Canadian Agency
for
Drugs and Technologies In Health
(CADTH)

Annual Business Plan
2010-2011
(Final)

Table of Contents

1 INTRODUCTION

1.1 The Need for Change

The Canadian Agency for Drugs and Technologies in Health (CADTH) was founded in 1989 to establish a clearinghouse and to share information on new and existing health related technologies. It is now a full fledged pan-Canadian health technology assessment agency that supports evidence-informed decision-making by providing health technology assessments, drug formulary advice and listing recommendations, and tools that promote the optimal use of drugs and other health technologies. CADTH has become a significant contributor in meeting the need for independent, evidence-based information related to health technologies, and for supporting decision makers as they contend with the demands of staying abreast of rapid technological change.

CADTH products and services continue to respond to, and align with, jurisdictional needs for high quality, impartial, evidence-based information on drugs, vaccines, devices, medical and surgical procedures, equipment, materials and health care systems. Agency staff work closely with decision makers to ensure CADTH products and services contribute to improved patient outcomes and the sustainability of the health care system.

The Conference of Deputy Ministers of Health (CDM) commissioned an independent review of CADTH in 2009 that engaged jurisdictional stakeholders, health care providers, experts and agency staff. The purpose of the review was to determine if CADTH was providing timely and relevant products and services to jurisdictional stakeholders in an efficient and effective fashion. The conclusions and recommendations emanating from the review were endorsed by the CDM, allowing the agency to move forward with its Board of Directors towards implementation of the report's recommendations.

As CADTH enters the next chapter in its evolution, it faces a number of key challenges. Jurisdictions are instituting budgetary controls resulting from spiralling health care expenditures. There is competition through the increased regionalization of health technology assessment as agencies with a provincial focus have been created in Quebec, Ontario and Alberta. Independent programs with mandates that overlap with CADTH, such as the Joint Oncology Drug Review, are being created. To meet these challenges, a coherent, coordinated, and integrated approach to health technology assessment is essential in order to reduce the potential duplication of effort, and the provision of conflicting advice.

Decision-makers within the federal, provincial, and territorial health ministries recognize the need for health technology assessment and support CADTH's role in responding to the need for a better, faster and smarter health technology assessment program. In response to budgetary constraints, CADTH has become more efficient and effective in its operations and more strategic in the focus of its work. This continuous improvement philosophy will be at the core of the agencies evolution.

CADTH products and services will also continue to evolve to meet the changing needs of jurisdictional stakeholders and the health care system as a whole. Listening to our

customers will allow the agency to be increasingly focused on the impact, value for money and return on investment.

To accomplish this, there is a need to establish stable long term funding arrangements. As well, CADTH must take a leadership role in ensuring a coordinated national approach to health technology management.

1.2 Transitioning CADTH to the Next Chapter

The "Next Chapter" strategy is a response to the challenges identified above and addresses the recommendations in the CDM assessment of CADTH. This Business Plan speaks to the strategic initiatives to be undertaken in preparing for the Next Chapter as well as the immediate changes necessary to respond effectively to the CDM report. CADTH will address both the strategic and immediate challenges while continuing to deliver products and services designed to support our customers. As such, the 2010-2011 fiscal year will be a year of transition as the agency moves forward to address the immediate challenges, and drafts a plan for the next 5 years. The Strategic Plan for CADTH's Next Chapter will be developed over the next 9 months and forwarded to the CDM for consideration in December, 2010.

1.3 2010-2011 Strategic Initiatives – Positioning CADTH for the Future

In parallel with the development of CADTH's Strategic Plan for 2011-2016, a number of priority initiatives will continue to be implemented and evaluated in 2010-2011. These initiatives respond to the direction provided by the CDM in their 2009 independent assessment of CADTH. They will build upon the successful work undertaken in 2009-2010 on the development of new products (non-drug recommendations and optimal utilization toolkits, therapeutic reviews, and a single topic hopper). The 2010-2011 strategic initiatives include:

- The implementation of a single, integrated and customer focused science program delivering products and services responsive to the needs of our customers.

  This initiative will see an internal reorganization with a focus on cost-effective and efficient delivery of an integrated continuum of products and services. The agency will continue to deliver drug formulary recommendations[1], provide a rapid response service[2] , produce drug and non-drug health technology assessments, and provide recommendations and tools to support optimal usage; however, this will be accomplished using a single consistent set of integrated policies, processes and practices. The human and capital resources available will be deployed based upon a single set of coherent customer priorities.

  Customer needs and priorities will be met by establishing a set of themes that reflect their priorities. Further, the mix of products, services and support offered to

[1] Common Drug Review (CDR)

[2] Health Technology Inquiry Service (HTIS)

customers will reflect the feedback received from stakeholders across the Canadian health care system and confirmed by the Board of Directors.

In 2010-2011, CADTH will institute three main work streams: serving our customers, advancing the science, and corporate support (governance, management and administration).

- The restructuring, consolidation and strengthening of CADTH's governance.

  As recommended in the CDM Review of CADTH, the governance structure for the agency at both the Board and Committee levels will be modified to include competency-based representation on the Board and health care delivery representation on committees.

  The representation on the CADTH Board will be expanded to include an independent non-jurisdictional Board Chair, and a number of non-jurisdictional representatives who will bring additional health care perspectives to CADTH's work. Jurisdictional appointments will continue to be a key link to the CDM, with appointments based on a regional distribution model.

  The current advisory committees will be consolidated into a Drug Policy Advisory Committee (DPAC) and a Health Technology Policy Advisory Committee (HTPAC). These committees will be strengthened with representation from all federal/provincial/territorial jurisdictions and with the addition of non-jurisdictional representatives. These new advisory committees will support strong linkages with jurisdictions and improved interaction with other health care system stakeholders.

  The current expert committees will be disbanded and a single drug expert committee and purpose-built health technology (non-drug) expert panels will be created. The drug expert committee will provide advice and recommendations related to drug formularies and the optimal prescribing and utilization of drugs. The non-drug expert panels will be assembled as required for a topic or set of related topics and incorporate representation from recognized experts and affected stakeholders. These expert committees will ensure that CADTH products receive input and endorsement from across the health care system.

  The Health Technology Exchange will continue to play a significant role in the national coordination of the health technology assessment research agenda and priorities. The Health Technology Policy Forum will continue to play a role in the identification of common jurisdictional policy issues and working towards common approaches to addressing key policy issues of importance across all jurisdictions. The reporting structure and mandate of the Policy Forum will be revisited with the CDM in the context of the governance considerations.

- The development of alternative funding and business models

  This initiative will see the formulation of options and recommendations for revisions to the agencies funding and business models. Options under consideration will be: increasing the reach of the programs within jurisdictions on a cost-recovery basis, strengthening the financial foundation through modification of the current funding model, and seeking new customers willing to pay for CADTH products and services.

1.4 Business Priorities for 2010-2011

In accordance with the direction provided by the CDM and the CADTH Board of Directors, the business plan and business operations have been organized around a series of work streams that represent the fundamental activities key to fulfilling the CADTH mission.

To ensure the agency continues to deliver value for money to our customers, a set of priority themes have been established for 2010-2011 that align with the priorities of jurisdictional stakeholders. With this thematic approach, CADTH will focus on continuing to support the uptake and utilization of health technology information by decision-makers.

