

*Canadian Agency for
Drugs and Technologies
in Health*



*Agence canadienne
des médicaments et des
technologies de la santé*

**CANADIAN AGENCY FOR
DRUGS AND TECHNOLOGIES IN HEALTH
(CADTH)**

**2011-2012
ANNUAL BUSINESS PLAN**

**“CEMENTING THE CHANGE AND SETTING
OUR SIGHTS TO THE FUTURE”**

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1. Introduction

CDM Assessment of CADTH

In 2009, the Conference of Deputy Ministers of Health (CDM) commissioned an independent assessment of CADTH to determine what jurisdictions wanted to attain, individually and collectively, from the organization into the future. Recommendations from the assessment related to governance, products and services, funding, and operational efficiencies with the underlying themes of “better, faster, and smarter.” In response to the CDM recommendations, and in response to customer needs, priorities, and challenges, CADTH embarked upon a cultural and organizational transformation that focused the Agency on bringing increased value for money to its stakeholders. The following priority initiatives were undertaken during the past year:

- Implementation of a single, integrated, and customer-focused science program delivering products and services responsive to the needs of CADTH customers
- Restructuring, consolidation, and strengthening of CADTH’s governance
- Development of alternative funding and business models.

Strategic Direction

Fiscal year 2010-2011 was one of transition and significant change as CADTH moved forward to address the recommendations of the CDM assessment, building upon the work initiated the previous year in developing a single topic hopper and new products (non-drug recommendations and optimal utilization toolkits, and therapeutic reviews). When the CADTH Board commenced work on an updated Strategic Plan in May 2010, the recommendations from the CDM assessment were a significant consideration in drafting the Plan. Recognizing that a new Board would be appointed effective January 1, 2011, the existing Board moved forward in completing an interim Strategic Plan in order to position the new Board for success in steering the organization into the future.

As such, the 2011-2012 Business Plan builds upon the key strategies contained in the interim 2011-2014 Strategic Plan and enforces CADTH’s commitment to serving its customers, increasing collaboration and outreach, and promoting the use of evidence in the management of health technologies in Canada. The new Board of Directors will revisit the Strategic Plan in the fall of 2011 in conjunction with commencement of the business planning process for 2012-2013.

2. A Year of Change

In response to the recommendations in the CDM assessment, and the needs and priorities of health care system customers, significant organizational changes were instituted throughout the Agency. A strong focus was placed on maximizing impact, delivering relevant products and services in a timely fashion, increasing operational efficiencies, and enhancing partnerships and outreach to improve the use of evidence in the management of health technologies in Canada.

Organizational Redesign

Over the course of the year, CADTH was completely restructured as it transitioned to a customer-focused, continuous improvement Agency. A new organizational structure was implemented that integrated the three existing science programs — Health Technology Assessment (HTA), Common Drug Review (CDR), and Canadian Optimal Medication Prescribing and Utilization Service (COMPUS). This integrated science program is guided by a centralized priority-setting process, where products and services are delivered through a centralized resource management model.

CADTH's Governance and Committee Structure

CADTH's governance and committee structures were also revamped in an effort to extend stakeholder representation, strengthen CADTH's relationships within the health care community, ensure a coherent research agenda, and streamline committee operations. A new Board of Directors was appointed effective January 1, 2011 that includes an independent Board Chair, and a hybrid model of jurisdictional and non-jurisdictional members. The three CADTH advisory committees were reduced to two — Health Technology Policy Advisory Committee and Drug Policy Advisory Committee — with an expanded membership of both jurisdictional and non-jurisdictional representation to capture the full range of decision-making needs. Opportunities for streamlining the expert committee structures for drugs and non-drug technologies were also initiated and will be finalized in 2011-2012.

Operational Efficiencies

CADTH's organizational transformation created a strong, lean, and agile team able to deliver products and services in response to customer needs in a timely and efficient manner. Migrating from a silo-based structure toward pooling of internal resources and standardized processes and procedures, and an expanded pool of external contractors, CADTH has been able to achieve greater flexibility and timeliness in the conduct of its work. A new central topic intake process has eliminated the potential for duplication of CADTH work on the same topic and has aligned customer priorities. Integration of knowledge exchange and implementation support throughout the product development life cycle supports maximum return on investment and impact with a product suite that meets the needs of our customers.

A consolidated management framework, supporting the Agency's changes and the shift to more outcome measures, has provided the foundation for improved business and operational planning, performance measurement and reporting, and resource management. Through a revitalized IT

infrastructure, systems have been implemented to achieve greater efficiencies, such as standardized project management tools, improved retrieval of project information, and the ability to track progress and performance from an initial customer request through to product delivery. Systems have been implemented to track visitor patterns to the CADTH website, including the uptake on outreach marketing campaigns. These data allow CADTH to identify where further work might be required and support continuous improvement of the website.

CADTH's Funding and Business Models

In response to the funding recommendations contained in the CDM assessment, CADTH reviewed its funding and business models and confirmed that it would continue to provide a set of core services to its member jurisdictions (Tier 1 Funding Model). CADTH also considered a sponsorship model (Tier 2 Funding Model) whereby member jurisdictions could request services beyond the core services, at an additional cost. This will be further explored in the next fiscal year.

The CDM recommendations encouraged CADTH to look at offering its existing products and services for a fee to an expanded client base (Tier 3 Funding Model) as a means of generating additional revenue. In February 2011, CADTH commissioned a feasibility assessment and market analysis to determine the potential opportunities stemming from this endeavour. Any business development opportunities identified through this assessment would be pursued in the future, following consideration by the members and the Board of Directors.

3. 2010-2011 Key Achievements

In fiscal year 2010-2011, CADTH structured its business operations around three main business lines representing the fundamental activities key to achieving the CADTH strategic goal:

1. Serving our customers
2. Advancing the science
3. Corporate support (governance, management, and administration).

Business priorities were focused on achieving greater operational efficiencies, enhancing partnerships and collaboration, and delivering products and services that would bring greatest value to CADTH customers. Significant progress was made throughout the year in transitioning CADTH from a research-focused organization to a customer-focused, continuous-improvement Agency. A summary of 2010-2011 key achievements has been documented and is located in Appendix A. The accomplishments of the past year provide a solid foundation upon which CADTH will continue to build. They demonstrate how far the organization has come in a short time. The priorities for 2011-2012 are designed to cement the change, deliver relevant products and services, and support the effective management of health technologies.

While the past year has been one of substantial change, the CADTH Board of Directors and staff have embraced it with enthusiasm, eagerness, and creativity. They have listened to the needs of CADTH's customers, understood the need for change, and are taking action to support CADTH's vision of improving the health of Canadians, today and tomorrow.

4. Business Priorities for 2011-2012

CADTH underwent a major transformation during the 2010-2011 business year. Changes were instituted that impacted all aspects of the Agency's operations. This included a shift in the corporate culture to promote a focus on exceeding customer expectations, a major change to the organizational structure to break down the silo-based approach to product development and delivery, and an ongoing assessment of scientific methods and operational processes to promote standardization and efficiency. With 2010-2011 being a year of change, 2011-2012 will be a year focused on operationalizing, solidifying, and refining the new culture, structure, and processes, thereby positioning CADTH to become the "go-to" source of information and advice regarding health technologies in Canada. To cement the considerable investments made in 2010-2011, the following are the Agency's top priorities for 2011-2012:

A. SOLIDIFYING THE ORGANIZATIONAL TRANSFORMATION IN ACCORDANCE WITH THE CDM ASSESSMENT OF CADTH

Governance

Substantial changes to CADTH's governance framework were recommended and introduced in 2010-2011. As with the introduction of any change, the new governance structure will continue to evolve. With a new Board of Directors in place as of January 1, 2011, the Board is now keen to establish its annual governance work plan and priorities. Key activities to be undertaken during 2011-2012 will include:

- Development of a full Board evaluation process
- Implementation of a Board Development Plan
- Revision and/or development of Board policies
- Development of a Board Orientation Program for new Board and Committee members
- Development of a robust nominations process for Board renewal and recruitment
- Review and refinement of the 2011-2014 CADTH Strategic Plan.

Program Development and Delivery

The magnitude of the changes introduced at CADTH in 2010-2011 was significant. It takes time and commitment for a change to be fully cemented into an organization's new culture. Many of the concepts were initiated earlier in the year and, as the organization enters the final months of the 2010-2011 fiscal year, a number of "game-changers" are ready for full launch and implementation. Maintaining the momentum of change by ensuring that CADTH staff are focused on exceeding customer expectations in all aspects of the agency's operations remains a priority in 2011-2012. Key activities to be undertaken during 2011-2012 will include:

- Fully operationalizing the central intake function and creating a portfolio of projects that contribute to improved patient outcomes and/or sustainability of the health care system

- Providing internal training, workshops, and customer rounds to support staff during the final stages of the transition
- Defining and documenting changes in processes and methods that were required as a result of the organizational transformation
- Fully operationalizing the recommendations from the CDM assessment regarding the expert and advisory committee structure for drug and non-drug technologies.

Corporate Services

CADTH will continue to operate with a lean but effective corporate and administrative support unit. Ongoing support to the business through the full range of corporate functions (IT, HR, finance, facilities and planning and evaluation) will be provided. Investments will continue to be made in developing tools/business systems to support an integrated management framework that ensures optimal use of resources and enables easy access to information and supports decision-making. Fostering a workplace that provides increased stability and clarity of roles and functions as CADTH continues to operationalize organizational changes throughout the 2011-2012 fiscal year is also essential to organizational success. Two special initiatives to be undertaken during 2011-2012 will include:

- Completion of an independent CADTH program evaluation by December 31, 2011, as required under the Health Canada Agreement
- Exploration of business development opportunities as requested by the CDM, and as identified through a feasibility study and market analysis currently underway.

B. DELIVERING HIGH QUALITY PRODUCTS AND SERVICES RESPONSIVE TO CUSTOMER NEEDS

In 2010-2011, the CADTH Board proposed a set of core products and services that would be delivered using the funding provided by F/P/T members (Tier 1 Funding). These services are those known to be most relevant to jurisdictional needs at this time. Based on the portfolio of topics prioritized for the year, as well as client requests for the demand-driven services such as the Common Drug Review (Formulary recommendations) and Rapid Response, CADTH will deliver a mix of products and services that respond to client needs. CADTH will continue to refine and improve the methods and processes employed to ensure projects are delivered in a timely fashion. CADTH also has a commitment to deliver the Health Canada-funded medical isotopes project (CADTH's only Tier 2 undertaking at present).

To ensure the ongoing scientific credibility of CADTH products and services and in support of CADTH-wide efforts aimed at improved transparency, and to mitigate risk to the organization, a cohesive and centralized framework outlining reporting standards for CADTH technical reports will be established.

Continuous quality improvement will continue to be a key aspect of CADTH's change management approach. Lessons-learned sessions will be routinely conducted for key initiatives and projects, as will client surveys and other feedback tools. These approaches help enhance existing CADTH products and services and support innovation.

C. ENHANCING PARTNERSHIPS AND COLLABORATION TO SUPPORT THE EFFECTIVE MANAGEMENT OF HEALTH TECHNOLOGIES IN CANADA

Working with other national and international partners, CADTH will identify opportunities to increase access to recommendations/information more quickly and/or share best practices adopted by other players in the global marketplace. CADTH will contribute to the development of an international community of health technology assessment through active membership and appropriate partnerships with key groups such as Health Technology Assessment international (HTAi), International Information Network on New and Emerging Health Technologies (EuroScan), and International Network of Agencies for Health Technology Assessment (INAHTA). Shared best practices in this community will support continuous improvement efforts by all health technology assessment producers.

Raising awareness within the health care system about the important work of health technology assessment producers is fundamental to increasing the use of evidence in health technology management. CADTH will develop and implement a comprehensive communications strategy that links and builds upon all of CADTH's external-facing activities to increase uptake, use, and impact of CADTH's work. Moving from providing evidence to facilitating its uptake and use is fundamental to achieving impact. Consolidated within the Communications Strategy will be knowledge exchange, communications, stakeholder relations, evaluation and impact, web and social media, partnerships, and marketing. Opportunities to profile the work of CADTH and other HTA producers will be a key consideration in the development of the strategy. For example, a central repository of reports conducted by CADTH and by other HTA producers will be developed in order to expand the library of evidence-based information available to decision-makers. The Agency will also look to improve transparency with key stakeholders (e.g., industry and patient groups).

