Phase 1 of the project, which was completed in spring 2016, involved an environmental scan. Phase 2 will begin in September 2016 and includes a review of Data Acquisition, Specimen Temperature Monitoring and Transportation Methodologies.

**Provincial Procurement**

DSM Procurement participates in both the Manitoba Provincial Procurement and the Western Procurement Collaboration Committees. These groups are focused on opportunities for group purchasing of equipment and supplies and economies of scale. In addition, the committees are committed to utilizing bulk pricing for consumable items under contract with Healthpro, a national not for profit group purchasing organization.
Challenges and Future Directions

DSM continues to face challenges and pressures that are common across the diagnostic industry. Innovation, standardization, information systems and technology and initiatives to reduce unnecessary testing are helping to alleviate some of these pressures, particularly with respect to volume and price increases, but there continue to be a number of issues that have implications to diagnostic services in Manitoba.

**Workforce - Education and Recruitment:** Increased demand for services across the province as well as demands for new or growing technical services, drives the need for more qualified staff. Recruitment continues to be a challenging area, especially for very specialized medical disciplines like genomics and for staff with technical knowledge, as in the case of ultrasound technologists. In addition, attracting experienced and knowledgeable staff to rural and remote locations can be difficult. In these locations, there is a need for staff who are dual-trained in laboratory and imaging, which often requires DSM to provide additional training on site. Succession planning has become a challenge as DSM has built a knowledgeable and experienced leadership team since 2002 when DSM was created; as retirements occur, a wealth of knowledge can be lost.

**Staffing Model:** DSM’s staffing model requires review due to changing service levels at sites. DSM is constrained its ability to respond to changes in health care service delivery needs due to lack of staff mobility between sites.

**Increasing Demand for Services/Utilization:** DSM continues to see a 2-5% annual increase in test volumes due to rising standards of care, increases in preventative and specialty testing such as genomics, and expanding test menus. Although DSM has introduced many efficiencies to diagnostic operations, there is little control with respect to the volumes of tests being ordered. To this end, DSM has partnered with CHI in the Choosing Wisely Manitoba initiative,
which endeavours to reduce unnecessary testing where appropriate (more info on page 16). In addition, DSM will continue to explore partnerships with other service providers to respond to growing service demands and needs; for instance, partnership has enabled the offering of Contextual Genomics services.

**Personalized Medicine:** Every jurisdiction in Canada is struggling with the immediate and growing need for genomic testing and personalized medicine. As health care jurisdictions across Canada and internationally struggle to prepare for the growing tsunami, Manitoba is in a unique position having a strong provincial cancer care authority (CCMB) and provincial diagnostic service provider (DSM) to be able to develop a vision and a 5-Year Provincial Genomics Testing Strategy that will support Personalized Medicine for Manitobans.

**Physical Space:** Health care facility space is at a premium and, in most cases, facilities were not designed to handle the volumes experienced today. Many of DSM’s labs and imaging locations face space constraints with little room for expansion or process redesign. Likewise, many of these spaces were constructed decades ago and have significant ‘wear and tear.’ Renovations have both financial and service implications.

**Aging Equipment:** The ongoing need to continue to replace aging equipment has financial implications and can cause service interruptions when repairs and replacement are required. In addition, the increasing costs of service contracts to maintain equipment is challenging.

**Increasing Quality Expectations:** Accreditation requirements are continually increasing and often require compliance within short timeframes. This creates challenges for staff to balance ongoing clinical workloads with efforts to become compliant.

**Rapidly Changing Technology:** Increasing technological demands, such as automated instrumentation, require a different skills set and ongoing education for technical staff and often require new approaches to quality management.

**Information Technology:** Since DSM’s inception in 2002, DSM has been working to build a Provincial LIS system. While we are getting closer, not all of our facilities are integrated into this system yet. Ever growing expectations and demands for diagnostic information continue to make this provincial system a priority. DSM’s IT team works closely with Manitoba eHealth to determine and manage ongoing technology initiatives.
Quality & Patient Safety Indicators

As part of DSM’s commitment to quality and patient safety across all our sites, DSM is continually enhancing the monitoring and communication of key quality indicators. These indicators are used to assess our performance based on industry standards and confirm that we are providing the right results to the right patients at the right time. Important uses of indicators also include: to monitor at risk or critical processes, assist utilization management and to achieve particular quality and patient safety objectives.

Proficiency Testing

Proficiency Testing (PT) is a quality system essential and a fundamental component of DSM’s quality processes. PT helps to ensure that DSM’s analytical systems are performing appropriately compared with expected results and peer labs. DSM participates in a robust PT program, which includes PT subscriptions to numerous laboratory PT organizations in Canada, the US and the UK. These programs assess performance on thousands of tests across all laboratory disciplines multiple times per year.