Faced with funding pressures, a capability assessment was conducted and opportunities to further align programs and services were identified. This will allow the agency to respond to jurisdictional needs while optimising the use of available resources. The 2010-2011 Business Plan focuses on undertaking those key initiatives that are most highly valued by our customers, most responsive to feedback, and affordable given the funding constraints. These include:

- The existing science programs – Health Technology Assessment, Common Drug Review and COMPUS - will be integrated into a single coherent science program guided by a single integrated priority setting process.
    - CADTH will continue to perform clinical and economic reviews of drugs and provide the participating drug plans with reimbursement recommendations.
    - CADTH will continue to operate a rapid response service with an expanded scope of topics undertaken and a near doubling of its capacity.
    - CADTH will provide fewer full health technology assessments and more advice, recommendations and implementation support / optimal use guidance (including uptake toolkits for both drugs and non-drugs). Experience and expertise gained in the HTA and COMPUS programs will be leveraged to deliver products and services with maximum impact.
- CADTH products and services will be of high quality, developed using the best available science, robust tools and state-of-the-art methodologies.
- The agency will deliver these products and services via integrated multi-disciplinary teams composed of clinicians, research officers, epidemiologists, health economists, research assistants, information specialists, communications and knowledge exchange experts, and project managers. These teams will exploit the experience and expertise drawn from across the three original science programs.
- The agency will continue to create and support partnerships within the health technology assessment community and across the Canadian health care system. CADTH work will be coordinated with the work of national and international partners in the health technology assessment community to minimize duplication

and leverage investments by all jurisdictions. This will create more health technology assessment, but not more CADTH.

- The agency will employ a sound environmental scanning capability, and work with the HT Policy Forum, HT Exchange, jurisdictional advisory committees, and the Liaison Program to establish program priorities and select topics which are responsive to the needs of jurisdictions.
- CADTH will continue to operate with lean but effective corporate and administrative support. Investments will be made in developing tools to support an integrated management framework that ensures optimal use of resources and ensures maximum value for money to funding jurisdictions.
- CADTH will consolidate and strengthen its committee structure to ensure maximum stakeholder and expert input in a cost-effective manner.
- The agency will examine its business and funding models in order to identify opportunities for extending its reach, increasing its impact and leveraging jurisdictional investments.
- CADTH will continue to focus on customer service supported by a shift in emphasis from maximizing output to maximizing impact.

These initiatives will be the foundation upon which the strategic plan for 2011-2016, CADTH's Next Chapter, will be built.

2 PROGRAM ACTIVITIES

2.1 Planning Framework

Responding to the recommendations of the CDM, the agency will be structured around three distinct work streams. The result is a planning and management framework that is focused on:

- Serving our customers;
- Advancing the science; and,
- Providing governance, management and administrative support.

2.2 Serving Our Customers

This work stream is focused on defining a science program that addresses stakeholder priorities and delivers a combination of products and services which respond to customer needs.

2.2.1 Defining the Program

Demonstrating value for money is directly proportional to the agencies ability to influence policy or affect practice. Defining the program is focused on ensuring that the topics which are chosen address the needs of the health care system, align with the

priorities of jurisdictional stakeholders, leverage the work of partner health technology assessment agencies, and are actively taken up by health care policy makers and practitioners.

In 2010-2011, CADTH will employ an integrated priority setting process that leads to the delivery of relevant, timely and focused products and services. This process begins with the establishment of a set of strategic themes (level 1 priorities) that reflect an agreed set of priorities for the health care system and our customers. Chosen on the basis of jurisdictional priorities, health care system impact, and feasibility, these themes are reflected in the strategic priorities identified in Section 3 of this business plan. This priority process will continue with the ongoing collection, analysis, characterization and selection of specific topics (level 2 priorities) within these themes.

To be successful, this process must ensure that: the topic chosen and the products and services delivered receive support from policy advisory committees and jurisdictional health ministries; Canadian HTA producers and users collaborate on assessments, advice, recommendations and toolkits; and, targeted users take up the results.

The effectiveness of the agencies science program in meeting customer needs is measured by the impact it has on policy and practice within the health care system. Impact is determined by the degree to which health care system stakeholders employ the advice and recommendations of CADTH and the health technology assessment community in their decision-making.

The specific sub-activities which support this work include:

- Defining science program priorities and topics;
- Operating Policy Advisory Committees;
- Operating a liaison program;
- Playing a coordinating role for national HT policy and research;
- Informing on emerging issues; and,
- Ensuring and measuring uptake and impact.

2.2.1.1 Defining Science Program Priorities and Topics

This sub-activity is targeted at the establishment, maintenance and operation of a priority setting process that identifies the strategic priorities for the science program (level 1) and supports the selection of topics within those priorities that maximize the return on investment to jurisdictional stakeholders (level 2).

This process first defines the anticipated volume for manufacturer drug review submissions for formulary recommendations[3] and the anticipated demand for rapid review requests[4]. These forecasts are used to plan capacity for these services.

Then this process establishes a series of strategic priorities or themes which will guide the selection of drug and non-drug topics. Selected topics are then characterized, the

[3] To the Common Drug Review (CDR) program.

[4] Via the Health Technology Inquiry Services (HTIS).

target audience(s) identified, and the products required to effect impact are defined. These products may include health technology assessments, therapeutic reviews, economic reviews, advice, recommendations and implementation support; or combinations thereof.

The process for selecting Strategic Priorities (level 1) involves conducting regular environmental scans and performing a detailed analysis of jurisdictional priorities and health care system needs.

For 2010-2011, CADTH has established a set of Strategic Priorities (level 1 themes) that reflect the priorities of the Canadian health care system and align with the priorities of jurisdictional stakeholders. These strategic priorities, discussed in more detail in section 3 of this business plan, include:

- Mental Health;
- Diabetes;
- Cardiovascular Disease;
- Respiratory/Thoracic Diseases (asthma, chronic obstructive pulmonary disease, sleep apnea, pulmonary vascular disease);
- Infectious Diseases; and,
- Emerging issues[5]

The process for selecting topics (level 2) within each strategic priority will be dynamic. A single intake process has been established and topics will be subject to evaluation, rank ordering and selection based upon need, impact and return on investment.

Topic selection will be validated with jurisdictional stakeholders via policy advisory committees and will include an ongoing assessment of all active topics. This ongoing assessment will ensure that only topics with continued relevance, value and impact are retained.

2.2.1.2 Operate Policy Advisory Committees

This sub-activity provides the mechanism for jurisdictional stakeholder input into the priority setting and topic selection processes through the jurisdictional advisory committees.

In 2010-2011, the current jurisdictional advisory committees - the COMPUS Advisory Committee (CAC), Advisory Committee on Pharmaceuticals (ACP) and the Devices and Systems Advisory Committee (DSAC) – will be disbanded allowing for the creation of a new Drug Policy Advisory Committee (DPAC) and a new Health Technology (Non-drug) Policy Advisory Committee (HTPAC).

The DPAC and HTPAC will play a key role in providing jurisdictional input to the science program overall priorities and detailed content.

[5] Issues which arise that were unforeseen when priorities were set.

2.2.1.3 Operate a Liaison Program

This sub-activity is targeted at maintaining and operating the existing Liaison Program, which provides a mechanism for regular knowledge exchange between CADTH and the federal/provincial/territorial ministries and their stakeholders.

In 2010-2011, the Liaison Officers (LOs) will contribute more significantly and directly to the definition and delivery of CADTH products and services. The LOs will be major contributors to the promotion of the rapid response service, creating increased awareness of the service in the health care community within their jurisdiction as well as submitting rapid response requests on their behalf. Additionally, the LOs will be a key conduit for jurisdictional input to the priority setting processes; identifying jurisdictional priorities; and, suggesting topics for consideration within the agreed themes.

As the primary interface with jurisdictional stakeholders and their constituents, the LOs are also instrumental to the dissemination and uptake of CADTH products and services, identifying project champions, defining target groups for product uptake, facilitating the development of workshops and value-added products, and providing vital feedback on impact in support of continuous improvement and adjustments to program priorities.

2.2.1.4 Coordinate National HT Policy and HT Research

This sub-activity is targeted at ensuring that priorities and topic selection processes are coordinated with those of other health technology assessment agencies across Canada and that common jurisdictional health technology policies are identified and addressed.

In 2010-2011, the HT Exchange will continue to provide the forum, mechanisms and tools to support research agenda coordination across partner agencies. The outputs from the HT Policy Exchange will be employed to inform priority setting and topic selection processes. In addition, through the HT Exchange, opportunities for collaboration will be identified and exploited. Through the HT Exchange, technology assessment agencies from across the jurisdictions can minimize duplication of effort, leverage each other's investments, coordinate training and methods development, and maximize the return on investment in health technology assessment.