Increased collaboration between all HTA producers in Canada with the goal of leveraging the capacity overall in support of improved health technology management in Canada is essential to help fill the information gaps within the health care system and optimize existing capacity. To this end, CADTH will develop a multi-year plan that enhances and leverages the partnership between CADTH and all jurisdictions (including Ontario and Quebec) to support coherence of HTA capacity in the country.

Discussion around a pan-Canadian field evaluation system has been ongoing since 2004. This year, the feasibility of CADTH taking a leading role in the management of a pan-Canadian field evaluation system will be explored with key players.

An annual process for establishing national priorities for the conduct of health technology assessments in Canada to leverage existing resources and increase the number of assessments that can be done to inform decisions about the use of drugs and other health technologies is proposed. In addition, CADTH will host and/or collaborate with partners in the delivery of education and training sessions that will strengthen and build capacity to produce more health technology assessments, and support decision-makers to use evidence to inform decisions about the use of drugs and other health technologies.

5. CADTH Priority Themes 2011-2012

Why Themes?

A thematic approach to topic identification and development was implemented in 2010-2011 to ensure that an efficient and effective process was in place to determine and undertake projects with maximum impact for CADTH customers. Focusing work on priority thematic areas that were determined by stakeholders and other reliable methods and approved by the CADTH Board of Directors ensures that CADTH is maximizing its return on investment by using its resources effectively and is undertaking projects of key relevance for its customers. Some of the benefits of a theme-based portfolio are to:

- Maintain a broad view of all CADTH work in progress and completed to ensure consistent and understandable messages for customers
- Identify knowledge gaps and inform the direction of future research
- Provide an opportunity for CADTH to develop an extensive knowledge base and expertise in thematic areas
- Leverage key relationships, partnerships, and collaborations with other stakeholders to proactively identify topics of relevance.

Establishing a theme-based portfolio of products enables CADTH to strategically assign its resources to projects and services with maximum impact and greater relevance to its customers.

Identifying Themes

CADTH implemented the priority theme approach for the first time in 2010-2011. The following factors were considered in determining these themes:

- Environmental scanning of trends
- A review of requests for work from jurisdictions
- Input from CADTH expert and advisory committees
- Feedback from CADTH staff, including Liaison Officers
- Work with national and international partners
- Review of drug submissions.

The CADTH Board of Directors approved the following priority themes for 2010-2011:

- Mental Health
- Infectious Diseases
- Diabetes
- Cardiovascular
- Thoracic/respiratory
- Emerging Issues.

Theme Activity for 2010-2011

Overall, theme area-related requests and projects accounted for approximately 77% of Environmental Scans and 75% of Optimal Use/HTA projects. While formulary reviews are based on industry submissions, and Rapid Response services are largely driven by client demand, 50% of formulary review submissions and 45% of Rapid Response requests were aligned with the themes. The theme areas with the largest proportion of projects were infectious diseases, diabetes, cardiovascular diseases, and mental health. Very little project activity occurred in the thoracic theme area (3% of the theme-related Rapid Response requests, 10% of Optimal Use/HTA projects, 5% of formulary submissions, no Environmental Scans).

The Theme Lead role was developed to support the priority theme process. The purpose of the Theme Lead is to ensure that customer focus is maintained throughout the project and to strategically develop projects within a portfolio area. Four theme lead positions managed the six thematic areas. Success of this role was demonstrated early on for several projects, such as the atypical antipsychotics project. Early findings of the project were communicated to the customer, which resulted in a change to the project type and schedule. This link with the customer maximizes the use of CADTH resources and ensures CADTH will deliver a more relevant product.

Priority Themes for 2011-2012

Using the factors noted above, the CADTH Board of Directors approved the following themes for 2011-2012:

- Mental Health
- Infectious Diseases
- Cardiovascular and Cerebrovascular Disorders
- Endocrine Disorders with a focus on Diabetes
- Neurological Disorders
- Emerging Issues.

Emerging Issues is identified as a priority theme to be able to respond to any unforeseen health technology issues that CADTH customers might be required to address throughout the year.

These priority theme areas:

- Collectively, as well as individually, represent significant disease burden in Canada
- Were identified as priorities of Canadian health care decision-makers, through CADTH's information-gathering processes
- Reflect topics where a clear need for evidence is essential and there is an opportunity to address particular health care issues within the theme
- Have knowledge partners who are receptive and indicate an interest in using the evidence for decision-making.

Detailed briefs are found in Appendix B.

Rationale for Changes to Themes for 2011-2012

Added Cerebrovascular to Cardiovascular Diseases — This is a necessary pairing of therapeutic areas. There is potential clinical overlap and the combination is recognized widely by the public through organizations such as the Heart and Stroke Foundation.

Replaced Diabetes with “Endocrine Disorders with a focus on Diabetes” — This is more consistent with the other theme classifications and allows opportunity for a broader scope on the topic.

Added Neurological Disorders — This was identified by CADTH stakeholders as an area of upcoming changes in drugs and technologies warranting attention.

Removed Thoracic/Respiratory — Low activity and limited interest in this topic, as well as minimal evidence of emerging drugs and technologies, suggest this area can be dropped.

Why certain themes have not been selected

As indicated above, CADTH dedicates resources to scan the environment and queries a number of individuals to identify theme areas that respond to customers’ priorities for health technology management information. Different approaches were examined to determine how to best identify theme areas that address significant areas of concern common across the health system. Certain jurisdictional health priorities cross several disease areas; these areas (e.g., Aboriginal health, patient safety) have been noted and effort will be made to ensure these are covered in the work under the proposed thematic areas.

Also, there are other areas in which CADTH is collaborating with other organizations on health technology issues (i.e., oncology) but given the level of current activity by other organizations, to avoid duplication of effort, oncology is not a priority theme for CADTH.

6. Alignment of 2011-2012 Program Initiatives to the Strategic Plan

Using the 2011-2014 Strategic Plan as a basis for planning the activities of the 2011-2012 business year, CADTH's program of activities will enhance customer service, increase collaboration and outreach, increase use of evidence in the management of health technologies, and grow the business. Emphasis will be placed on impact, partnerships, and customer service.

A number of the program initiatives are a continuation of the work undertaken in 2010-2011 and are aimed at solidifying CADTH as a customer-focused organization that is committed to continuous improvement and meeting the needs of its customers in a timely and efficient manner. CADTH will also embark upon new initiatives that support the advancement of a national health technology management framework, advance the science of health technology assessment, and improve the uptake and use of evidence by health care decision-makers.

Specific program initiatives for 2011-2012 are outlined in the table following. This format further expands on the details of the initiatives across CADTH and aligns with the priorities discussed in Section 4.

Key Success Factor: Customer Satisfaction

Defining and solidifying core CADTH products and services and strengthening our role in addressing customer priorities.

Outcomes	Key Strategies	2011-2012 Initiatives
<p>Product Delivery Timely delivery of products used by health care decision-makers to improve the health of Canadians and to contribute to system sustainability.</p>	<p>Establish a comprehensive early warning system building on CADTH's environmental scanning expertise to alert decision-makers to new and emerging health technologies.</p> <p>Conduct reviews and technology assessments and provide recommendations, advice, and tools to CADTH customers to facilitate the effective and efficient use of health technologies in Canada.</p>	<p>Provide the following core set of products and services to participating member F/P/T ministries of health and their constituents:</p> <ul style="list-style-type: none"> ▪ Formulary recommendations to provincial drug plans, including reviews of oral oncology drugs on behalf of the pan-Canadian Oncology Drug Review ▪ Rapid Response reports ▪ Optimal Therapy Reports with recommendations, tools, and implementation support for significant/select research areas requiring in-depth analysis ▪ Emerging Technology Bulletins ▪ Methods projects to support best practices in scientific methods. <p>Expand CADTH's Environmental Scanning Service through the establishment of a CADTH-hosted Canadian Network for Environmental Scanning in Health (CNESH) for purposes of uniting a permanent network of relevant groups/individuals that are involved in identifying new and emerging technologies within a Canadian context.</p>
<p>Relevance Meeting customer needs.</p>	<p>Evolve and expand strategies for continuous customer engagement to meet their needs. All CADTH activities are filtered through a customer service lens.</p> <p>Adapt and/or create products and services that fulfill customer needs.</p> <p>Employ a strategic portfolio management process that aligns CADTH products and services with current Canadian health care priorities and informs decision-making processes.</p>	<p>Implement a customer service strategy that will support CADTH's shift toward a customer-service culture and will ensure a high level of customer satisfaction is achieved.</p> <p>Enhance CADTH's integrated topic selection and portfolio management process to maximize stakeholder return on investment and ensure the delivery of products and services that meet customer needs.</p> <p>Undertake a review of CADTH's formulary review products to improve how CADTH conducts the clinical and cost-effectiveness reviews of drugs for formulary listing</p>

Outcomes	Key Strategies	2011-2012 Initiatives
	<p>Employ a strategic prioritization process to focus on the delivery of products and services that are highly relevant and usable, and that have a high impact on patient outcomes.</p>	<p>recommendations, including a new format for the recommendations to support the managed entry and managed exit of drugs at the drug plan level.</p> <p>Consider expanding the product line of the Rapid Response service to increase the transparency (detailed methods section) and rigour (more critical appraisal) of the reports, and increase the uptake and use for guideline and recommendation development (e.g., Rapid Reviews with clinical and economic components).</p> <p>Complete the Health Canada-funded (Tier 2) research project on the optimal use of medical isotopes and alternatives, for purposes of assisting health care decision-makers optimize the use of the medical isotope technetium-99m, as well as the use of alternative medical isotopes and medical imaging equipment.</p>
<p>Impact Changes or decisions that are a result of, or influenced by, products and services delivered by CADTH to its customers.</p>	<p>Engage experts, decision-makers, thought leaders, industry, patients, and the public in CADTH processes to enhance the credibility and acceptance of CADTH products.</p> <p>Develop and apply comprehensive knowledge exchange and marketing strategies that increase the uptake and usability of and capacity for CADTH products.</p> <p>Develop and apply an evaluation and impact framework that provides data to determine the added value CADTH delivers to its customers. This will also support continuous product and service improvements to meet existing and future customer needs.</p>	<p>Evaluate patient/public engagement initiatives already underway at CADTH and explore opportunities to refine/expand.</p> <p>Explore opportunities to expand CADTH transparency initiatives related to the conduct of its Health Technology Assessments in an effort to improve the usefulness and applicability of its work.</p> <p>Develop and implement an overarching and seamless Impact Strategy that maximizes the uptake and use of CADTH products and services in improving the health of Canadians. The Strategy will integrate and leverage all communications-related activities/functions, including media relations, stakeholder engagement, public outreach, partnerships, conferences, government relations, knowledge exchange, marketing, web/new media development, and internal and external communications efforts.</p> <p>Implement an Evaluation and Impact Framework that is integrated into all CADTH activities and processes to facilitate</p>

Outcomes	Key Strategies	2011-2012 Initiatives
		<p>easy gathering of impact data that are informative, meaningful, and relevant to CADTH and its customers.</p> <p>Conduct an independent CADTH program evaluation as required under the Health Canada Agreement.</p> <p>Commence planning for the next five-year (2011-2016) CADTH evaluation as required under the Health Canada Agreement and update the CADTH Evaluation Framework to reflect organizational changes.</p>
<p>Credibility CADTH products meet standards for quality, accuracy, timeliness, and impact.</p>	<p>Develop guidelines, roadmaps, checklists, models, and measures for existing and new/improved products and services, providing a disciplined approach to continuous quality improvement.</p> <p>Apply/adapt harmonized quality assurance standards and control processes to ensure CADTH products continue to meet high standards for scientific credibility, accuracy, relevance, timeliness, and impact.</p> <p>Provide ongoing professional development and training to maintain the necessary level of skills and expertise needed to meet ongoing customer needs.</p>	<p>Establish a cohesive and centralized framework outlining reporting standards for CADTH technical reports to ensure the ongoing scientific credibility of CADTH products and services, to support Agency-wide efforts aimed at improved transparency, and to mitigate risk to the organization.</p> <p>Develop and implement a comprehensive Professional Development and Training Plan for all CADTH staff to support successful implementation of organizational changes, with a focus on:</p> <ul style="list-style-type: none"> ▪ Maintaining CADTH's scientific credibility ▪ Developing leadership ▪ Implementing new processes, and software and business solutions ▪ Transitioning to a customer-focused organization.

Key Success Factor: Improved Use of Evidence in the Management of Health Technologies

Through enhanced collaboration and leadership, increase capacity in Canada to produce more health technology assessments and effect greater uptake of evidence by health care decision-makers to inform decisions about the use of drugs and other health technologies.