Critical Incident Reporting – April 1, 2015 to March 31, 2016

As per provincial legislation that mandates the reporting of all Critical Incidents (CI) (incidents where patient harm has occurred), DSM continues to report all CIs to MHSAL. As a proactive measure to identify systemic issues, DSM expands upon this principle by investigating all incidents whether or not harm has occurred to a patient.

To demonstrate our commitment to CI investigation and learning, as well as to provide our patients and the public with an understanding of Critical Incident investigation, information outlining the reporting process is posted on DSM’s website at www.dsmanitoba.ca.

DSM is now submitting selected Patient Safety Learning Advisories for posting on the MHSAL Website.

Additional Information:


Accreditation Status (as of March 31, 2016)

Accreditation is a key priority for DSM because it is the primary measure that our quality management system is working. Our commitment to accreditation is in perfect harmony with legislation from the province of Manitoba that requires all Medical Laboratory and Diagnostic Imaging sites in Manitoba to be accredited by a third party agency. Being “accreditation-ready” at all times is one of the ways that DSM demonstrates to our clients/patients, the public and our health care partners that we are truly committed to quality.

DSM uses two third-party accreditation agencies for the majority of its accreditation needs: The Manitoba Quality Assurance Program (MANQAP) and The College of American Pathologists (CAP). DSM also uses additional third-party accreditation agencies for specialty areas. These include: Canadian Association of Radiologists (CAR) for Mammography; The American Quality & Patient Safety Indicators 24
Board of Forensic Toxicology (ABFT) for Toxicology at SBH; and Public Health Agency Canada (PHAC) for Microbiology at HSC.

**MANQAP**

The Manitoba Quality Assurance Program (MANQAP), operating under the College of Physicians and Surgeons of Manitoba (CPSM), is responsible for accreditation of laboratory and diagnostic imaging facilities and Patient Service Centres (PSC) in Manitoba. Accreditation is granted by the Program Review Committee (PRC) of the CPSM.

All DSM sites have achieved accredited status from MANQAP. Accreditation of a facility is for a defined period of time; typically five years. Sites will be granted either full accreditation or conditional accreditation.

**Full Accreditation**

Obtained when a facility fully complies with all the relevant standards. The Program Review Committee grants full accreditation and a certificate of accreditation is issued. Copies of current accreditation certificates are available on the DSM website.

**Conditional Accreditation**

Obtained when a facility has been inspected and deficiencies to standards are noted, and the Program Review Committee deems there to be no patient or staff safety issues. No certificate of accreditation is issued until all deficiencies are closed, and full accreditation is achieved. Note: deficiencies may be as simple as documentation gaps and do not reflect any risk to quality and safety of diagnostic testing for our clients.

Sites that have never been fully accredited and have inspections pending are considered 'conditional.' These include DSM’s Patient Service Centres, which commenced the MANQAP accreditation process in the fall of 2015.

DSM continues to work with MANQAP to resolve any outstanding issues both through the routine MANQAP accreditation process and via communication with the College of Physicians and Surgeons.

**College of American Pathologists (CAP)**

CAP is one of the highest ranked accreditation agencies for medical laboratories in the world; DSM is proud that its two largest medical laboratory sites (Health Sciences Centre and St Boniface Hospital) earned their CAP accreditation in 2011 and have maintained that level of quality ever since. In addition, all DSM pathology laboratories were first accredited by CAP in 2013 and continue to maintain that accreditation. Copies of current accreditation certificates are available on the DSM website.

The CAP accreditation process includes a two-year inspection cycle: an on-site unannounced inspection by CAP Inspectors which occurs every two years, and an interim year self-inspection performed by DSM team members in the alternate years. As part of the CAP inspection program, DSM also provides a team of inspectors every two years to perform an inspection on behalf of the CAP at another CAP accredited site/system.

<table>
<thead>
<tr>
<th>Type of Accreditation</th>
<th># Sites with Full</th>
<th># Sites with Conditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory</td>
<td>47</td>
<td>12</td>
</tr>
<tr>
<td>Patient Service Centre</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Transfusion Medicine</td>
<td>52</td>
<td>5</td>
</tr>
<tr>
<td>Diagnostic Imaging</td>
<td>44</td>
<td>8</td>
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</table>
INDEPENDENT AUDITORS’ REPORT ON THE SUMMARIZED FINANCIAL STATEMENTS

To the Member of Diagnostic Services of Manitoba Inc.