The HT Policy Forum will continue to provide the mechanism for identifying common jurisdictional policy issues and developing common policy responses. The Policy Forum has developed common policy response recommendations on a variety of issues[6] and will continue to do so in collaboration with CADTH. The HT Policy Forum will increasingly be employed to inform the priority setting process, ensuring that pan-Canadian issues with significant policy impact are identified and addressed.

The work of these two mechanisms includes coordinating policy initiatives across the F/P/T health partnership, coordinating health technology assessment priorities, and promoting the effective utilization of F/P/T health technology assessment resources.

[6] Renal Replacement Therapy, Positron Emission Therapy (PET) in Oncology, Obsolescence of Health Technologies in Canada, Managing Technology Diffusion.

2.2.1.5 Inform on Emerging Issues

This sub-activity is targeted at the identification and characterization of emerging issues in health technology in order to inform the priority setting process. The objective of this sub-activity is to ensure timely access by stakeholders to information on emerging health care technology issues.

In 2010-2011, the agency will enhance its environmental scanning capacity and capability through the generation of products that include bulletins, newsletters, briefings and discussion papers on emerging health care issues and health technologies. These will be provided directly to external stakeholders as well as being employed in the priority setting process.

In addition, environmental scanning will be a trigger to the initiation of topics to be considered under the emerging issues theme within the strategic priorities.

2.2.1.6 Ensuring and Measuring Impact

This sub-activity is targeted at ensuring that CADTH products and services have a demonstrated impact and deliver value for money to jurisdictional stakeholders. This impact is largely measured by the effect the products have on decision-makers within the health care system. This impact is felt when decision makers employ CADTH advice and recommendations on health technology reimbursement, health technology purchasing and health care delivery policies and practices.

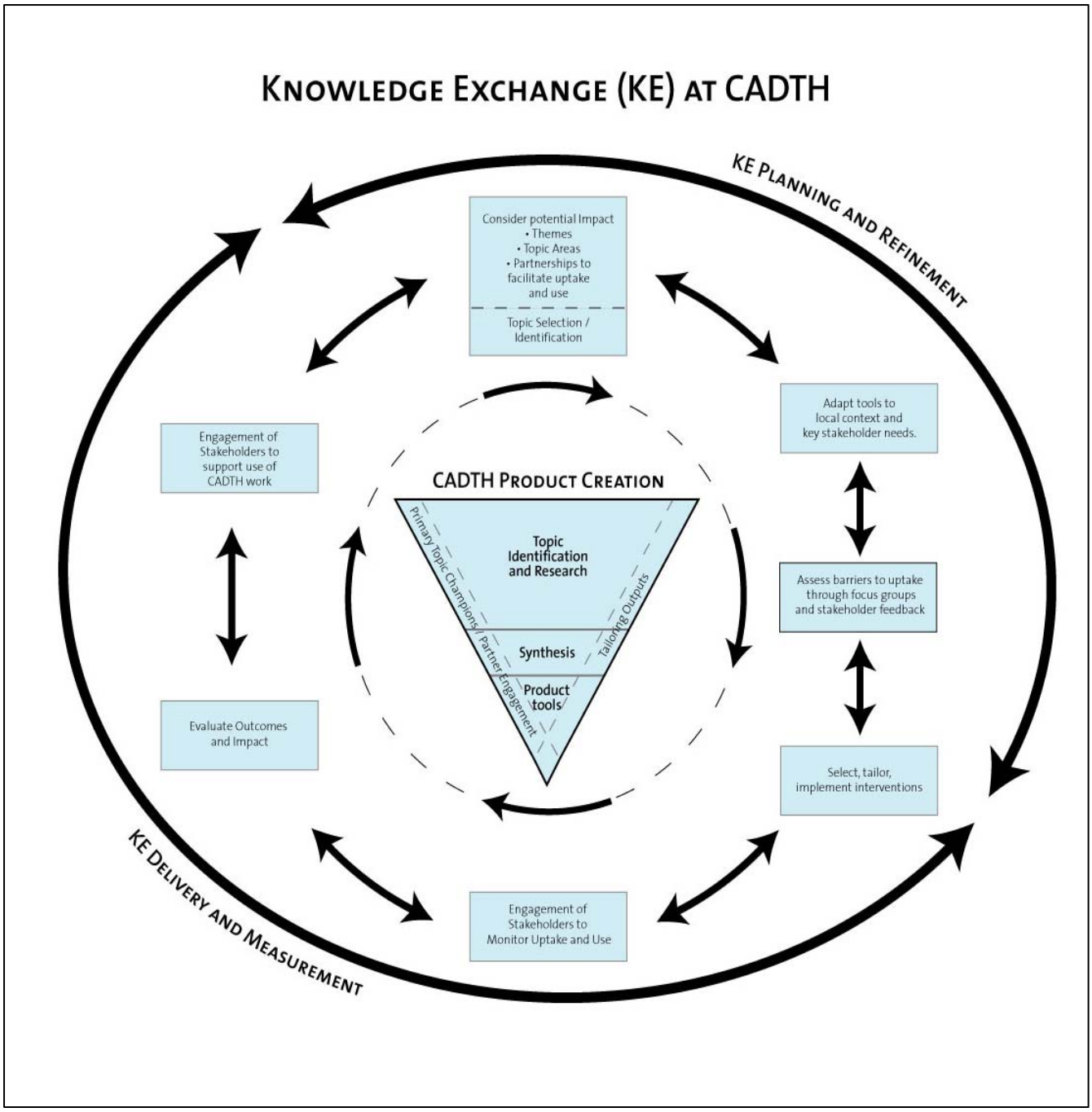
This sub-activity informs the priority setting processes for both the strategic priorities (level 1) and topics selection (level 2). It also provides input to the agencies overall corporate performance measurement.

In 2010-2011, knowledge exchange activities will be an integral element to topic selection, product definition and delivery, and performance measurement. As illustrated in the figure below, knowledge exchange contributes to all facets of Serving our Customers. It is a continuous activity and is critical to ensuring that the topics chosen are responsive to customer needs, and support evidence-informed decision-making.

Knowledge exchange will contribute to the identification and selection of topics by assessing their potential for impact, coordinating the definition of the required products, and planning for their uptake. Knowledge exchange will be tightly linked to environmental scanning, the liaison program, and advisory committee activities. All topics selected will be accompanied by a plan that identifies key target audiences and topic champions, policy or practice gaps, required products, and implementation strategies.

Knowledge exchange efforts will facilitate the uptake of CADTH products, help guide their adaptation to the local context, identify barriers, tailor interventions and support their implementation.

In 2010-2011, the agency will also refine its performance measurement framework to ensure a focus on uptake and impact. This framework will be employed in selecting topics, characterizing their potential for uptake and impact, gathering feedback, and reporting on the degree of impact actually achieved (See diagram on next page).


KNOWLEDGE EXCHANGE (KE) AT CADTH
KE PLANNING AND REFINEMENT
Consider potential Impact
• Themes
• Topic Areas
• Partnerships to facilitate uptake and use
Topic Selection / Identification
Adapt tools to local context and key stakeholder needs.
Assess barriers to uptake through focus groups and stakeholder feedback
Select, tailor, implement interventions
Engagement of Stakeholders to Monitor Uptake and Use
Evaluate Outcomes and Impact
Engagement of Stakeholders to support use of CADTH work
CADTH PRODUCT CREATION
Topic Identification and Research
Synthesis
Product tools
Primary Topic Champions / Partner Engagement
Tailoring Outputs
KE DELIVERY AND MEASUREMENT

2.2.2 Delivering the Program

The objective of this activity is the timely and cost-effective generation and delivery of CADTH products and services. In 2010-2011, the three existing science programs will be integrated into a single program to support the efficient and effective delivery of a continuum of products and services.