Outcomes	Key Strategies	2011-2012 Initiatives
<p>Strengthening and Building Capacity Increased awareness by decision-makers regarding the role of evidence to inform decisions about the appropriate use of drugs and other health technologies.</p> <p>Expanded library of evidence about a greater number of health technologies.</p>	<p>Collaborate with other HTA organizations and producers to affect optimal utilization of resources, reduce duplication of efforts, and share health technology assessment and policy analysis information across the country to increase the availability of relevant and usable evidence for health care decision-makers.</p> <p>Propose and champion the adaptation of common processes and criteria in the assessment of health technologies in Canada to enable ease of use for decision-makers and facilitate increased evidence-informed decision-making.</p> <p>Develop and deliver programs and tools that will promote the use of evidence in the management of health technologies and increase the capacity of CADTH's customers to make evidence-informed decisions throughout the life cycle of health technologies.</p>	<p>Develop, implement, and maintain an up-to-date central repository for all projects and requests received by CADTH. This database will be accessible to internal and external audiences and will have the capacity to house HTA projects that are conducted by any authentic producer in Canada in the future.</p> <p>Further expand the scope of the Rx for Change database to include interventions aimed at improving health beyond those aimed at improving prescribing (which is the current scope of the database), and update the database with recent evidence to ensure it remains current.</p> <p>Provide opportunities for producers and users of health technology assessment to further develop their skills and expertise to facilitate increased evidence-informed decision-making, e.g. CADTH Annual Symposium, education sessions/workshops/webinars, student rotations, and university courses.</p> <p>Explore opportunities to establish a network of rapid response producers for purposes of information sharing regarding products and methods, and reducing duplication of effort.</p>
<p>Partnerships and Outreach A pan-Canadian approach to the delivery and uptake of health technology assessment products and services that supports efficient and optimal use of health technologies in Canada.</p>	<p>Strengthen relationships and collaboration with key partners (and develop new partners) to increase awareness of the work and expertise of CADTH and other HTA producers, to expand the array of products and services available to health care decision-makers at all levels of the health care system.</p> <p>Lead an annual national priority-setting process with</p>	<p>Work with key partners (e.g., users and producers of health technology assessment, and other stakeholders) to initiate an annual process for establishing national priorities for the conduct of health technology assessments in Canada. This initiative has the potential to reduce duplication of work and increase the number of assessments that can be done with the same level of resources.</p> <p>Continue to provide secretariat support for the Policy Forum and</p>

Outcomes	Key Strategies	2011-2012 Initiatives
	<p>key partners to inform the health technology assessment research agenda and support an integrated and efficient approach to the management of health technologies in Canada. Bring together users, producers, and other stakeholders to identify current areas of focus, key issues, gaps/needs, and potential pressures.</p> <p>Work with key partners in the development and implementation of a Canadian framework to promote and improve the use of evidence in the management of health technologies.</p>	<p>implement any changes to its reporting structure and/or mandate once this has been reviewed by the CADTH Board of Directors in the context of governance recommendations contained in the John Wright Report.</p> <p>Actively participate as a member of the Health Technology Analysis Exchange and cultivate increased collaboration amongst the members in identifying priority needs of the health system and coordinating the production and sharing of health technology assessment and policy analysis information throughout Canada.</p> <p>Continue to support the implementation of the pan-Canadian Oncology Drug Review (pCODR) process, and explore opportunities to align/harmonize processes with CADTH. Participate in other similar type pan-Canadian drug review initiatives and support/advocate for the alignment and harmonization of processes and methods where possible (e.g., Drugs for Rare Diseases).</p>
<p>International Collaboration International reputation as a leader in advancing the science of health technology assessment.</p>	<p>Contribute to the development of an international community of health technology assessment that promotes best practices in HTA and supports its use in health policy decision-making around the world.</p> <p>Leverage research efforts among international partners by determining mutual research priorities and share in the completion of clinical analysis efforts. Clinical analysis can then be shared and economic modelling adapted as needed by each specific partner for their country.</p>	<p>Through the use of the CADTH central repository of HTA projects, support the rollout and implementation of the International Register of Systematic Reviews being led by the Centre for Reviews and Dissemination in an effort to promote research transparency, help avoid duplication, and support efficient use of research funding.</p> <p>Contribute to the development of an international community of health technology assessment through active membership and appropriate partnerships with key groups such as HTAi and INAHTA.</p> <p>With international HTA/payer partners, contribute to the development of at least one condition/disease-specific guidance document, outlining key considerations for the design, conduct, and reporting of phase 3 pharmaceutical trials. This guidance</p>

Outcomes	Key Strategies	2011-2012 Initiatives
<p>Innovation A pan-Canadian environment where health technology assessment supports innovation in addressing health system priorities and challenges.</p>	<p>Establish CADTH's role in coordinating a pan-Canadian field evaluation system to affect optimal utilization of resources, reduce duplication of efforts, and share information with decision-makers to facilitate innovation and inform investment decisions about the acquisition and appropriate use of health technologies in Canada.</p> <p>Develop the capability to anticipate the needs of health care decision-makers regarding challenges in the appropriate use of technologies and work collaboratively with decision-makers to facilitate the development of methodologies and policy frameworks to meet these challenges (e.g., drugs for rare diseases, values-based analysis, disinvestment).</p> <p>Engage pharmaceutical and medical device companies in the exchange of information about trends in research and development, and anticipated advancements in health technologies, to support the planning and delivery of health technology assessment in Canada.</p> <p>Design and implement new or revised models for assessing drugs and other health technologies.</p>	<p>will be akin to that which has already been created by regulators, for industry.</p> <p>In consultation and collaboration with other HTA producers in Canada, explore the feasibility of CADTH taking a lead role in coordinating a pan-Canadian field evaluation system for new technologies.</p> <p>Continue to participate in meetings of the CADTH-Industry Liaison Forum, composed of representatives from CADTH, Rx&D, and BIOTECanada for purposes of information sharing and identifying solutions to address areas of mutual concern. Engage MEDEC in similar type meetings and discussions pertaining to medical devices.</p> <p>Collaborate with the Health Products and Foods Branch of Health Canada (HPFB) to implement a joint HPFB-CADTH work plan in an effort to accelerate market access to health technologies for patients. This initiative will enhance information sharing and transparency and identify opportunities for continued collaboration and efficiencies.</p>

Key Success Factor: Organizational Efficiency (Better, Faster, Smarter)

CADTH promotes continuous improvement by deploying processes and systems that proactively respond to emerging customer needs.

Outcomes	Key Strategies	2011-2012 Initiatives
<p>Continuous Quality Improvement The needs and expectations of CADTH's customers are met in an efficient, affordable, and timely manner.</p>	<p>Apply an integrated approach to quality improvement that increases accountability and promotes the best use of resources to achieve the best outcomes.</p> <p>Build capacity within CADTH through empowering staff to take greater responsibility for managing and improving processes and systems that will ensure the development of best practices and successful delivery of affordable, timely, and relevant products and services to its customers.</p> <p>Involve CADTH customers in defining health care needs and priorities to support current and future product and service development.</p>	<p>Develop and implement a Process Management Framework to ensure current, standardized, best practice processes are available to reflect organizational changes and enable better, faster, smarter approaches to CADTH work.</p> <p>Working in collaboration with CADTH partners, design and implement a decision-making framework that will support CADTH expert committees/panels in the development of recommendations for health technologies (e.g., drugs and non-drugs). The decision-making framework, building on best practices, will allow for the incorporation of evidence (quantitative and qualitative), values/preferences, and policy/precedent, resulting in recommendations that are credible, consistent, predictable, and transparent.</p> <p>Implement a customer service strategy that will ensure CADTH delivers the best products to its customers with the greatest impact.</p>
<p>Human Resources A culture that attracts, retains, and engages a highly skilled and professional workforce.</p>	<p>Implement an HR Strategy that provides for the human capacity and capability to meet current and future customer needs, and where employees consider CADTH as an employer of choice.</p> <p>Proactive workforce planning to address emerging and specialized work requirements (includes working with groups/networks outside of CADTH to ensure additional resources can be secured as needed).</p>	<p>Ongoing review and refinement of the HR Strategy to position CADTH to exceed customer expectations and foster a workplace characterized by the core values of leadership, excellence, responsiveness, and collaboration.</p> <p>Implement tools to support proactive assessment of the capacity needed to deliver products and services to CADTH customers in a timely manner, and establish annual project/product volumes that can be achieved with existing resources. Implement a strategy for increasing the number of external contractors available to support CADTH research work.</p>
<p>Financial Framework Long-term financial stability is achieved for the organization.</p>	<p>Explore new funding models that are affordable for CADTH's owners, that ensure a shared commitment by the owners of the corporation to</p>	<p>Implement direction from the Conference of Deputy Ministers regarding a new funding model for CADTH.</p>

Outcomes	Key Strategies	2011-2012 Initiatives
<p>Governance A cost-effective governance and advisory structure that enhances organizational performance.</p>	<p>CADTH and to each other, and that sustain the organization's growth and development.</p> <p>Implement a new governance structure that improves engagement and communications with CADTH customers and enhances the wealth of experience and expertise on the Board of Directors.</p> <p>Implement a streamlined structure for CADTH's advisory and expert committees to simplify processes, reduce overlap, and enhance committee profiles and expertise.</p> <p>Implement governance and advisory committee processes that are flexible, transparent, responsive, and efficient.</p>	<p>Fully operationalize the expert and advisory committee structures for drug and non-drug technologies. CADTH's two existing drug expert committees will be merged into one, and a process for establishing expert review panels for non-drug technologies will be developed and implemented.</p> <p>Support the Board of Directors and Members of the Corporation with implementation of the new governance structure and annual work plan, and implement a Board Communications Strategy to foster linkages and ongoing interaction with CADTH stakeholders.</p> <p>Develop a multi-year plan that enhances and leverages the partnership between CADTH and all jurisdictions (including Ontario and Quebec) to support coherence of all capacity in the country.</p>
<p>Efficient Operations A planning and management framework that positions CADTH to best serve its customers.</p>	<p>Apply an integrated approach to environmental scanning, program planning, management, and delivery of products and services.</p> <p>Implement a coherent and integrated health technology assessment program that coordinates submission of topics; applies common policies, processes, and practices; and utilizes staff expertise in a cost-effective and efficient manner.</p> <p>Utilize information technology systems that promote effective and efficient internal operations, and enable CADTH customers and partners to have quick and easy access to the organization's products and resources.</p>	<p>Review and consolidate CADTH's business systems to ensure ease of access to information internally and support decision-making within the new organization structure and workflow (e.g., SharePoint, Project Server, Topics Database, CRM, document management, finance systems).</p> <p>Update and implement the IT and Web Strategy to support CADTH's internal infrastructure and facilitate enhanced communications/interaction with CADTH customers.</p>

Key Success Factor: Grow the Business

Develop new products for existing customers and seek new markets for existing and new products.

Outcomes	Key Strategies	2011-2012 Initiatives
<p>Expanded Reach Products and services used by multiple levels within the health care system.</p>	<p>Develop a comprehensive marketing and communications strategy to promote the use of evidence-informed decision-making.</p> <p>Plan and implement a growth strategy to extend the reach of current products and services within jurisdictions.</p> <p>Develop enhanced processes to support the uptake and utilization of CADTH products and services.</p>	<p>Pursue initiatives as identified through a feasibility study and market analysis.</p> <p>Implement an Impact Strategy that encompasses Communications and Knowledge Exchange Strategies that ensures products are focused on our customers' needs and further supported by adaptation to meet local context.</p>
<p>Business Development Products and services (designed or adapted) to serve an expanded customer base with revenue-generating opportunities.</p>	<p>Tailor/leverage existing products for existing and new customers and explore opportunities for new products/services for existing and new customers. CADTH's expanded portfolio of products funded through new business will leverage core investments by its owners and provide maximum value to the Canadian health care system.</p> <p>Implement revenue-generating activities through the provision of "added-value" services to expanded national and international markets.</p> <p>Design a new products and services development model for use in developing products/services for existing or new customers.</p>	<p>Pursue business development opportunities as identified through a feasibility study and market analysis.</p> <p>Conduct one sponsorship-type project that would be identified and funded by jurisdictions or in partnership with other agencies/organizations.</p> <p>Explore opportunities to extend the Rapid Response service to non-CADTH customers for a fee.</p>

7. Financial Plan

Core funding as provided by CADTH's members will remain unchanged in 2011-2012. Inflationary increases are currently not part of the ongoing F/P/T funding arrangements. Increases to operating costs are absorbed within the existing funding envelopes. Based on direction from the Conference of Deputy Ministers, CADTH is completing a feasibility and marketing analysis with the help of an external consulting firm to develop potential new funding models/approaches to help bolster the Agency's longer-term financial viability. New and/or expanded business opportunities will take into consideration the level of investment by members of the corporation, the potential to leverage that investment to generate additional revenue for products and services that fall outside of CADTH's core suite of products and services, and to make more evidence-informed synthesis and assessment information available to Canadians. The results of this investigation and assessment of business opportunities will be available for consideration in 2011-2012.