We have audited the accompanying financial statements of Diagnostic Services of Manitoba Inc., which comprise the statements of financial position as at March 31, 2016 and the statements of operations, changes in net assets and cash flows for the year then end, and a summary of significant accounting policies and other explanatory information.

Management’s responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors’ responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors’ judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Diagnostic Services of Manitoba Inc. as at March 31, 2016 and the results of its operations and its cash flows for the year then in accordance with Canadian public sector accounting standards.

Winnipeg Canada,
June 10, 2016.

Ernest Young
Chartered Accountants
Diagnostic Services of Manitoba Inc.
Incorporated under the laws of Manitoba

# STATEMENTS OF FINANCIAL POSITION

[Expressed in thousands of dollars]

As at March 31

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$11,485</td>
<td>$6,805</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>$10,022</td>
<td>$14,010</td>
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<tr>
<td>Prepaid expenses</td>
<td>$1,428</td>
<td>$1,469</td>
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<tr>
<td>Vacation pay recoverable from</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manitoba Health</td>
<td>$598</td>
<td>$619</td>
</tr>
<tr>
<td>Regional Health Authorities of Manitoba</td>
<td>$909</td>
<td>$903</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>$24,442</td>
<td>$23,806</td>
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<tr>
<td>Capital assets, net</td>
<td>$67,131</td>
<td>$57,720</td>
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<tr>
<td>Pre-retirement benefits recoverable</td>
<td>$12,642</td>
<td>$13,007</td>
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<tr>
<td>Future sick leave benefits recoverable</td>
<td>$2,042</td>
<td>$2,340</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$106,257</td>
<td>$96,873</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES AND NET ASSETS</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank indebtedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and accrued liabilities</td>
<td>$13,404</td>
<td>$10,555</td>
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<tr>
<td>Current portion of obligations under capital lease</td>
<td>$8</td>
<td>$248</td>
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<tr>
<td>Accrued vacation pay</td>
<td>$9,514</td>
<td>$9,397</td>
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<tr>
<td><strong>Total current liabilities</strong></td>
<td>$22,926</td>
<td>$20,200</td>
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<tr>
<td>Accrued pre-retirement benefits</td>
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<td>Future sick benefits payable</td>
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<td>$2,761</td>
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<tr>
<td>Obligations under capital lease</td>
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<td>$9</td>
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<tr>
<td>Deferred contributions</td>
<td>$66,682</td>
<td>$59,871</td>
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<tr>
<td><strong>Total liabilities</strong></td>
<td>$105,765</td>
<td>$96,845</td>
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<td><strong>Commitments</strong></td>
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<td></td>
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<tr>
<td><strong>Net assets</strong></td>
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<td>$28</td>
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<tr>
<td><strong>Total</strong></td>
<td>$106,257</td>
<td>$96,873</td>
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Signed on behalf of the Board:

Arlene Wilgosh, Board Chair

Glenn McLennan, Treasurer
Diagnostic Services of Manitoba Inc.
Incorporated under the laws of Manitoba

STATEMENT OF OPERATIONS
[Expressed in thousands of dollars]
Year ended March 31

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manitoba Health operating income</td>
<td>31,499</td>
<td>29,720</td>
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<tr>
<td>Recoveries from Regional Health Authorities</td>
<td>123,777</td>
<td>121,799</td>
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<tr>
<td>Revenue from non-resident out-patient services</td>
<td>-</td>
<td>90</td>
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<tr>
<td>Interest income</td>
<td>7</td>
<td>11</td>
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<tr>
<td>Other recoveries</td>
<td>127</td>
<td>459</td>
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<tr>
<td>Gain (loss) on disposal of assets</td>
<td>(107)</td>
<td>(61)</td>
</tr>
<tr>
<td>Recognition of deferred contributions</td>
<td></td>
<td></td>
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<tr>
<td>Capital - amortization</td>
<td>8,261</td>
<td>7,945</td>
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<tr>
<td>Expenses</td>
<td>990</td>
<td>67</td>
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<tr>
<td></td>
<td>164,554</td>
<td>160,030</td>
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<tr>
<td>EXPENSES</td>
<td></td>
<td></td>
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<tr>
<td>Direct operating</td>
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<tr>
<td>Salaries and benefits</td>
<td>139,659</td>
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<td>Communications</td>
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<td>Equipment</td>
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<td>7,519</td>
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<tr>
<td>External Consulting</td>
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<td>639</td>
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<tr>
<td>Grants</td>
<td>105</td>
<td>-</td>
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<tr>
<td>Insurance</td>
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<td>154</td>
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<tr>
<td>Interest</td>
<td>7</td>
<td>57</td>
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<tr>
<td>Laboratory and diagnostic supplies</td>
<td>3,518</td>
<td>3,857</td>
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<tr>
<td>Legal and audit</td>
<td>172</td>
<td>206</td>
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<td>Meetings</td>
<td>170</td>
<td>34</td>
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<tr>
<td>Miscellaneous</td>
<td>574</td>
<td>152</td>
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<tr>
<td>Printer, paper and office supplies</td>
<td>847</td>
<td>866</td>
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<tr>
<td>Recruitment</td>
<td>158</td>
<td>195</td>
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<tr>
<td>Rent and utilities</td>
<td>605</td>
<td>647</td>
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<tr>
<td>Staff training and development</td>
<td>774</td>
<td>706</td>
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<tr>
<td>Telephone</td>
<td>157</td>
<td>130</td>
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<tr>
<td>Travel</td>
<td>534</td>
<td>519</td>
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<td></td>
<td>155,767</td>
<td>151,998</td>
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<tr>
<td>Amortization of capital assets</td>
<td>8,323</td>
<td>8,032</td>
</tr>
<tr>
<td>Excess of expenses over revenue for the year</td>
<td>464</td>
<td>-</td>
</tr>
</tbody>
</table>
Supplementary Information
For the year ended March 31
(unaudited)