The products and services delivered will reflect the strategic priorities identified through guidance from the Board of Directors and the advisory committees, and will be aligned with the recommendations in the CDM assessment of CADTH. The products and services fall into three general categories as follows:

- a rapid response service[7];
- drug formulary advice and recommendations[8]; and,
- health technology assessments and optimal use products that will provide advice, recommendations, toolkits and implementation support for drug and non-drug technologies[9].

2.2.2.1 Rapid Response Service

This sub-activity is focused on the enhancement of the rapid response service owing to its unconditional success and increased demand. Its value has been demonstrated through direct client feedback and formal program evaluation. The CDM and the Board of Directors have recommended that this service be expanded in scope and capacity.

In 2010-2011, in response to this increased demand, the rapid response service will have an expanded scope and an increased reach. The scope will be expanded to include issues and topics outside the current service mandate as determined in consultation with jurisdictional stakeholders. The reach of the service will be extended through an awareness campaign that targets users at all levels within a jurisdiction. Opportunities to sell the service to non-jurisdictional customers such as professional associations, primary care providers, and private insurance providers, will be explored.

In order to support this expanded scope and reach, there will be a doubling of the resources assigned to the rapid response service by the end of the fiscal year.

2.2.2.2 Drug Formulary Listing Recommendations

This sub-activity is focused on the delivery of timely evidence-based reviews of the clinical and pharmacoeconomic information on drugs and the provision of formulary listing recommendations.

In 2010-2011, this well-received service will continue to evolve in direct support of F/P/T drug plans. The volume of drug submissions from manufacturers is expected to be

[7] An expanded HTIS-like service.
[8] Products of the Common Drug Review.
[9] Products of the HTA and COMPUS programs.

similar to the number received in 2009-2010. A new Drug Expert Committee will be established in 2010-2011 to generate the formulary recommendations – this committee will replace the current CDR and COMPUS expert committees and have an expanded mandate covering formulary listing and optimal use recommendations.

2.2.2.3 Health Technology Assessments, Optimal Use Products, and Implementation Support

This sub-activity is targeted at the development of assessments, optimal use products, and implementation support for drug and non-drug health technologies. Formerly developed and delivered under independent science programs[10], these products will now be developed and delivered as an integrated product set within the context of a set of strategic priorities and research themes.

During 2009-2010, enhancements to the current programs were made that introduced recommendations and optimal use products for non-drug technologies. In addition, CADTH introduced a new product line referred to as a therapeutic (or drug class) review in response to a defined customer need. Two therapeutic reviews were conducted as a pilot project and the process will be evaluated, refined, and formally implemented in 2010-2011. Therapeutic reviews selected will be reflective of the priority themes approved by the Board of Directors.

In 2010-2011, there will be an increased focus on the uptake and impact of all CADTH products and services. The current process of producing a strictly defined product set and selecting topics which fit the products will undergo change. It has become clear that maximum impact is achieved by reversing this order: topics need to be selected based upon the criteria employed during priority setting with clearly defined criteria assessing the potential impact of the topic. Once the impact has been defined, the specific products can be identified for the selected topic. In all cases, the topics selected within the priority themes will be chosen based on their ability to impact health care system sustainability and/or patient outcomes.

Topics addressed through other sub-activities within the science program, specifically the rapid response requests and drug formulary recommendations, may also be subject to development of optimal use toolkits and enhanced implementation support. Uptake and impact will be the outcome pursued.

In 2010-2011, there will be fewer ‘gold-standard’ health technology assessments produced to allow for an increase in the capacity of the rapid response service, and to permit the introduction of therapeutic reviews, as well as recommendations and optimal use tools for non-drug technologies. Resources will also be shifted to allow for enhancements to implementation support. Wherever possible, CADTH will exploit the work of other Canadian and international health technology assessment organizations, leveraging the investments made elsewhere by health care stakeholders.

[10] HTA and COMPUS.

2.2.2.4 Operate Expert Committees

This sub-activity provides the mechanism for gaining input from external experts on CADTH products and services. Access to independent expert opinion is vital to the acceptance of CADTH products by stakeholders across the health care system.

In 2010-2011, the current expert committees (CEDAC and CERC) will be disbanded and a new drug expert committee will be established. The new drug expert committee will include broad representation from the health care research and provider communities and their mandate will be to provide expert advice on all drug topics. For non-drug technologies, CADTH will employ purpose-built expert advisory panels.

2.3 Advancing the Science

The continued success of CADTH rests upon its credibility with decision makers, clinicians, and the scientific community. This credibility has been built upon the use of sound methods, tools and processes that reflect current best practice in both health technology assessment and decision-making sciences. Decision makers require high quality products and services which can withstand the scrutiny of stakeholders across the Canadian health care system as well as internationally.

In 2010-2011, quality management systems, methodologies, and processes will be consolidated under the guidance of a Chief Scientist responsible for ensuring that CADTH's reputation as a centre of excellence for assessments, recommendations and knowledge exchange is maintained. By striving to continuously advance the science, CADTH will ensure that the Canadian health technology assessment community employs the most advanced and appropriate methods, tools and processes in the development and uptake of high-quality health technology recommendations.

The specific sub-activities include:

- Developing and implementing methods and processes that reflect the latest advances in systematic review, epidemiology, pharmacoeconomics, and other aspects of health technology assessment and decision-making sciences;
- Educating and training the developers and users of health technology assessment; and,
- Maintaining quality in our products and services and maintaining our reputation as a reliable source for evidence-informed decision-making.

2.3.1 Methods and Processes

This sub-activity is targeted at developing the tools, methods and processes required to support the cost-effective and robust development of health technology products and services. Under the guidance of the Chief Scientist, CADTH will continue to develop and use the most advanced, up to date, and effective tools, methods and processes for the generation and uptake of health technology products and services.

In 2010-2011, as part of the integration activities, there will be a focus on rationalizing the methodologies and processes used by the three science programs into a harmonized set of efficient and effective processes.

2.3.2 Education and Training

This sub-activity is targeted at identifying training requirements, as well as developing and delivering education and training in the tools, methods and processes associated with health technology assessment, knowledge transfer and decision-making. While the focus is on the training requirements of internal staff, opportunities to collaborate and/or train external partners will be explored.

In 2010-2011, these education and training activities will continue to include internal research rounds, lunch and learns, workshops on methodologies and tools, and the seminars and workshops held at the CADTH Symposium. The practice of bringing external experts in methodology and analysis will continue as these activities support continuous improvement efforts and professional development requirements.

2.3.3 Ensure Quality in CADTH Products and Services

This sub-activity encompasses all quality management systems and processes employed within CADTH. The outcome of this sub-activity is to ensure that CADTH products and services continue to meet the highest standards for accuracy, relevance and timeliness.

In 2010-2011, quality assurance processes and standards developed under the three independent science programs will be consolidated under the guidance of the Chief Scientist. Further, the Chief Scientist will be responsible for strengthening the review of all products produced to ensure they meet established quality standards through the conduct of independent audits and evaluations.

2.4 Providing Governance, Management and Administrative Services

The efficient and effective corporate support and executive management of the science programs has been a strength of CADTH. The coming year will see significant challenges as the organization evolves, the governance structure is consolidated and strengthened, and the strategic plan for 2011-2016 is developed.

In support of strategic planning, all jurisdictions will be actively engaged in establishing the vision for the future. Customers and partners will be consulted to help develop strategic priorities, shape product and service offerings, and guide program delivery. This more active engagement will be a hallmark of the new vision.

Strengthening the governance structure through changes to the Board structure and consolidation of the advisory and expert committees is a component of this more active engagement. The Board of Directors will have senior representation from member jurisdictions and will include non-jurisdictional representation. The advisory and expert committees will include a more broadly based membership that will include health care practitioners and health institution managers – the front line of health care.

The organizational transformation underway will create the foundation for a strong, lean and agile team prepared to support the new vision for CADTH and respond to continuing challenges within the health care system. This transformation will demand significant employee engagement, careful planning and management and strong corporate leadership.