With no increases in revenue projected in the short term, CADTH will be working to achieve a balanced budget. Annual operating costs continue to rise and efforts to achieve efficiencies and cost savings remain a priority for CADTH management. During the past two financial years, a number of cost reduction strategies have been employed and will continue. While inflationary increases to operating costs are inevitable, they must be and are carefully managed to minimize the impact on the delivery of key programs and services.

8. Appendices

Appendix A: 2011-2012 Key Achievements

Appendix B: CADTH Priority Themes

Appendix C: CADTH Work Completed in Relation to 2010-2011 Priority Themes

Appendix A: 2010-2011 Key Achievements

In accordance with CADTH's new direction, the business plan and business operations for 2010-2011 were organized around three main business lines representing the fundamental activities key to fulfilling the CADTH mission:

1. Serving our customers
2. Advancing the science
3. Corporate support (governance, management, and administration).

Achievement of the following activities in 2010-2011 under each of these business lines constitutes the first steps in CADTH's move to increased effectiveness and responsiveness to customer needs and priorities. Significant progress has been made in transitioning CADTH to a customer-focused, continuous improvement Agency.

Serving our Customers

To ensure that CADTH is meeting the needs of its customers, the jurisdictions that provide funding to CADTH, the Agency was completely restructured to focus on the delivery of products and services that are relevant, timely, and of high impact or value. The silo-based programmatic structure that CADTH had operated under over the course of its 20-year history — Health Technology Assessment, Common Drug Review, and Canadian Optimal Medication Prescribing and Utilization Service — was replaced with two interdependent directorates that work closely together to serve CADTH customers: one responsible for defining the program, products and services, and one dedicated to the research, production, and delivery of the products and services.

Defining Topic Priorities

In defining topic priorities, CADTH works closely with its advisory committees and jurisdictional decision-makers, and through partnerships and outreach opportunities with other producers of health technology assessments (national and international), and key stakeholder groups (for example, other agencies and government departments, professional associations and colleges, academic centres, patient groups, and industry) to ensure its products and services align with the priorities and needs of the Canadian health care system.

CADTH's new central intake process allows for a one-stop-shop approach to planning and prioritizing projects, including the drug reviews that are conducted as part of the Common Drug Review, all of the Rapid Response requests, the Environmental Scanning Service, and all other project ideas that fall within CADTH's priority themes for the year. Priority themes are identified through regular Environmental Scans and analysis of jurisdictional priorities and needs of the health care system, as well as consultation with CADTH's Liaison Officers, Knowledge Exchange Officers, customers, and partners. The central intake process ensures there is no duplication of work on the same topic within the organization and that there is optimal selection of topics with the greatest impact, as well as the optimal use of CADTH resources. An

interdisciplinary portfolio committee meets on a weekly basis to review the status of all current projects and prioritize new projects to ensure that CADTH's work continues to provide maximum return on investment and the best possible outcomes for Canadians.

Uptake and Impact

Efforts in knowledge exchange, including jurisdictional Liaison Officer outreach, have resulted in increased uptake and implementation of CADTH's work. The Agency has experienced unprecedented requests for information, products, and services as a result of positive customer service activities. Strategic efforts in customized workshops for customers, context-specific tools, broad and grassroots-level outreach, targeted communication, and partnerships, etc., designed to maximize impact have been successful. Examples:

- Significant media interest (including *Globe and Mail*; *New York Times*) following the publication of CADTH's article on cost-effectiveness of self-monitoring of blood glucose in the *Canadian Medical Association Journal*
- A British Columbia health authority introduced a hip protector program. The decision was influenced by CADTH recommendations and implementation support tools on hip protectors in long-term care facilities
- Evaluation of national Café Scientifique sessions indicates positive prescriber and patient behaviour change toward the uptake of CADTH recommendations on self-monitoring of blood glucose
- Physician online CME on proton pump inhibitors evaluated positively; prescribers successfully completed the accredited program.

Partnerships and Collaboration

Continued efforts to foster partnerships within the health technology assessment community, both nationally and internationally, and across the broader Canadian health care system have resulted in a number of new or renewed partnerships:

- **World Health Organization**
CADTH is currently co-sponsoring a project with the World Health Organization (WHO) that seeks to identify safety concerns with certain aerosol-generating procedures. Findings from this project will inform an update to WHO guidelines, which will be distributed across Canada by the Public Health Agency of Canada (PHAC). CADTH is working closely with PHAC to identify additional issues surrounding this topic and to ensure the report is relevant to the Canadian health care system.

- **Health Products and Foods Branch of Health Canada**
Through continued interaction and engagement with the HPFB, a joint work plan has been developed to enhance information sharing and transparency and to identify opportunities for collaboration and efficiency. This is consistent with an international trend toward closer relationships between regulators and HTA agencies.
- **Industry Liaison Forum**
CADTH created an Industry Liaison Forum to meet with senior officials from the two major pharmaceutical industry trade associations (Rx&D and BIOTECanada) on a semi-annual basis to share information and to look for ways to address areas of concern.
- **Public Health Agency of Canada**
With renewed funding from PHAC, CADTH hosted a second series of Café Scientifique events across Canada. Ten events were held that brought together diverse audiences to examine the evidence behind self-monitoring of blood glucose (SMBG) by people with type 2 diabetes and provide insight into CADTH's recommendations on this topic. These Cafés were part of CADTH's full suite of SMBG products, including scientific reports, intervention tools, and journal publications. Video and audio recordings from these events are available on the CADTH website.

Products and Services

As mentioned, CADTH's three science programs were integrated into a single science program to support efficient and effective delivery of a continuum of products and services. These products and services fall under the following three product lines:

- Rapid Response Service
- Drug formulary advice and recommendations
- Health Technology Assessments and Optimal Use Products that provide advice, recommendations, toolkits, and implementation support for drug and non-drug technologies.

Below is a summary of the key initiatives undertaken within each of the product lines during 2010-2011.

Rapid Response Service

The Rapid Response Service was launched in February 2005 and since that time, there has been a continual increase in the use of the service. Client feedback and formal program evaluation have confirmed that the service is highly relevant and informs Canadian health care decision-making. In response to customer needs, CADTH has expanded the scope of the service to accept a multitude of requests where the evidence will have an impact on improving patient outcomes (e.g., health human resource queries). CADTH completed 295 Rapid Response reports from April 1, 2010 to December 31, 2011, which represents a 23% increase over the previous fiscal year.

Drug Formulary Listing Recommendations

The Common Drug Review program remains a flagship program for CADTH and will continue to evolve in direct support of F/P/T Drug Plans. To date, 19 formulary recommendations were issued. To date, 26 submissions were received.

The CADTH Patient Input initiative was launched in May 2010, providing patient groups with an opportunity to formally provide input into CADTH's Common Drug Review (CDR) process by providing the patient perspective regarding drugs being reviewed by CDR. This approach was designed to allow for a continuum of patient input from the CDR review up to and including the decision-making step taken by the jurisdictions. It was developed in consultation with the participating drug plans, other international drug review agencies, and key stakeholders (including patients).

Health Technology Assessments, Optimal Use Products, and Implementation Support

Formerly developed and delivered under independent science programs — Health Technology Assessment, and the Canadian Optimal Medication Prescribing and Utilization Service — these products are now developed and delivered as an integrated product set. A number of projects were initiated under this new direction and include:

- **Medical Isotopes**

At the request of Health Canada, and with the provision of project funding, CADTH launched a two-year project that will develop improved policies, protocols, and standards to help health care decision-makers optimize the use of the medical isotope technetium-99m, as well as the use of alternative medical isotopes and medical imaging equipment. An expert advisory committee composed of experts from across Canada has been established to help CADTH in providing guidance on optimizing the use of medical isotopes. To ensure impact of the project, a detailed knowledge exchange and outreach plan is being implemented. The target date for completion of this project is March 31, 2012.

- **Second- and Third-Line Therapy for Diabetes**

An Optimal Use report with recommendations was completed and a number of implementation support tools developed to enhance impact (e.g., audit and feedback guide on prescribing practices, a guide for decision-makers in Canada, and prescribing aids).

- **Therapeutic Review on Biologics for Rheumatoid Arthritis**

A clinical and economic overview report was completed with recommendations. To support uptake and implementation of the recommendations, context-specific tools were developed for decision-makers in the jurisdictions, and a newsletter for prescribers is being developed.

Advancing the Science

Recognizing that CADTH has a stellar reputation for high quality, robust, and accurate research and analysis, CADTH consolidated and strengthened its commitment to advancing the sciences of technology assessment and knowledge exchange under the guidance of a Chief Scientist. This position has oversight for ensuring the ongoing scientific credibility of CADTH products and services, through the provision of methodological guidance and quality assurance related to best practices in the conduct and reporting of CADTH technical documents.

As such, the Advancing the Science (ATS) team has provided direct methodological support for the conduct and reporting of CADTH products, in particular, the isotopes project and the two Rapid Response reports being used as the basis for recommendations under the new purpose-built expert review panels for Octaplas and MRI.

An education and training plan for CADTH research staff has been implemented to ensure all team members have the skills needed to complete any CADTH product, and that CADTH products retain their ongoing credibility and scientific rigour.

In addition, through the ATS business line, CADTH has supported the advancement of the science of health technology assessment through educational engagements such as the following:

- CADTH convened and led a graduate (MSc) level course in health technology assessment in the Department of Epidemiology at the University of Ottawa — a significant step forward in helping to build the capacity of HTA-trained clinicians and researchers in Canada.
- CADTH offered a three-day, hands-on workshop with presenters from the Programs for Assessment of Technology in Health (PATH) Research Institute at McMaster University, Canada, and the Department of Public Health, Medical Decision-Making and Health Technology Assessment at the University for Health Sciences, Medical Informatics and Technology (UMIT), Austria. The workshop focused on modelling techniques that are applied in public health and health technology assessment, using real-world case studies. This workshop was a revenue-generating initiative.
- CADTH Annual Symposium held in Halifax in April. More than 400 delegates from around the world attended. The event provided an opportunity for those actively involved in the areas of policy-making, program decision-making, health care delivery, and research to share their expertise in the production and use of evidence-based information on drugs and other health technologies.

Corporate Support (Governance, Management, and Administration)

Governance

▪ **Board of Directors**

A new Board governance structure was implemented that includes an independent Board chair, and a number of non-jurisdictional representatives who bring additional health care perspectives to CADTH's work. Jurisdictional appointments continue to be a key link to the Conference of Deputy Ministers, with appointments based on a regional distribution model. A recruitment firm was engaged to conduct a pan-Canadian search for the independent Board Chair and non-jurisdictional Board members. Updated CADTH bylaws reflecting the new governance structure received Industry Canada approval in August and a new Chair and members were appointed to the Board effective January 1, 2011. A comprehensive orientation program was provided to the new Board prior to their taking office.

▪ **Expert and Advisory Committees**

As part of strengthening the governance structure, the membership and mandates of CADTH expert and advisory committees were reviewed and changes initiated to streamline the number of committees, eliminate duplication of roles, and expand membership to enable increased involvement of end-users and the public. CADTH's three advisory committees were consolidated into two — Health Technology Policy Advisory Committee and Drug Policy Advisory Committee — and will advise CADTH on pan-Canadian issues and priorities to support the development of products and services that are relevant, timely, and responsive to customer needs.

CADTH initiated the use of purpose-built expert review panels to support the development of recommendations for non-drug technologies. A panel was established for an MRI project requested by the Ministry of Health of New Brunswick to develop recommendations regarding two "strengths" of MRI machines. A knowledge exchange strategy will support implementation of the recommendations. Work to streamline the expert committee structure for drugs and non-drug technologies will be finalized in the next fiscal year.