ADMINISTRATIVE COSTS

The Canadian Institute of Health Information (CIHI) defines a standard set of guidelines for the classification and coding of financial and statistical information for use by all Canadian health service organizations. Diagnostic Services of Manitoba Inc. (DSM) adheres to these coding guidelines.

The most current definition of administrative costs by CIHI includes: General Administration (including Acute/Long Term Care/Community Administration, Patient Relations, Community Needs Assessment, Risk Management, Quality Assurance and Executive costs), Finance, Human Resources, Labour Relations, Nurse/Physician Recruitment and Retention and Communications.

The administrative cost percentage indicator (administrative costs as a percentage of total operating costs) adheres to CIHI definitions.

The figures presented are based on data available at time of publication. Restatements are made in the subsequent year to reflect the final data and changes in the CIHI definition, if any.

Administrative costs and percentages for DSM are:

<table>
<thead>
<tr>
<th>Administrative Cost Summary</th>
<th>2016</th>
<th>2015 Re-stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate</td>
<td>$3,921,076</td>
<td>2.55%</td>
</tr>
<tr>
<td>Patient care related costs</td>
<td>$1,720,420</td>
<td>1.12%</td>
</tr>
<tr>
<td>Recruitment/Human Resources related costs</td>
<td>$1,406,233</td>
<td>0.91%</td>
</tr>
<tr>
<td>TOTAL Administrative costs</td>
<td>$7,047,728</td>
<td>4.58%</td>
</tr>
<tr>
<td></td>
<td>$4,155,932</td>
<td>2.91%</td>
</tr>
<tr>
<td></td>
<td>$1,282,282</td>
<td>0.90%</td>
</tr>
<tr>
<td></td>
<td>$1,267,605</td>
<td>0.89%</td>
</tr>
</tbody>
</table>

ADMINISTRATIVE FOOTNOTE

The statement of operations excludes operating expenses that are paid directly by the various regional health authorities in support of laboratory and diagnostic imaging services. The total of these expenses, estimated at $43 million for fiscal 2016 ($46 million for fiscal 2015 restated), are reflected in the financial statements reported for each respective regional health authority. Had those expenses been included in DSM’s financial statements for 2016, the administrative cost would be 3.58% for fiscal 2016 (3.45% for 2015).
Public Sector Compensation Disclosure

In compliance with The Public Sector Compensation Disclosure Act of Manitoba, interested parties may obtain copies of the Diagnostic Services of Manitoba Inc. public sector compensation disclosure (which has been prepared for the purpose and certified by its auditor to be correct) and contains the amount of compensation it pays or provides in the corresponding fiscal year for each of its officers and employees whose compensation is $50,000.00 or more. This information is available in hard copy by contacting (204) 926-8005.

Public Interest Disclosure (Whistleblower Protection) Act

In accordance with DSM Policy 10-40-12, Public Interest Disclosure (Whistleblower Protection) Act, paragraph 3.2, a report must be prepared annually by the Designated Officer on disclosures that have been made and the action taken to address the disclosures.

There were no disclosures for the period April 1, 2015 to March 31, 2016.

P. Brennan
Designated Officer for Public Interest Disclosure
Diagnostic Services Manitoba

31 Mar 2016