The specific sub-activities for this work stream area follows:

- Governance and executive management
- Business and financial management
- Administrative and support services

2.4.1 Governance and Executive Management

This sub-activity encompasses all of those activities associated with maintaining relationships with jurisdictional funders (the customers) and strategic partners, and providing the leadership and direction for the organization as a whole.

In 2010-2011, government and stakeholder relations, and corporate communications will be consolidated within the Executive Office. Supported by the Executive Team and reporting to the Board of Directors, the President will have responsibility for those activities required to shape the organization, revamp business and funding models, establish the new vision for the organization and lead CADTH into the Next Chapter.

Implementing the revamped governance structures at CADTH will be an area of

considerable focus for the first half of the year. CADTH staff will support the DM steering committee work in implementing the new governance structure of the board including bylaw renewal, recruitment of board members and an independent chair, and the provision of orientation for the new board members. Similar processes will also occur with the amalgamation of the expert and advisory committees.

2.4.2 Business and Financial Management

This sub-activity encompasses all of those activities associated with the implementation and operation of an integrated management framework that includes: the development and execution of strategic, business and operational plans; the establishment and operation of financial management, risk, audit and evaluation frameworks; and the provision of legal, contracting, and human resource management.

In 2010-2011, the focus will be on supporting the development of CADTH's new strategic plan and its associated business and funding models, and on supporting the organizational transformation underway. This includes the development of the change strategy and the implementation of the change management function. The management of change will be coordinated and controlled within this sub-activity.

The shift from a focus on outputs to a focus on impact, and the changes in the performance measurement and reporting frameworks to support this shift, will be a key element of this sub-activity in 2010-2011. This will include the implementation of the changes to financial planning, management and reporting systems and tools required to manage by outcomes. Planning needed to support the next 5 year evaluation will also take place.

The organizational transformation will have real and significant human resource implications. While designed to create organizational efficiencies and support the shift to a focus on the delivery of an integrated product and service set, staff and managers will see changes to their responsibilities and reporting relationships. Human resources will focus on ensuring maximum employee engagement, clear internal communications and closely managed personnel reassignment. This process has begun, employees are committed and resistance to change is minimal.

2.4.3 Administrative and Support Services

This sub-activity encompasses all of those activities associated with the provision of administrative and support services which include: information management and information technology (IM/IT); and, real property and facility management services.

The physical and electronic infrastructure at CADTH is robust and mature. The organizational transformation planned for 2010-2011 will require physical moves but minimal change to the configuration of CADTH infrastructure. The move to an integrated resource management model will require enhancement to the project management

toolset in place and training for its base of users. Changes to the financial management tools and systems as well as the evaluation and impact data collection tools will also require support from IM/IT.

The ongoing changes to products and services will see a continuing shift from delivery of products physically to their delivery electronically; reducing the environmental footprint. The web site and extranets will continue to be improved and extended in support of increased transparency and enhanced engagement.

3 CADTH PRIORITY THEMES 2010-2011

3.1 Themes

The institution of this integrated priority setting process, described in Section 2.2.1 Defining the Program, is key to ensuring maximum value for money and return on investment for an agency constrained by resources.

Through this priority setting process, a set of five priority themes have been identified. CADTH products and services will be focused on developing assessments, advice, recommendations, toolkits and implementation support consistent with these themes. The genesis of these themes involved the use of a comprehensive environmental scan and analysis which considered:

- jurisdictional priorities identified via advisory committees and the liaison program;
- information on health technology research agendas within the national health technology assessment community gathered from HT Exchange members;
- cross-jurisdictional policy issues identified by the HT Policy Forum;
- rapid review requests recently received from stakeholders;
- manufacturer drug review submissions; and,
- information on disease and economic burden, technology costs, potential for uptake/impact, and other relevant data obtained from literature and database searches.

The resulting themes for 2010-2011 reflect the needs of the health care system and represent issues that impose a significant burden. They offer feasible opportunities for impact with direct links to health care outcomes and can be undertaken with acceptable risk. (Detailed briefs for each theme are provided in Appendix A.) The themes for 2010-2011 are:

- Mental health;
- Diabetes;
- Cardiovascular disease;
- Respiratory/Thoracic diseases (asthma, chronic obstructive pulmonary disease, sleep apnea, pulmonary vascular disease);
- Infectious disease; and,
- Emerging issues.

3.2 Topics

For 2010-2011, the process for selecting topics within each priority theme will be dynamic and focused on impact and value. A single intake process has been established and topics proposed will be subject to evaluation, rank ordering and selection based upon a set of criteria that will include:

- alignment with strategic priorities;
- impact on health outcomes and/or health care resource allocation;
- assessment of need, gaps in knowledge related to optimal use;
- likelihood of success in effecting change;
- existence/availability/commitment of topic champions;
- opportunities to leverage partnerships; and,
- ability to measure and evaluate impact and return on investment;

Topic selection will be validated with jurisdictional stakeholders via policy advisory committees and the topic selection process will include an ongoing assessment of all active topics. This ongoing assessment will ensure that only topics with continued relevance, value and impact are retained.

For each topic selected, a unique set of products designed to address the specific needs of the target audience, will be produced. Support for the uptake of the resulting recommendations and tools will be a key component of the product delivery cycle.

3.3 Emerging Issues (Capacity for New Issues)

The strategic priorities identified in the 2010-2011 Business Plan reflect current jurisdictional priorities, have clearly identified target audiences, and offer opportunities for significant return on investment.

Nonetheless, unforeseen issues can and will arise. In 2010-2011, resources have been set aside to allow for a timely and effective response to these important emerging health technology issues. In anticipation, emerging issues has been explicitly identified as a strategic priority.

Appendix A: Detailed Briefs – Priority Themes for 2010-2011

Briefing Paper: Respiratory/Thoracic Disease (Asthma, Chronic Obstructive Pulmonary Disease, Sleep Apnea, and Pulmonary Vascular Disease)

1. Need

Significant treatment gaps exist in the management of asthma and chronic obstructive pulmonary disease (COPD) as evidenced by suboptimal provision of asthma education, written action plans, spirometric testing in Albertans with asthma[1] and the observation that COPD has the highest rate of hospital admission among major chronic illnesses in Canada.[2]

CADTH's stakeholders have demonstrated a demand for information related to thoracic diseases. Currently, CADTH is working on two full health technology assessments (HTAs) that focus on thoracic diseases: Pulmonary rehabilitation for COPD and Triple therapy for COPD. In the past 10 years, CADTH has completed 12 full HTAs related to the following thoracic diseases: COPD (6), asthma (2), pulmonary hypertension (1), and sleep apnea (2). This includes the recent HTA report "Long-Acting Beta2-Agonist and Inhaled Corticosteroid Combination Therapy for Adult Persistent Asthma." In the past fiscal year there have been three HTIS requests related to COPD and one related to sleep apnea from Health Canada's First Nations and Inuit Health Branch, the Department of National Defense and the Health Quality Council.

A December 2009 scan of 38 technology assessment and related organizations across Canada found that two were actively engaged in technology assessment related to chronic disease management. As such this portfolio will require coordinated efforts and information sharing with other agencies in this area.

2. Potential Impact

Respiratory diseases, including asthma, COPD, sleep apnea, and pulmonary vascular disease, are the fourth leading cause of death in Canada[3] and the third leading cause of hospitalization.[4] The economic burden of respiratory diseases in Canada is estimated to be $9.53 billion annually (in 2005 dollars) when hospital, physician, drug costs, and productivity losses due to premature death and disability are considered.[5] Inhaled drugs for respiratory illness were the fifth largest drug expenditure category in 2007, representing 4.7% of drug costs or $888 million.[6] Delivering a CADTH program in the area of thoracic disease could potentially reduce the morbidity and economic burden of thoracic diseases.