Management and Administration

The organizational transformation initiated in the last year required significant employee engagement, careful planning and management, and strong corporate leadership. A formal change management process was adopted to ensure that significant changes were implemented in an orderly and systematic fashion and that a strong foundation was built, on which CADTH could successfully and efficiently meet the needs of its customers into the future.

The organizational transformation had real and significant implications for the human resources of the Agency. Throughout the change process, serious attention and commitment were given to ensuring maximum employee engagement, clear internal communications, and closely managed personnel reassignment. A number of mechanisms were implemented to encourage staff engagement (e.g., focus groups, intranet tools for staff to submit questions and/or bright ideas related to the change). The success of these initiatives resulted in the achievement of organizational efficiencies and implementation of an integrated product and service delivery model.

Staff-led solution groups were established to contribute to the internal planning and process integration. Implementation of an integrated management framework provided the foundation for CADTH's business and operational planning, financial and risk management, performance measurement and reporting, and human resources management. With the shift toward performance outcomes, changes to the performance measurement and reporting frameworks were required, as well as changes to financial planning management and reporting systems and tools.

CADTH's IT infrastructure was revitalized to achieve greater efficiencies, such as standardized project management, and to initiate systems to improve retrieval of project information and be able to track progress and performance from receipt of a customer request through to product delivery. Many CADTH staff are involved when responding to a request and the ability to track a project through one single data source saves staff time and reduces the potential for error in the translation of information.

To align with the changes to CADTH's internal structure and redefinition of products, redesign of the CADTH website was initiated to provide more user-friendly navigation, incorporate social media tools to enhance communications with CADTH customers, and align online requests for products and services with the new central intake process. Systems have been implemented to track visitor patterns to the website, including the uptake on CADTH outreach marketing campaigns. Web statistics are used by CADTH to identify: 1) where further work might be warranted on a specific topic, 2) new markets to be pursued, 3) website enhancements, and 4) search engine optimization.

Appendix B: CADTH Priority Themes

Briefing papers related to Priority Themes for 2011-2012:

- **Cardiovascular and Cerebrovascular Disorders**
- **Endocrine Disorders with a focus on Diabetes**
- **Infectious Diseases**
- **Mental Health**
- **Neurological Disorders**

Briefing Paper: Cardiovascular and Cerebrovascular Disorders

Cardiovascular disease represents a class of disorders that affect the heart and blood vessels. The most common of these include:

- ischemic heart diseases (e.g., angina, myocardial infarction)
- cardiac vascular diseases (e.g., pulmonary hypertension)
- disorders of the heart (e.g., heart failure, defective heart valves)
- disorders of the heart rhythm (e.g., arrhythmias)
- hypertension, dyslipidemias (e.g., high blood cholesterol)
- peripheral vascular disease.

Cerebrovascular disease has a common underlying cause to ischemic heart disease and peripheral vascular disease — i.e., arteriosclerosis. Key conditions include transient ischemic attacks and stroke (embolic or hemorrhagic). Together, cardiovascular and cerebrovascular diseases represent a significant disease burden in Canada:

- Cardiovascular diseases (mortality rate: 210.5/100,000 population) and cerebrovascular diseases (mortality rate: 42.3/100,000) are leading causes of death in Canada. In comparison, the mortality rate for malignant neoplasms (cancer) is 207.7/100,000 (based on 2006 data, the latest year of data available from Statistics Canada).^{1,2} On its own, cardiovascular disease represents approximately 30% of deaths in Canada.²
- The leading cause of hospitalization in Canada continues to be heart disease and stroke, accounting for 16.9% of total hospitalizations.²
- Heart disease and stroke cost the Canadian economy more than \$22.2 billion every year in physician services, hospital costs, lost wages, and decreased productivity.² Cardiovascular disease on its own is the leading cause of drug costs in Canada.³
- Nine Canadians in 10 have at least one risk factor for heart disease or stroke (smoking, alcohol, physical inactivity, obesity, hypertension, hypercholesterolemia, diabetes).² It has been estimated that one in four Canadians has some form of heart disease, disease of the blood vessels, or is at risk of stroke.⁴
- Some of the at-risk populations in Canada include a growing number of young adults who are obese or overweight, the largest cohort of baby boomers (50 years to 64 years) in Canada's history entering a stage where they are at higher risk of heart disease, and Aboriginal people who have worse cardiovascular health than the general population.⁵

Why this theme area?

Cardiovascular and cerebrovascular diseases represent an important burden to Canada's health care system. This was recently acknowledged with the release of the Canadian Heart Health Strategy and Action Plan. Given the importance of this thematic area, the need for evidence and advice by CADTH's customers regarding drugs and health technologies (e.g., cardiac valves, coronary stents, surgical robotic systems) is expected to continue. They will require the best information available regarding technologies

that reduce adverse effects and improve patient outcomes, as well as improve economic impact and system efficiency. Additionally, these technologies have the potential to extend the range of indications and conditions that can be treated.

Given the need of decision-makers to address cost-effectiveness and comparative effectiveness of drugs and health technologies, CADTH has an opportunity to assume an important role in assessing and reporting to its customers in this area. Emerging health care technologies — including therapeutics, diagnostic assays, molecular imaging modalities, and genomics — have significant potential to improve the delivery of health care in this field and will help address sustainability issues, as new technologies are significant cost drivers for the Canadian health care system.

This is an important thematic area that has impact for both health policy and clinical practice. Cardiovascular and cerebrovascular diseases relate to important health system priorities that include:

- Aboriginal health
- diagnostic imaging
- health human resources
- elderly care
- disease prevention
- health promotion
- patient, family, and community-based health care.

A December 2009 scan of Canadian health technology assessment (HTA) producers revealed that cardiovascular disease is an important area of focus, with most agencies conducting reviews in this field. As such, this portfolio requires a coordinated effort and information sharing with other agencies. An example of this is that CADTH is a successful co-applicant on an Alberta Heritage Foundation for Medical Research grant that is attempting to use HTA to develop tools for chronic diseases management (including cardiovascular conditions such as hypertension) in Alberta and will be able to bring these tools to a pan-Canadian audience. CADTH will play a role in the dissemination of these findings.

What has CADTH done in this theme area?

In response to customer requests, CADTH has completed many reports on cardiovascular and cerebrovascular diseases in 2010 (listing available in Appendix C):

- four HTA reports (20% of the reports published or initiated in 2010)
- three Environmental Scanning Reports (23% of published reports)
- one Emerging Technology Bulletin (100% of published reports)
- 42 Rapid Assessments (10% of the reports)
- six new cardiovascular drug submissions (16% of submissions currently under review).

Over the past year, strategic partnerships have been developed with a number of groups, including the Alberta Health Technology Assessment Unit for the uptake of an ongoing HTA project to inform their

provincial policy on surgical robotics for cardiac interventions and other indications. The Vancouver Coastal Health Authority, which initially requested the surgical robotics topic, will also use the early report findings to inform decisions regarding potentially expanding the number of indications currently reimbursed, including cardiac interventions.

What is in progress and on the horizon?

Over the coming year, CADTH will focus on further developing the thematic approach by continuing to build linkages and partnerships with key stakeholders, including the Canadian Cardiovascular Society, the Heart and Stroke Foundation, the Canadian Stroke Network, and others working in the cardiovascular and cerebrovascular disease area. There will also be a shift to a more proactive priority-setting approach by identifying technologies that may impact the care of patients with cardiovascular or cerebrovascular disease. For example, the Environmental Scanning Service has identified that a number of new oral anticoagulants and antiplatelet drugs are in clinical development and 25 new cardiovascular devices are in the pipeline.

On the horizon:

Further to the work cited above, one new cardiovascular drug submission was received in early 2011. Also, one HTA and one Environmental Scanning Report will be completed this spring for this thematic area. A proposal for a therapeutic review on newer anticoagulants is currently in development (listing available in Appendix C).

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Briefing Paper: Endocrine Disorders with a Focus on Diabetes

Endocrine disorders are those that affect the secretion of hormones, which regulate the body, into the bloodstream. Examples of endocrine disorders include diabetes, osteoporosis, hypothyroidism, and hyperthyroidism. Type 1 diabetes occurs in approximately 10% of patients with diabetes, making type 2 diabetes the most prevalent.

- The economic cost of endocrine disorders in Canada was estimated to be at least \$2.7 billion in 2002, with diabetes accounting for 43% of all direct costs, the majority being type 2.¹
- Productivity losses due to premature death and disability as a result of endocrine-related disorders cost the Canadian economy an additional \$2.1 billion a year, for a total economic burden of \$4.8 billion in 2002.¹
- In 2005-2006, approximately 1.9 million (5.9%) of Canadians aged 20 years and older had diagnosed diabetes.²
- It is estimated that 2.8% of the general adult population has undiagnosed type 2 diabetes mellitus.³
- Between 2010 and 2020, it is estimated that another 1.2 million people will be diagnosed with diabetes, bringing the total to 3.7 million.⁴
- The economic burden of diabetes in Canada is expected to be about \$12.2 billion in 2010 and \$16.9 billion in 2020 (measured in inflation-adjusted 2005 dollars). This is nearly double the cost from 2000.⁴
- Between 2004 and 2008, the cost of antihyperglycemic agents in Canada rose 40.3%, from \$393.3 million to \$637.1 million.⁵
- Diabetes issues have significant impact at the jurisdictional level, including health human resources, elderly care, child/youth care, and disease prevention.

Why this theme area?

There are several endocrine system disorders that result from disruptions in this complex system, with diabetes the most prevalent. The need for evidence to guide diabetes prevention, diagnosis, monitoring, and treatment is illustrated by the gaps between evidence, policy, and practice. With the anticipated increase in diabetes diagnoses over the next decade, pharmaceutical companies are studying a record 235 drugs to treat diabetes and related conditions.⁶ This wide range of new agents will have varying degrees of clinical benefit, but with higher associated costs. Furthermore, given the increasing prevalence of type 2 diabetes, the optimal use of therapies is of paramount importance. Compounding the issue are the rising rates of obesity in Canada, which is considered to be the most significant risk factor for the development of type 2 diabetes.⁷ CADTH had previously identified diabetes as a priority theme; however, we are currently proposing expanding the theme to endocrine disorders.

What has CADTH done in this theme area?

In response to customer requests, CADTH has completed many reports within endocrine disorders, with the majority focusing on diabetes for 2010 (listing available in Appendix C):

- one HTA report (5% of reports published or initiated in 2010)
- 14 Rapid Assessments (4% of reports)
- four new diabetes drug submissions (11% of submissions received or completed in 2010).

Other CADTH reports include the clinical and cost-effective studies on insulin analogues, self-monitoring of blood glucose (SMBG), and second- and third-line therapy for type 2 diabetes. CADTH has also disseminated the findings from its reports by publishing several peer-reviewed articles in journal publications (i.e., the *Canadian Medical Association Journal (CMAJ)*, *Canadian Journal of Diabetes*, *Canadian Pharmacists Journal*, and *Open Medicine*), and has hosted several open-forum discussions (Café Scientifiques) across Canada in collaboration with the Public Health Agency of Canada. Our significant work within diabetes and specifically in the area of SMBG has led to numerous citations and national speaking engagements on this topic. To assist health care providers, policy-makers, and consumers with the local implementation of optimal blood glucose-testing frequency, a variety of intervention tools were developed, including an audit and feedback guide, evaluation framework, and academic detailing templates. CADTH continues to produce and support many diabetes-related tools including decision aids, alternate prescription pads, and materials to influence prescribing behaviour. CADTH has a track record of bringing value by providing objective evidence to jurisdictions regarding diabetes treatment, as evidenced by the publication and uptake of SMBG evidence.

What is in progress and on the horizon?

Over the coming year, work will focus on further developing the thematic approach by continuing with linkages and partnerships with key stakeholders and with others working in endocrine disorders. CADTH has built a considerable knowledge base in the area of diabetes management and is now recognized as a valuable and credible source of evidence-based information. We will continue to disseminate the information from CADTH reports within the diabetes-related community.

On the horizon:

- We will shift to a more proactive priority-setting approach by identifying technologies that may impact the care of patients with diabetes and other endocrine disorders.
- A number of new oral antidiabetic drugs are in clinical development stages.
- The Environmental Scanning Service has identified the OmniPod Insulin Management System, a wearable insulin pump, in the pipeline.
- CADTH, in collaboration with the Public Health Agency of Canada, has scheduled two additional Café Scientifiques (open-forum discussion) events on SMBG for 2011, to be hosted in Surrey, British Columbia, and in St. John's, Newfoundland and Labrador.

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Briefing Paper: Infectious Diseases

Infectious diseases are those that are transmitted through pathogenic microorganisms, such as bacteria, viruses, parasites, and fungi. Emerging, re-emerging, and persisting infectious diseases continue to affect the health of Canadians, resulting in a substantial economic burden to the health care system, and remain a key health policy concern across the country.

- Due to the nature of infectious disease and public susceptibility to new pandemics and emerging infectious diseases, this thematic area is relevant to Canadians regardless of age, socio-economic status, or ethnicity.
- Infectious diseases are causes of death and disability and are responsible for significant social and economic disruption.
- Influenza and pneumonia are the leading cause of death from infectious diseases in Canada and the sixth most common cause of death overall.¹
- Community-acquired pneumonia accounts for one million doctor visits a year in Canada as well as 60,000 hospitalizations, resulting in costs to the Canadian health care system of approximately \$100 million.²
- The cost of health care-associated infections has been estimated to be between \$453 million and \$1 billion annually.³
- In 2010, the Ontario Burden of Infectious Disease Study reported that over seven million infectious disease episodes and nearly 4,900 deaths occur in Ontario from infectious diseases, annually.⁴
- Recent years have seen the emergence of H1N1, SARS, BSE, avian flu, and West Nile virus.

Why this theme area?

Emerging health care technology, including genomic, vaccine, and molecular diagnostic technology, could change health care delivery with respect to emerging and existing infectious disease. The previously observed need for evidence and advice by health care decision-makers and stakeholders regarding health technologies (e.g., masks, antivirals) and health care processes and procedures to reduce the spread of infections is expected to continue. Knowing that these technologies could be significant cost drivers, CADTH can bring its expertise to bear by providing credible evidence on cost-effectiveness and comparative effectiveness of technology use.

A December 2009 scan of 38 technology assessment and related organizations across Canada revealed that few (three) organizations are actively engaged in technology assessment activities related to infectious disease management and control. As such, this portfolio requires coordinated efforts and information sharing with other agencies in this area.

Infectious diseases are relevant to many areas of focus in the health care system, particularly disease prevention and control, health promotion, and patient and community-centred care. Assessments of new technologies related to infectious diseases also have the potential to impact important health systems outcomes, particularly the protection of population health, improved health care quality, and enhanced patient safety.

What has CADTH done in this theme area?

In response to customer requests, CADTH has completed many reports on infectious diseases in 2010 (listing available in Appendix C):

- seven HTA reports (35% of reports published or initiated in 2010)
- two Environmental Scanning Reports (15% of published reports)
- 47 Rapid Assessments (12% of reports published in 2010)
- four infectious disease drug submissions (11% of submissions received or completed in 2010).

Over the past year, strategic partnerships have been developed with leaders in infectious disease control as CADTH has engaged in work related to methicillin-resistant *Staphylococcus aureus* and *Clostridium difficile*. CADTH has also partnered with the World Health Organization (WHO) on two projects focused on respiratory virus transmission to inform WHO guideline development. As well, CADTH has a long-standing working relationship with the Public Health Agency of Canada, which has used CADTH's reports to support pandemic planning. Given that the community of infectious disease specialists is small in Canada and effective partnerships have been established, it is reasonable to conclude that this will further support CADTH's knowledge exchange and dissemination activities and will be able to demonstrate impact.

What is in progress and on the horizon?

Over the coming year, CADTH will focus on further developing the thematic approach by building linkages and partnerships with key stakeholders, including the Public Health Agency of Canada, WHO, Association of Medical Microbiology and Infectious Disease Canada, Canadian Patient Safety Institute, Community and Hospital Infection Control Association, and others working in the prevention, treatment, and control of infectious diseases.

On the horizon:

- The treatment of hepatitis C will see major changes over the next two to three years with the addition of new oral protease inhibitors and introduction of long-acting interferons.⁵ Environmental Scanning has identified a number of devices currently in the pipeline for the detection of infectious diseases. For example, the use of nanoparticles in testing instrumentation has the potential to simplify and expedite the detection of infectious disease.
In addition, rapid tests (e.g., Xpert MRSA or SA Blood Culture test) to screen for methicillin-resistant *Staphylococcus aureus* or *Staphylococcus aureus* have been developed for on-demand rapid detection of infection, with the intent of improving patient management and improved antimicrobial stewardship. Medical imaging is also being applied to the area of infectious disease, such as the use of single photon emission CT and CT scans for diabetic foot infections.
- A number of new and emerging technologies for infection control in health care settings have also been identified (e.g., HyGreen, Clean-Trace NG, and Inov8 Science's Air Disinfection Device).

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Briefing Paper: Mental Health

Mental health is a critical component of the overall well-being of Canadians, in addition to representing significant specific medical and social challenges for Canadians. Mental health includes disorders and illnesses that cause changes in cognitive, emotional, or behavioural function, such as schizophrenia, mood disorders, anxiety disorders, addictions, and eating disorders. Mental illness indirectly affects all Canadians during their lifetimes, through a family member, friend, or colleague.¹ Suicide, while not classified a mental illness, is an important mental health issue, as there is a significant correlation between suicide and mental health.²

Mental disorders, particularly depression and schizophrenia, are costly diseases to both the health system and society, at an estimated cost of \$14.7 billion in Canada for 2007-2008.³ The largest contributor to these costs was pharmaceuticals, at a total of \$2.8 billion, and hospitalization, with a cost of approximately \$2.7 billion.³ Mental illnesses are a large contributor to hospitalizations, and other costs incurred such as disability burden and loss of work productivity are largely undefined. There are also hidden burdens that stem from the social stigma, including lack of access to care, as well as violations of human rights and freedoms.¹ As such, mental disorders and mental illnesses represent a significant disease burden in Canada, but the magnitude is difficult to quantify.

Achieving good mental health requires more than physical health and the absence of a mental disorder or illness; it requires a balance of mental, social, physical, spiritual, and economic elements.⁴ Mental health promotion applies to Canadians of all ages, across ethnicities, and regardless of socio-economic status. Examples of mental health-related issues include work/life balance and healthy aging.

Why this theme area?

Controversy remains surrounding the use of various therapies, especially for severe mental illnesses; for example, the newer alternative therapies. There is an ongoing need for a critical review of the clinical benefit and harms of current technologies and those in development, to determine the best approaches toward the treatment of mental illnesses and the enhancement of the mental health of Canadians.

Several jurisdictions and agencies have clearly indicated that they require assistance from CADTH in informing their decisions regarding mental health and mental illness. The Public Health Agency of Canada, the Mental Health Commission of Canada, the First Nations, Inuit and Aboriginal Health Branch at Health Canada, and the Canadian Psychiatric Association have identified areas where CADTH's work has either brought value to their decision-making processes or identified areas in which it would. Given this interest, it is reasonable to conclude that CADTH's work could have significant impact for key decision-makers in the areas of mental illness.

What has CADTH done in this theme area?

In response to customer requests, CADTH has completed many reports on mental health in 2010 (listing available in attached document):

- one HTA report (5% of reports published or initiated in 2010)
- 44 Rapid Assessments (12% of reports)
- two new mental health drug submissions (5% of submissions received or completed in 2010).

Requests coming from jurisdictions across Canada, as well as multiple requests from federal programs (including the Department of National Defence and the First Nations, Inuit and Aboriginal Health Branch) have driven CADTH's work in this priority theme area. In addition, many copies of these reports were requested in the past 12 months by users from across Canada.

Over the past year, relationships have been continued and established with Health Canada, the Mental Health Commission of Canada, the Canadian Psychiatric Association, and other organizations and associations working in mental health and mental illness.

What is in progress and on the horizon?

Over the coming year, CADTH will focus on further developing the thematic approach by building linkages and partnerships with key stakeholders, including the Canadian Psychological Association and the Canadian Mental Health Association.

On the horizon:

- A number of new drugs being developed for schizophrenia, depression, and bipolar disorder will be considered.
- Jurisdictions have identified that first-line therapy for depression, long- and short-acting agents for attention hyperactivity disorder, and medications for other dementias are of particular interest.
- Requests for Rapid Response work on mental health continue; for example, safety of antipsychotics in pregnancy and routes of administration for antipsychotics are newly identified topics of interest.
- A review of the clinical evidence on pharmacotherapies for the treatment of attention deficit hyperactivity disorder in children and adolescents, along with another report on both pharmacological and psychological treatments in adults.
- CADTH will continue to work on combination and high-dose use of atypical antipsychotics in inadequately controlled patients with schizophrenia.

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Briefing Paper: Neurological Disorders

Diseases of the central and peripheral nervous system are a significant social and medical challenge. Neurological diseases include disorders of the brain, spinal cord, and nerves, causing difficulties with moving, thinking, speaking, swallowing, and learning. Examples of neurological diseases and disorders include Alzheimer's disease and other dementias, amyotrophic lateral sclerosis, epilepsy, migraine and headache disorders, Parkinson's disease, and multiple sclerosis. Given the changing demographic of Canada's population, neurological disease represents a significant and growing disease burden in Canada:

- The total cost of 10 common neurological diseases in 2001-2002 was estimated at almost \$6 billion.¹ This number is believed to have increased, given the increasing number of dementias and related diseases that are affecting the aging population. Drug expenditures accounted for about half of the direct costs for the following conditions: headaches, multiple sclerosis, and Parkinson's disease.¹
- The Alzheimer Society report, *Rising Tide: The Impact of Dementia on Canadian Society*,² estimates that within a generation, the number of Canadians with Alzheimer's disease or a related dementia will increase from 500,000 to 1.1 million, and the associated costs to Canadians (direct health costs, lost opportunities for informal caregiver, and indirect costs) will rise from \$15 billion to \$153 billion.
- Multiple sclerosis is the most common neurological disease of young Canadians (average diagnosis age 15 to 40). The cost of multiple sclerosis to the Canadian economy every year is estimated at \$1 billion.³

Why this theme area?

As Canada's population ages, there will be an increase in neurological diseases in Canada. These conditions are often incurable and pose a great deal of economic burden to society.¹ With the anticipated increase in diagnosis of neurological disease and the need for evidence-based guidance on a number of new and emerging health technologies, CADTH has the opportunity to provide information for key decision-makers that has the potential for significant impact in the area of neurological disease.

What has CADTH done in this area?

In response to customer requests, CADTH has completed a number of reports on neurological diseases and disorders in 2010 (listing available in attached document):

- 22 Rapid Assessments (5% of reports published in 2010)
- one Environmental Scanning Report (8% of published reports)
- one formulary review (3% of submissions received or completed in 2010).

This year, there was significant demand and interest from jurisdictions for information surrounding chronic cerebrospinal venous insufficiency therapy for multiple sclerosis. New and emerging medical imaging technologies for neurological conditions have also been identified through CADTH's work on medical isotopes. These technologies (e.g., PET/MRI) intend to improve health care by providing a better clinical understanding of neurological disease process.⁴ By setting neurological disease as a priority theme area, CADTH will be able to shift to a proactive priority-setting approach and identify technologies that may positively impact the care of patients with neurological diseases, as well as contribute to the sustainability of the health care system.

What is in progress and on the horizon?

Over the coming year, CADTH will focus on developing the thematic approach by building linkages and partnerships with key stakeholders, including the Alzheimer Society of Canada, Multiple Sclerosis Society of Canada, and others working in neurological disease.

On the horizon:

- The treatment of multiple sclerosis will see a shift from injectable drugs to the development of oral disease-modifying medications (e.g., fingolimod, teriflunomide, cladribine).⁵
- Several new treatment options for Alzheimer's disease are currently undergoing phase 3 clinical trials, including two monoclonal antibodies (bapineuzumab and solanezumab), which have been developed to target beta-amyloid proteins.⁵
- Environmental Scanning has identified devices in the pipeline, such as diffusion tensor imaging, a new neuroimaging technology that will be used to better understand neurological disorders such as multiple sclerosis, dementia, amyotrophic lateral sclerosis, and Alzheimer's disease.⁵ In addition, hyperpolarization MRI is an emerging technique designed to enhance the sensitivity of the MRI, and is also speculated to become a valuable tool for the early detection of neurological disorders.⁶
- The use of neurological radiotracers as imaging agents for diagnosis and monitoring disease progression is currently under investigation. Florbetaben is an investigational imaging agent that provides a visualization of beta-amyloid, a protein that builds up in the brain and is thought to be a precursor to Alzheimer's disease.⁷

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Appendix C: CADTH Work Completed in Relation to 2010-2011 Priority Themes

- **Cardiovascular and Cerebrovascular Diseases 2010**
- **Endocrine Diseases 2010**
- **Infectious Disease 2010**
- **Mental Health 2010**
- **Neurology 2010**

CADTH WORK RELATED TO CARDIOVASCULAR AND CEREBROVASCULAR DISEASES 2010

This document provides topics undertaken in the thematic area of Cardiovascular and Cerebrovascular Diseases by the Canadian Agency for Drugs and Technologies in Health (CADTH) in 2010.