Stakeholders and end-users of products that focus on thoracic diseases include patients, public and private health-care decision-makers and payers, healthcare providers, advocacy groups such as the Canadian Lung Association and health care professional organizations such as the Canadian Thoracic Society. Through CADTH's current and previous work in thoracic disease, relationships have been developed with key members of the Canadian Thoracic Society. Thus, CADTH could anticipate continued interest on the part of such groups. As well, hospitalization figures for COPD and other respiratory disease suggest that products and services that improve care and service delivery in these areas could potentially make a significant economic impact.

A number of Canadian jurisdictions have recognized the need for improvement in the prevention and management of chronic diseases such as COPD and asthma. Frameworks for chronic care delivery have been introduced in a number of Canadian jurisdictions (Ontario, British Columbia, Alberta, Saskatchewan, and Manitoba). Embedding evidence-based guidelines into daily practice, using clinical care and management tools or instruments, and developing and promoting healthy public policies are components of such frameworks, all of which could potentially be supported by CADTH's work.[7]

The National Lung Health Framework (chaired by and housed at The Lung Association – National Office) has indicated a desire to work in partnership with CADTH on the key framework and goals for lung health: (1) Health Promotion, Awareness and Disease Prevention; (2) Disease Detection and Management; (3) Policy, Partnerships, and Community/Systems Support; (4) Research, Surveillance and Knowledge Translation.

3. Feasibility

Through internal resources and its network of external clinical experts established from work on current and past projects in thoracic diseases, it is expected that CADTH would be successful in delivering this portfolio. Extra training in the area of thoracic diseases would likely be unnecessary as clinical expertise can be solicited through external experts, while methodological expertise is found within the organization, as are the structures and processes necessary to deliver products within the portfolio. CADTH has already demonstrated its ability to meet stakeholder needs in thoracic diseases through the HTIS and HTA reports that have been produced to date.

4. Risks

Political risk with groups who have special interests in thoracic diseases (e.g. health care professional, patient advocacy groups, and the Canadian Lung Association) is possible if CADTH's work does not align with their position or if they are not consulted where appropriate. However, such risks are not unique to the thoracic disease portfolio. COPD and lung cancer are diseases generally associated with smoking and CADTH works and consults extensively with these groups to minimize where possible these risks. Because of this, there could be some negative public perception toward resource allocation to these diseases at the expense of others.

5. Health System Focus and Link to Health Care Outcomes

Given the diversity of the thoracic diseases, this portfolio would likely have a widespread impact on decisions made at the healthcare system level (Health Ministry, private payers, health region, hospital and long-term care facilities) and at the level of individual patient management. Further, this portfolio could impact ambulatory and inpatient care.

Through the Lung Health Framework over 500 individual and organizational stakeholders worked together over three years to identify where Canada needed to go to make significant improvements in respiratory health. They collectively identified four goals and 23 strategies to guide the collective work of stakeholders across the country.

Thoracic diseases are relevant to many areas of focus in the healthcare system. COPD is a disease of the elderly, while asthma is an important childhood illness. Given that COPD is

largely related to smoking, it is relevant to disease prevention and health promotion activities. Improving asthma and COPD management could have a significant impact on emergency department and hospital utilization, which is important to sustainability – a major preoccupation of decision-makers at the political and delivery levels of the health care system. One of the four goals of the Lung Health Framework that could be supported by CADTH is to develop, implement and strengthen the support structures essential to an effective respiratory health management strategy for all sectors, including policy and legislation, partnerships, community supports, and health care system delivery and design.

References

1. Tsuyuki RT, Sin DD, Sharpe HM, Cowie RL, Nilsson C, Man SF, et al. Management of asthma among community-based primary care physicians. *J Asthma*. 2005 Apr;42(3):163-7.

2. Ontario Ministry of Health and Long-Term Care. *Preventing and Managing Chronic Disease: Ontario's Framework* [Internet]. Toronto: The Ministry; 2007 May. 50 p. [cited 2010 Feb 16]. Available from: http://www.health.gov.on.ca/english/providers/program/cdpm/pdf/framework_full.pdf

3. Canadian Institute for Health Information. *Health Indicators 2008* [Internet]. Ottawa: CIHI; 2008. 91 p. [cited 2010 Feb 15]. Available from: http://secure.cihi.ca/cihiweb/products/HealthIndicators2008_ENGweb.pdf

4. Statistics Canada. *Leading Causes of Death and Hospitalization in Canada* [Internet]. Ottawa: Statistics Canada; 2008 Jun 17. Table 2: Leading causes of hospitalizations, Canada, 2004, males and females combined: counts (crude rate per 100,000). [cited 2010 Feb 16]. Available from: http://www.phac-aspc.gc.ca/publicat/lcd-pcd97/table2-eng.php

5. Morgan S, Raymond C, Mooney D, Martin D. *Canadian Rx Atlas* [Internet]. 2nd edition. Vancouver: UBC Centre for Health Services and Policy Research; 2008 Dec. 151 p. [cited 2010 Feb 16]. Available from: http://www.chspr.ubc.ca/files/publications/2008/CanRxAtlas/Canadian_Rx_Atlas_2nd_Edition.pdf

6. Public Health Agency of Canada. *Tuberculosis in Canada 2006* [Internet]. Ottawa: The Agency; 2008. [cited 2010 Feb 16]. Available from: http://www.phac-aspc.gc.ca/publicat/2009/tbcan06/pdf/tbcan2006-eng.pdf

7. Patra J, Popova S, Rehm J, Bondy S, Flint R, Giesbrecht N. *Economic Cost of Chronic Disease in Canada, 1995-2003* [Internet].Ontario Chronic Disease Prevention Alliance; 2007 Mar. 37 p. [cited 2010 Feb 16]. Available from: http://www.ocdpa.on.ca/docs/OCDPA_EconomicCosts.pdf Prepared for the Ontario Chronic Disease Prevention Alliance and the Ontario Public Health Association.

Briefing Paper: Mental Health

1. Need

Patients may not seek treatment for mental health conditions for several reasons, including failure to recognize symptoms, underestimation of the severity, limited access to therapists and services or reluctance to see a health care professional because of stigmatization.[1] There remains controversy surrounding the use of various therapies especially for severe mental health conditions. An ongoing need exists for a critical review of the risks and potential benefits of current technologies and in general to determine the most cost effective approach towards treatment of mental health conditions given the adoption of newer alternative therapies.

Mental health topics have been an ongoing priority for CADTH-member jurisdictions. The Advisory Committee on Pharmaceuticals and the Devices and Systems Advisory Committee, for example, prioritized three topics for national review for this year:

- Antipsychotics for schizophrenia
- Cognitive behavioural therapy for depression
- Electroconvulsive therapy for major depression, schizophrenia, mania and catatonia

Based on consultation with CADTH Liaison Officers, mental health is especially of importance for Alberta, Manitoba, Federal Programs, Saskatchewan and the Territories. In the past fiscal year (April 1, 2009 to February 11, 2010), CADTH's rapid response service (HTIS) authored more than 32 reports on technology issues associated with mental health; over one-third of the reports were requested by Saskatchewan Health. The remaining requests came from at least six different jurisdictions including multiple requests from federal programs (Department of National Defence; First Nations and Inuit Health Branch; Veterans Affairs). In addition, over 180 requests for copies of these reports were issued over the fiscal year from various jurisdictions.

A review of assessment reports undertaken by Exchange members revealed no research activities related to mental health by member-agencies over the past year. In terms of topic requests, the Canadian Psychiatric Association (CPA) has approached CADTH for assessment of various mental health technologies. Previously, Manitoba Health requested an assessment on 'dialectical behaviour therapy in adolescents for suicide prevention' to assist with development of a Youth Suicide Prevention Strategy across the province; Saskatchewan Health also requested multiple copies of this report on behalf of their newly-developed Provincial Risk and Addictions Advisory Committee and regional mental health programs.

2. Potential Impact

The CPA has approached CADTH to assist them with clinical practice guidelines development and recommendations on technology issues associated with mental health. The Department of National Defense recently indicated that the HTIS report on methadone for the management of pain in patients with opioid addiction was used by their drug program. In addition, a recent HTIS report on naltrexone for alcohol dependence was used for decision-making by the First Nations and Inuit Health Branch at Health Canada. In addition to the above groups, the Mental Health Commission of Canada is very interested in increasing partnership opportunities with CADTH to assist in meeting its ambitious goals. A number of rapid reviews have been requested and

many policy and guideline-related research gaps that require CADTH work have been identified. For example:

- comparing the efficacy of drug to talk therapies - the public system funds drug but not talk therapies; how does the availability of talk therapy affect outcomes?
- a study on efficacy of selective serotonin reuptake inhibitors - SSRIs
- effective interventions to decrease co-morbidites – polypharmacy
- review CPA guidelines for schizophrenia (e.g. What systems need to be in place?)

In addition to the above groups, the Public Health Agency of Canada (PHAC) and the Mental Health Commission, there is a well-defined group of decision-makers in this area including managers/clinical nurse specialists across Canadian mental health care facilities, policy analysts across regional mental health divisions, and directors/supervisors of regional mental health-addictions services. Given the existing positive relationships with stakeholder groups such as the CPA, PHAC, and the above federal programs within Health Canada, it is reasonable to conclude that knowledge exchange efforts and the potential uptake of CADTH products and services in this area could be significant.

Previous reports and briefing papers on mental health measures have suggested considerable health and financial impact from optimal use of technology. For example, a September 2007 CADTH report suggested starting some patients with generic risperidone could result in over $30 million of saving without considerable impact on health. Therefore, there is an opportunity for CADTH to demonstrate a return on investment in creating such a portfolio. Mental illness indirectly affects all Canadians at some time through a family member, friend or colleague.[1] Twenty percent of Canadians will personally experience a mental illness in their lifetime.[1] The economic cost of mental illnesses in Canada was estimated to be at least $7 billion in 1993 and 86% of hospitalizations for mental illness in Canada occur in general hospitals.[1] The stigma attached to mental illnesses presents a serious barrier not only to diagnosis and treatment but also to acceptance in the community.[1]

3. Feasibility

CADTH has the resources and the expertise to deliver this portfolio. We have met ongoing expectations with current capabilities including a good network of content experts to contribute to this initiative.

4. Risk

Mental health is considered a low risk area of work. No problems have been encountered in the work CADTH has already undertaken. Political risk with groups who have special interests in mental health (e.g. health care professional, patient advocacy groups, and the CPA) is possible if CADTH's work does not align with their position or if they are not consulted where appropriate. However, such risks are not unique to the mental health portfolio and CADTH works and consults extensively with these groups to minimize where possible these risks.

5. Health System Focus and Link to Health Care Outcomes

This portfolio will affect various levels of decision making including at the health ministry, health regions, hospital, and practice levels. Mental illness affects people of all ages, educational and income levels, and cultures. Information and communication technology, for example, is increasingly being considered as a viable therapeutic alternative to reach individuals who are underserved by traditional therapy. This is especially of importance for aboriginal health and youth care given the high burden of mental illness and substance use among these populations. Addressing the technology issues within this priority theme will have a positive effect on various health system outcomes including decreased wait times, improved access to evidence-based treatment options, and increased efficiencies across jurisdictions.

References

1. *A Report on mental illnesses in Canada* [Internet]. Ottawa: Health Canada; 2002. [cited 2009 Jul 9]. Available from: http://www.phac-aspc.gc.ca/publicat/miic-mmac/pdf/men_ill_e.pdf

Briefing Paper: Diabetes

1. Need

The need for evidence-based information to guide diabetes diagnosis, monitoring, and treatment is illustrated by areas in which there is known uncertainty or gaps between evidence, policy and practice. For example, treatment of type 2 diabetes typically begins with lifestyle modification, followed by treatment with oral antidiabetes drugs. Fifteen years ago, treatment options were limited to the well-established and relatively inexpensive treatment options insulin, sulfonylureas and metformin. The past decade has seen the introduction of a wide range of new therapies associated with varying degrees of clinical benefit, but with higher associated costs. Expenditures on antihyperglycemic agents (i.e., oral antidiabetes drugs and insulin) in Canada increased by 40.3%, between 2004 and 2008, from $393.3 million to $637.1 million. [1] No clear consensus exists as to the optimal use of these newer agents. Self-monitoring of blood glucose (SMBG) has also been associated with uncertainty and has been previously addressed by CADTH, a practice that cost the Ontario Public Drug Program, for example, approximately $69 million in 2006.

While recommendations related to most areas in the management of diabetes are issued by the Canadian Diabetes Association, the economic impact of these recommendations is usually not considered. Hence, there is a clear need for information, recommendations, and advice regarding the optimal treatment of type 2 diabetes based on both clinical and cost effectiveness evidence. CADTH has been directly approached by its member jurisdictions to produce numerous assessments and recommendations related to diabetes management, including the use of newer antihyperglycemics, insulins and SMBG.

2. Potential Impact

Given the high prevalence and health care costs associated with type 2 diabetes, evidence-based information, recommendations/advice, and implementation tools have significant potential to improve population health outcomes, health system sustainability, and patient access. If CADTH's evidence-based recommendations regarding more restrictive use of SMBG in patients with type 2 diabetes not using insulin were adopted, more than $150 million could be saved annually by public and private third-party payers across Canada, without negatively affecting health outcomes. These funds could be redirected towards other investments. This is only one of many instances of suboptimal practice in diabetes management that have been identified. CADTH could continue its efforts to address other instances.

CADTH has established a close link with key stakeholders in the delivery of diabetes services, including provincial drug plans, and clinical subject experts through its previous COMPUS initiatives. Publication of the cost effectiveness results for SMBG in the Canadian Medical Association Journal (CMAJ) garnered a high level of attention from the lay media. Publication in such high-impact journals will undoubtedly cause physicians and others to re-think their practice related to SMBG. CADTH may also establish itself as a reputable source of information through public forum discussions and involving patients and other interested stakeholders regarding SMBG. Numerous intervention tools are under development, some of which (e.g., insulin start tool, clinical flow sheet) are designed for integration into clinical care processes. The knowledge exchange and implementation strategies from CADTH's SMBG project are readily transferable to future projects that CADTH undertakes in diabetes.

Diabetes represents a large burden of illness. In 2005/2006, approximately 1.9 million (5.9%) Canadians aged 20 years and older had diagnosed diabetes.[2] However, it is estimated that 2.8% of the general adult population has undiagnosed type 2 diabetes mellitus,[3] and the true prevalence of diabetes may actually approach 2 million.[4] From 2010 to 2020, another 1.2 million people are expected to be diagnosed with diabetes, bringing the total to about 3.7 million in Canada.[5] The economic burden of diabetes in Canada is expected to be about $12.2 billion in 2010, measured in inflation adjusted 2005 dollars. This is an increase of $5.9 billion or nearly double its level in 2000. The cost of the disease is expected to rise by another $4.7 billion by 2020.

3. Feasibility

CADTH has a proven track record in the area of type 2 diabetes. These include clinical and cost effectiveness studies of insulin analogues, SMBG, and second- and third-line therapy for type 2 diabetes (draft). CADTH has been in dialogue with the Canadian Diabetes Association (CDA), and has a working relationship with a number of diabetes experts across Canada.

4. Risk

Diabetes is considered a low risk area of work for CADTH.

There is a continued risk that CADTH products and services will be criticized or rejected by the CDA should there be a lack of alignment between the two organizations. Given the influence of the CDA in Canada, this could hamper knowledge exchange activities and reduce impact. However, through its work on insulin analogues and SMBG, CADTH has experience in managing the relationship with the CDA, and in effectively communicating the reasons for any differences in recommendations from the two organizations to stakeholders.

5. Health System Focus and Link to Health Outcomes

A diabetes portfolio would affect healthcare at the Ministry level in terms of policy and coverage decisions, at the hospital or health region level, the primary caregiver level (clinicians, endocrinologists), and ultimately at the patient level.