Rapid Responses

Heart Failure

- Use of Patient Experience Indicators to Influence Heart Failure Care Pathways: Clinical Evidence and Guidelines
- The Six-Minute Walk Test for CHF: Clinical Effectiveness and Guidelines
- Indirect Calorimetry versus Thermodilution and Echocardiography for Measuring Cardiac Output: Comparative Clinical and Cost-Effectiveness
- Extremity Elevation for the Management of Edema: Clinical Evidence and Guidelines

Heart Valves

- Transcatheter Aortic Valve Implantation: A Critical Appraisal of a Health Technology Assessment and Comparison with a Rapid Review
- Port-Access versus Sternotomy for Mitral Valve Surgery: Comparative Clinical Effectiveness, Cost-Effectiveness, and Safety
- Percutaneous Heart Valve Replacement for Valvular Heart Disease: A Review of the Clinical Effectiveness, Cost-Effectiveness, and Guidelines
- Correx Aortic Valve Bypass for Patients Who Cannot Undergo Conventional Aortic Valve Replacement: Clinical Effectiveness

Heart Rhythm

- Use of Continuous Loop Cardiac Monitors in Outpatient Settings: Guidelines
- Timeframe for Interpretation of 12-Lead Electrocardiogram Reports: Guidelines

- Hands-Free Defibrillation Pads: Clinical Effectiveness and Evidence-Based Guidelines
- Adult Doses of Ventricular Fibrillation in Children One to Eight Years of Age: Clinical Effectiveness and Guidelines
- 200J Rectilinear Biphasic Waveform and 360J Truncated Biphasic Waveform Defibrillators: Clinical Effectiveness and Equivalency
- Respiratory and Cardiac Monitoring for Patients Receiving Propofol for Procedural Sedation: Guidelines

Ischemic Heart Disease

- Statin Administration Following Acute Myocardial Infarction: Guidelines
- Remote Ischemic Conditioning: A Review of the Clinical Effectiveness
- Point-of-Care Troponin I and Myoglobin Testing in a Pre-hospital Setting: Clinical Effectiveness and Guidelines
- Implantation of Drug-Eluting Stents during Percutaneous Coronary Interventions: Review of Revascularization Rates Due to In-Stent Restenosis
- Discharge of Patients Following Interventional Angiogram Procedures: Risk of Complications and Guidelines for Self-Care Instructions
- Administration of Angiotensin-Converting Enzyme Inhibitors Following Acute Myocardial Infarction: Guidelines
- Acetylsalicylic Acid Administration Following Acute Myocardial Infarction: Guidelines

Hypertension/Blood Pressure

- Use of Diuretics for Hypertension in Patients with Reduced Renal Function: A Review of Clinical Effectiveness, Safety, and Guidelines
- Accuracy and Reliability of Automated Non-Invasive Blood Pressure Devices: Clinical Evidence and Guidelines

CADTH WORK RELATED TO CARDIOVASCULAR AND CEREBROVASCULAR DISEASES 2010

Stroke

- The ABCD2 Scoring System for Transient Ischemic Attacks: Diagnostic Accuracy and Predictive Value
- Left Atrial Appendage Occlusion for Stroke Prevention: Clinical Benefit, Cost-Effectiveness, Economic Impact, and Existing HTA Recommendations

Anticoagulant Therapy/Thromboprophylaxis

- Twice a Day versus Three Times a Day Unfractionated Heparin in Post-Operative Patients with Epidurals: Clinical Benefits and Harms
- Pre-Mixed Heparin Solutions for Infusion: Comparative Safety and Guidelines
- Point-of-Care International Normalized Ratio Testing Versus Plasma-Based Testing: Comparative Accuracy and Reliability
- Pharmacological Thromboprophylaxis for Pediatric Patients Undergoing Elective Surgery: Clinical Effectiveness and Guidelines
- Pharmacological Thromboprophylaxis for Gynecology Patients Undergoing Elective Surgery: Clinical Effectiveness and Guidelines
- Low Molecular Weight Heparin for Patients Requiring Hemodialysis: Clinical Effectiveness and Cost-effectiveness
- Knee-High Compared with Thigh-High Compression Stockings for Perioperative Patients: Clinical and Cost-Effectiveness
- Intermittent Pneumatic Compression Stockings and Thromboembolytic Deterrent Stockings for Perioperative Patients: Clinical Effectiveness and Guidelines

Other

- Structured Cardiac Rehabilitation Program for Adults After a Cardiac Event: Clinical Effectiveness and Guidelines
- Sternal Talon for Cardiac Surgery Patients: A Review of the Clinical Effectiveness and Guidelines
- Positive versus Negative Needleless Connectors for Central Venous Lines and Peripheral Lines: A Review of the Clinical Effectiveness and Guidelines
- Intraosseous Infusions for Patients Needing Emergency Fluid Resuscitation or Medication Administration: Clinical Benefits, Clinical Harms, and Guidelines
- Conversion Rates of Temporal and Pulmonary Artery Temperatures: Guidelines
- Topical Nitroglycerin Paste for Dilating Peripheral Veins: Clinical Effectiveness and Guidelines

Drug Review Recommendations

- Multaq (dronedarone) for atrial fibrillation
- Adcirca (tadalafil) for pulmonary hypertension
- Effient (prasugrel) for acute coronary syndrome
- Brilinta (ticagrelor) for acute coronary syndrome
- Twynsta (telmisartan/amlodipine) for essential hypertension
- Pradox AF2 (dabigatran) for stroke prevention in atrial fibrillation
- **COMING SOON!** Coralan (ivabradine) for the treatment of chronic stable angina in patients with coronary artery disease with normal sinus rhythm.



CADTH WORK RELATED TO CARDIOVASCULAR AND CEREBROVASCULAR DISEASES 2010

Environmental Scanning Reports and Emerging Technology Bulletins

- New Anticoagulants for Stroke Prevention in Patients with Atrial Fibrillation (Bulletin)
- Endovascular Repair for Abdominal Aortic Aneurysm (Report)
- Support Services for Cardiac Rehabilitation in Canada (Report)
- Dedicated Cardiac Computed Tomography in Canada (Report)
- **COMING SOON!** Trends in the Utilization of Endovascular Therapy for Elective and Ruptured Abdominal Aortic Aneurysm Procedures Across Canada: A Cohort Study (Environmental Scanning Report).

HTA/Optimal Use Reports

- Ablation Procedures for Rhythm Control in Patients With Atrial Fibrillation: Clinical and Cost-Effectiveness Analyses
- Non-Emergency Telecardiology Services: Rapid Review of Clinical and Cost Outcomes
- Clopidogrel versus Other Antiplatelet Agents for Secondary Prevention of Vascular Events in Adults with Acute Coronary Syndrome or Peripheral Vascular Disease: Clinical and Cost-Effectiveness Analyses
- Clopidogrel Compared With Other Antiplatelet Agents for Secondary Prevention of Vascular Events in Adults Undergoing Percutaneous Coronary Intervention: Clinical and Cost-Effectiveness Analyses
- **COMING SOON!** Robot-assisted Surgery versus Open Surgery and Laparoscopic Surgery: Clinical and Cost-Effectiveness Analyses (note: HTA project on several indications, including cardiac procedures such as mitral valve replacement and coronary artery bypass grafting).
- **COMING SOON!** Newer anticoagulants (dabigatran, rivaroxaban, apixiban) for the prevention of stroke in patients with atrial fibrillation (note: therapeutic review topic in development).

This document provides topics undertaken in the thematic area of Endocrine Diseases by the Canadian Agency for Drugs and Technologies in Health (CADTH) in 2010.

Rapid Responses

Diabetes

- Bevacizumab or Ranibizumab for Treatment of Diabetic Retinopathy: Clinical Effectiveness
- Devil's Club for Patients with Type 2 Diabetes: Clinical Effectiveness
- Diabetes in Aboriginal Populations: Review of Guidelines for Screening and Treatment
- Diabetes in First Nations People: Guidelines for Screening and Treatment
- Frequency of Monitoring Hemoglobin A1C Levels in Adults with Type 2 Diabetes: Evidence-Based Guidelines and Clinical Effectiveness
- In-Hospital Management of Post-Partum Women with Gestational Diabetes: Guidelines
- Intravenous Insulin Infusions in Labouring Women: Guidelines
- Management of Diabetes in the Long-Term Care Population: Guidelines
- Management of Obstetric Patients with Chronic Diabetes or Gestational Diabetes: Guidelines

- Patients with Type 2 Diabetes Who Cannot Use Insulin: Clinical Evidence
- Point-of-Care Testing for Hemoglobin A1C: Clinical Effectiveness
- Rosiglitazone and Pioglitazone for Patients with Type 2 Diabetes: Safety
- Intramuscular Glucagon versus Intravenous Glucose for Severe Hypoglycemic Symptoms: Clinical Effectiveness and Guidelines

Thyroid

- Routine Prenatal Thyroid-Stimulating Hormone Testing: Evidence-Based Guidelines

Drug Review Recommendations

- **Under Review:** Victoza (liraglutide)
- Onglyza (saxagliptin)
- Janumet (sitagliptin phosphate monohydrate/metformin hydrochloride)
- Januvia (sitagliptin phosphate)

HTA/Optimal Use

- Third-Line Therapy for Patients with Type 2 Diabetes Inadequately Controlled with Metformin and Sulfonylurea Combination Therapy

This document provides topics undertaken in the thematic area of Infectious Disease by the Canadian Agency for Drugs and Technologies in Health (CADTH) in 2010.

Rapid Responses

Antivirals

- Antivirals for Influenza: A Review of the Clinical Benefit and Harm
- Antivirals for Pandemic Influenza
- Creatinine Clearance Testing in Geriatric Patients Treated with Tamiflu
- Drug Therapy for Prophylactic and Post-Exposure Treatment of H1N1: A Review of the Comparative Clinical and Cost-Effectiveness

Infection Control

- Infection Prevention and Control in Community Care Settings: Guidelines
- Use of the T5 Personal Protection System During Arthroplasty Procedures: Clinical and Cost-Effectiveness and Guidelines
- Hand Hygiene for the Prevention of Infection Transmission: Clinical Evidence and Guidelines
- Patient Hand Hygiene: Clinical Effectiveness and Guidelines
- Frequent Use of Alcohol-Based Hand Sanitizers: Safety and Guidelines
- Portable Air Purifiers for Removal of Airborne Pathogens in Close Proximity Settings: Clinical and Cost-Effectiveness
- Bleach versus Activated Hydrogen Peroxide for *Clostridium difficile* and Norovirus Disinfection: Clinical Effectiveness and Safety
- Bleach versus Accelerated Hydrogen Peroxide for *Clostridium difficile* and Norovirus Disinfection: A Review of the Clinical Effectiveness and Safety
- Reprocessing of Flexible Colonoscopes and Sigmoidoscopes: A Systematic Review of the Clinical and Cost-Effectiveness, and Guidelines

- Multi-Dose Contrast Media for Patients Undergoing Computed Tomography: Clinical Benefits, Harms, and Evidence-Based Guidelines
- Intravenous Infusion Equipment and Methods: Clinical Effectiveness, Cost-Effectiveness, and Guidelines

C. difficile

- *Clostridium difficile* Transmission: A Review of the Risk Factors
- Fecal Bacteriotherapy for Patients with Recurrent *Clostridium difficile*: Clinical Effectiveness and Guidelines

Surgical/Wound Care

- AquaCel Dressing for Patients Undergoing Hip or Knee Arthroplasty: Clinical Effectiveness and Cost-Effectiveness
- Wound Management Following Total Hip or Total Knee Arthroplasty: Guidelines
- Silver Dressings for the Treatment of Patients with Infected Wounds: A Review of Clinical and Cost-Effectiveness
- Intracameral Antibiotics for the Prevention of Endophthalmitis Post-Cataract Surgery: Review of the Clinical and Cost-Effectiveness, and Guidelines
- Antibacterial Sutures for Wound Closure After Surgery: Clinical Effectiveness and Guidelines for Use
- Preoperative Skin Preparation: A Review of the Clinical Effectiveness and Guidelines
- Negative Pressure Therapy for Patients' Infected Wounds: A Review of the Clinical and Cost-Effectiveness Evidence and Recommendations for Use
- Risk of Nosocomial Infections in Surgical Patients Residing on the Same Unit as Nonsurgical Patients: Clinical and Cost-Effectiveness and Guidelines
- Infection Reduction Interventions for Women Post-Cesarean Section: Evidence for Use
- Antibiotic-Infused Bone Cement for Orthopedic Surgeries: Clinical and Cost-Effectiveness
- Prevention of Surgical Site Infections with Silver-Based Antimicrobials: Clinical Effectiveness

CADTH WORK RELATED TO INFECTIOUS DISEASE 2010

- Use of Iodophor Infused Adherent Drapes for Orthopedic Surgery: Clinical Effectiveness, Cost-Effectiveness, and Guidelines
- Implementing a Complete Chlorhexidine Environment for Surgical Procedures: Clinical Effectiveness and Guidelines
- Disposable Wipes Containing 2% Chlorhexidine for Routine Hygiene Care: Clinical and Cost-Effectiveness

Vaccines

- Hepatitis B Vaccine Dose for Immunocompromised Patients: Clinical Evidence and Guidelines
- Varicella-Zoster Vaccine Implementation: Clinical Evidence and Guidelines

Non-Drug — Other

- Biofilm Testing to Select Antibiotics for Patients with Cystic Fibrosis: Clinical and Cost-Effectiveness
- ¹³C-Urea Breath Test and IRIS-3 Infrared Isotope Analyzer for Detection of *Helicobacter pylori* or Liver Function: Guidelines
- Disposal of Medications During Infectious Outbreaks: Clinical Evidence and Guidelines
- Cytomegalovirus-Safe versus Cytomegalovirus-Negative Platelets for Bone Marrow or Stem Cell Recipients Receiving Platelets: A Review of the Comparative Infection Risk and Guidelines
- Transmission of Infectious Agents from Magazines, Books, and Toys in the Health Care Setting: Risks and Clinical Practice Guidelines
- Early Identification of Sepsis: A Review of the Evidence for Clinical Indicators and Guidelines for Management

Drugs — Other

- Injectable and Topical Antimicrobials for the Eye: Clinical Effectiveness
- Different Doses of Meropenem in Adult Patients in the Hospital: Clinical Effectiveness

- Treating Complicated Urinary Tract Infections in Pediatric Patients with Oral Cefixime: Clinical and Cost-Effectiveness and Guidelines
- Lindane and Other Treatments for Lice and Scabies: A Review of Clinical Effectiveness and Safety
- Prevention and Treatment of Community-Acquired Methicillin-Resistant *Staphylococcus aureus*: Guidelines

Environmental Scanning Reports and Emerging Technology Bulletins

- H1N1 and Seasonal Influenza Vaccine Practices across Canadian Jurisdictions
- Reprocessing Single-Use Medical Devices: An Update of the Clinical Evidence and an Environmental Scan of Policies in Canada

Drug Review Recommendations

- **NEW!** Raltegravir for treatment-naive HIV
- **NEW!** Darunavir for pediatric HIV infection
- **Under Review:** Cyasten for the management of cystic fibrosis (CF) patients with chronic pulmonary *Pseudomonas aeruginosa* infections
- **Under Review:** Celsentri for the management of adult patients infected with CCR5-tropic HIV-1

HTA/Optimal Use

- Vancomycin or Metronidazole for Treatment of *Clostridium difficile* Infection
- Polymerase Chain Reaction Tests for Methicillin-Resistant *Staphylococcus aureus* in Hospitalized Patients
- **COMING SOON!** Decision Tool — Hospital Setting Screening Strategy MRSA Calculator (Hospital-Acquired MRSA)
- **COMING SOON!** Aerosol-Generating Procedures and Risk of Transmission of Acute Respiratory Diseases
- **COMING SOON!** Economic Evaluation of Physical Interventions to Interrupt or Reduce the Spread of Respiratory Viruses (N95 Resource Use)

CADTH WORK RELATED TO MENTAL HEALTH 2010

This document provides topics undertaken in the thematic area of Mental Health by the Canadian Agency for Drugs and Technologies in Health (CADTH) in 2010.

Rapid Responses

Sleep Disorders

- Diagnosis of Sleep Disorders for Adults with Insomnia: Identification of Effective Screening Tools
- Cognitive Behavioural Therapy for Insomnia in Adults: A Review of the Clinical Effectiveness
- Sleep Medications: Clinical Effectiveness, Safety, Cost-Effectiveness, and Guidelines

Suicide

- Rapid Assessment of Suicide Risk for Incarcerated Patients: Clinical Evidence and Guidelines for Use

Addictions

- Long-Term Management of Alcohol and Drug Addictions: Guidelines
- PulmoLife for Smoking Cessation: Clinical Effectiveness
- Cognitive Behavioural Therapy for Patients with Addictions: A Review of the Clinical and Cost-Effectiveness
- Tools for Assessing Tobacco Dependence: Clinical Effectiveness and Guidelines
- Methadone Use During Pregnancy: Risk of Developmental Delay
- Tramadol Compared with Opioids for Pain: A Review of Addiction Potential
- Disulfiram for Alcohol Dependence: Clinical Effectiveness and Safety

Depression

- Prenatal and Postnatal Screening for Depression in First Nations Women:

Diagnostic Accuracy and Evidence-Based Guidelines

- Self-Management and Supportive Self-Management Strategies for Depression: Clinical Effectiveness
- Use of Bupropion in Patients with Depression and the Associated Risk of Seizures: Safety
- Bupropion for Depressive Illness: Abuse Potential and Clinical Practice Guidelines

Schizophrenia

- Atypical Antipsychotics for the Treatment of Schizophrenia: A Review of Combination Therapy and High-Dosing Strategies

Non-Drug – Other

- Assessment Tools and Tests for the Diagnosis of Language Disorders in Bilingual Children: Clinical Effectiveness and Guidelines
- Clothing for Hospitalized Psychiatric Patients: A Review of Clinical Effectiveness and Guidelines
- Monitoring Patients Who Require Physical Restraints in Acute Care: Safety and Guidelines
- Cognitive Behavioural Therapy for Post Traumatic Stress Disorder: A Review of the Clinical and Cost-Effectiveness
- Community-Based Care Models or Systems for People with a Diagnosis of a Mental Illness, Physical Disability, or Intellectual Disability
- Critical Incident Stress Debriefing for First Responders: A Review of the Clinical Benefit and Harm
- Prioritization Tools for Speech Language Pathology: Clinical Effectiveness and Guidelines
- Psychological Interventions for Children and Youth with Anxiety Disorders: Clinical Effectiveness
- Use of Restraint and Alternate Strategies in Adults in Mental Health Care Settings: Clinical Effectiveness and Guidelines
- Use of Restraint and Alternate Strategies in Children and Youth in Mental Health Care

CADTH WORK RELATED TO MENTAL HEALTH 2010

Settings: Clinical Effectiveness and Guidelines

- Psychological Interventions for Children and Youth with Disruptive Behaviour Disorders: Clinical Effectiveness
- Psychological Interventions for Children and Youth with Affective Disorders: Clinical Effectiveness
- Electrical Stimulation for Dyspareunia: Clinical Effectiveness
- Inpatient Treatment for Borderline Personality Disorder: A Review of Clinical Effectiveness and Guidelines
- The Modified Mini-Mental State Exam for Screening Adults with Cognitive Impairment: Clinical Effectiveness and Diagnostic Accuracy
- Bupropion for Adults with Attention Deficit Hyperactivity Disorder: A Review of the Clinical Effectiveness and Harms of Misuse
- Depot Atypical Antipsychotics: A Review of the Clinical Effectiveness and Safety
- Clozapine Treatment of Hospitalized Patients: A Review of Clinical Practice Guidelines and Safety
- Quetiapine Use in Correctional Facilities: Clinical Evidence, Abuse Potential, and Guidelines
- Using Environmental Restraint or Antipsychotics and/or Benzodiazepines for the Treatment of Acute Psychosis in Inpatients of Mental Facilities and Hospitals: Clinical Effectiveness and Guidelines

Drugs — Other

- Treatment Options for Clozapine-Induced Enuresis: A Review of Clinical Effectiveness
- Midazolam for Psychiatric Emergencies in the Pre-Hospital Setting: Safety
- Use of Gabapentin as an Anxiolytic: Clinical Effectiveness and Guidelines
- Use of Antipsychotics and/or Benzodiazepines as Rapid Tranquilization in Inpatients of Mental Facilities and Emergency Departments: A Review of the Clinical Effectiveness and Guidelines
- Benzodiazepines in Elderly Patients: Review of Clinical Effectiveness, Cost Effectiveness, and Guidelines

Drug Review Recommendations

- **Under Review:** Invega Sustenna for schizophrenia

HTA/Optimal Use

- Pharmacologic-based Strategies for Smoking Cessation
- Varenicline for Smoking Cessation in Patients with Psychiatric Illness: A Review of the Risks
- Self-Directed Cognitive Behavioural Therapy for Adult Patients with a Diagnosis of Depression: A Systematic Review of Clinical Effectiveness, Cost-Effectiveness, and Guidelines

This document provides a list of topics undertaken in the *proposed* thematic area of Neurology by the Canadian Agency for Drugs and Technologies in Health (CADTH) in 2010.

Rapid Responses

Epilepsy

- Positron Emission Tomography for Epilepsy: Clinical Effectiveness and Guidelines

Alzheimer's Disease and Other Dementias

- Administering Drugs with Anticholinergic Effects to Patients with Alzheimer's Disease Who Are Currently Taking Cholinesterase Inhibitors: Clinical Effectiveness and Guidelines
- Discontinuance of Cholinesterase Inhibitors in Adults with Dementia: Clinical Effectiveness and Evidence-Based Guidelines
- Short-Acting Benzodiazepines versus Other Strategies for the Management of Agitation in Older Patients: Clinical Effectiveness and Guidelines
- Botulinum Toxin for Spasticity Secondary to Dementia: Clinical Effectiveness

Multiple Sclerosis

- Vibration Therapy for Adults: Clinical Effectiveness
- Range of Motion Therapy for Patients with Multiple Sclerosis: Clinical Effectiveness and Guidelines

Parkinson's Disease

- Deep Brain Stimulation for Parkinson's Disease and Neurological Movement Disorders: A Review of the Clinical and Cost-Effectiveness and Guidelines

Speech/Language

- Assessment Tools and Tests for the Diagnosis of Language Disorders in Bilingual Children: Clinical Effectiveness and Guidelines
- Prioritization Tools for Speech Language Pathology: Clinical Effectiveness and Guidelines

Drugs – Other

- Pregabalin Treatment for Patients with Fibromyalgia: Clinical Effectiveness
- Treatment for Adult Onset Distal Spinal Muscular Atrophy: Clinical Effectiveness and Guidelines
- Ergotamine versus Dihydroergotamine for the Treatment of Migraine Headaches: Comparative Clinical Effectiveness
- Fluconazole and Pharmaceuticals without Inactive Ingredients for Autism: A Review of the Clinical Effectiveness

Non-Drugs – Other

- Seating Devices for Patients with Progressive Neuromuscular Diseases: Clinical Effectiveness
- Constraint-Induced Movement Therapy for Children: Clinical Effectiveness and Clinical Practice Guidelines
- Screening Programs for Asymptomatic Unruptured Intracranial Aneurysms: Review of Clinical Effectiveness, Cost-Effectiveness, and Evidence-Based Guidelines
- Choking and Swallowing Assessments in Long-Term Care: Clinical Indications and Guidelines
- Managing Patients with Closed Head Injury: Guidelines
- Scoop Stretchers versus Standard Backboards for Patients Requiring Pre-Hospital Spinal Immobilization: Comparative Effectiveness and Guidelines
- Cervical Spine Splint for Cervical Stabilization: Clinical and Cost-Effectiveness

CADTH WORK RELATED TO NEUROLOGY 2010

- Screening Adults with Cognitive Impairment with the Montreal Cognitive Assessment Tool: Clinical Effectiveness and Diagnostic Accuracy
- Integrated Imaging and Surgical Technologies for Cardiology and Neurology: Clinical and Cost-Effectiveness

Environmental Scanning Reports and Emerging Technology Bulletins

- Investigating Chronic Cerebrospinal Venous Insufficiency for the Treatment of Multiple Sclerosis

Drug Review Recommendations

- **Under Review:** Vimpat for Partial Onset Seizures (POS) in Epilepsy