The health outcomes and focus priorities identified by Canadian jurisdictions shows that diabetes is a central topic. Diabetes issues include health human resources, elderly care, child/youth care, and disease prevention. The proposed diabetes portfolio has the potential to impact numerous health system outcomes through improved health outcomes and/or enhanced efficiency. These include: decreased wait times; improved access; enhanced sustainability; population health; enhanced safety; and improved quality.

The diabetes portfolio would also promote many of the elements of the Canadian Diabetes Strategy (CDS), which was launched by the Government of Canada in 1999 and renewed in 2005. CDS priorities include provision of relevant information on diabetes to Canadians, prevention and early detection of type 2 diabetes, and management of diabetes to prevent complications. CDS activities include; surveillance, knowledge development and exchange, community-based programming, monitoring and evaluation, public information, and diabetes coordination and corporate support. CADTH's products and services could support implementation efforts for this strategy.

References

1. McCann J, Dourdin N, Welner S, Minshall M, McKenzie E. Understanding the classes: drugs for diabetes mellitus. *Provincial Reimbursement Advisor*. 2008;11(3):52-65.

2. Public Health Agency of Canada. *Diabetes in Canada: highlights from the National Diabetes Surveillance System 2004-2005* [Internet]. Ottawa: Ministry of Health; 2008. Report No.: HP32-2/2005. [cited 2008 Jun 26]. Available from: http://www.phac-aspc.gc.ca/publicat/2008/dicndss-dacsnsd-04-05/pdf/dicndss-04-05-eng.pdf

3. Canadian Diabetes Association 2008 clinical practice guidelines for the prevention and management of diabetes in Canada. *Can J Diabetes* [Internet]. 2008 [cited 2010 Jan 27];32(suppl 1):i-S201. Available from: http://www.diabetes.ca/files/cpg2008/cpg-2008.pdf

4. Dawson KG, Gomes D, Gerstein H, Blanchard JF, Kahler KH. The economic cost of diabetes in Canada, 1998. *Diabetes Care* [Internet]. 2002 Aug [cited 2010 Jan 27];25(8):1303-7. Available from: http://care.diabetesjournals.org/cgi/reprint/25/8/1303.pdf

5. Canadian Diabetes Association. *An economic tsunami: the cost of diabetes in Canada* [Internet].Canadian Diabetes Association; 2009 Dec. Available from: http://www.diabetes.ca/documents/get-involved/FINAL_Economic_Report.pdf

Briefing Paper: Infectious Disease

1. Need

Infectious diseases are those which can be transmitted from one person to another through pathogenic microorganisms like fungi, bacteria, viruses, and parasites. Due to the nature of infectious disease and public susceptibility to new and emerging pandemics, this disease area is relevant to Canadians regardless of age, socio-economic status, or ethnicity.

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 healthcare 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.

Infectious diseases are recognized as a key health policy concern across Canada. Recent years have seen the emergence of H1N1, SARS, BSE, avian flu, and West Nile virus.

CADTH has completed numerous reports on a variety of infectious disease areas in response to its stakeholders. Currently, CADTH is working on a health technology assessment (HTA) on antibacterial regimens for Clostridium difficile (c-difficile) associated disease. A pilot project intended to provide jurisdictional recommendations regarding rapid polymerase chain reaction (PCR) tests for methicillin-resistant Staphylococcus aureus (MRSA) control is also underway. Previous HTA reports completed by CADTH in this area include:

- Rapid PCR Tests for MRSA in Hospitalized Patients (2010)
- Vaccines for the Prevention of Rotavirus Infection in Children (2008)
- Neuraminidase Inhibitors (Oseltamivir, Zanamivir) and Amantadine for the Prevention of Influenza Infection (2006)
- The New Fluoroquinolones in Community-acquired Pneumonia (2001)

In the past fiscal year (April 1, 2009 to January 19, 2010), CADTH's rapid response service authored more than 25 reports on technology issues associated with infectious disease including botulism, human papillomavirus and influenza. Approximately one-third of the reports were requested by the Public Health Agency of Canada (PHAC) who used the information to support recommendations for pandemic planning. The remaining two-thirds of the infectious disease requests came from at least five different jurisdictions. In addition, over 100 requests for copies of these reports were issued over the fiscal year, from 10 Canadian jurisdictions.

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

2. Potential Impact

Infectious diseases are causes of death and disability and are responsible for significant social and economic disruption. High health care costs are associated with infectious diseases. In 1998 the economic burden of infectious disease in Canada amounted to $909.0 million.[1] While current figures are not available, it can be reasonably assumed that there are opportunities for improving Canadian health care sustainability.

Recent work in MRSA and c-difficile has helped CADTH develop strong relationships with leaders in Canadian infectious disease control. CADTH also has a long working relationship with PHAC, who are responsible for Canadian infectious disease and immunization guidelines, and are repeated users of CADTH services.

Given that the community of infectious disease specialists is reasonably small in Canada and effective partnerships have been established, it is reasonable to conclude that knowledge exchange efforts and the potential uptake of CADTH products and services in this area could be significant. CADTH has informed several PHAC infectious disease initiatives, for example, providing evidence to support pan-Canadian recommendations and strategies for pandemic planning.

Previous economic evaluations of infectious disease control measures have suggested considerable health and financial impact from optimal use of technology. Therefore, there is a real opportunity for CADTH to demonstrate a return on investment in creating such a portfolio if products and services from CADTH lead to an optimal delivery of health care technology in this area.

3. Feasibility

Given its previous experience and network of external subject experts established from work on current and past projects in infectious diseases, it is expected that CADTH would be successful in delivering this portfolio. Extra training in the area of infectious diseases diagnostics and management would be likely be unnecessary as methodological expertise is found within the organization, as are the structures and processes necessary to deliver products within the portfolio. CADTH has already demonstrated its ability to meet stakeholder needs in infectious diseases through the HTIS and HTA reports that have been produced to date. CADTH's pilot project of MRSA screening is one of the first non-drug recommendations produced by CADTH.

4. Risks

Infectious disease management and prevention is considered a low risk area of work for CADTH. No problems have been encountered in the work CADTH has already undertaken. Political risk with groups who have special interests in infectious disease management (e.g. health care professional, patient advocacy groups) is possible if CADTH's work does not align with their position or if they are not consulted where appropriate. However, such risks are not unique to the infectious disease portfolio and CADTH works and consults extensively with these groups to minimize where possible these risks.

5. Health System Focus and Link to Health Outcomes

The emergence of new infections diseases and management and control of existing infectious diseases presents a major public health policy concern. As such this priority theme is expected to inform ministerial, hospital and practice policy decision making.

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

References

1. Policy Research Division, Strategic Policy Directorate, Population and Public Health Branch, Health Canada. *Economic burden of illness in Canada, 1998*. Ottawa: Health Canada; 2002. [cited 2009 Mar 20]. Available from: http://www.phac-aspc.gc.ca/publicat/ebic-femc98/index-eng.php

Briefing Paper: Cardiovascular Diseases

1. Need

Cardiovascular diseases (CVDs) are a class of diseases that affect the heart and blood vessels. The most common types of CVDs include ischemic heart disease, stroke and peripheral vascular disease. CVD is the leading cause of hospital admissions and drug costs in Canada.[1] Emerging health care technologies, including therapeutics, diagnostic assays, molecular imaging modalities and genomics have the potential to improve the delivery of health care in this field. The need for evidence and advice by health care decision makers and stakeholders regarding health technologies (e.g. drug eluting stents, embolic protection devices and robotic systems) that reduce adverse effects, improve patient outcomes and extend the range of formulations for existing indications is expected to continue.

CVD is the leading cause of death in Canada, accounting for approximately 36 per cent of all deaths.[2] Aboriginal/indigenous peoples are 1.5 to 2 times more likely to develop CVD than the general population.[3] Younger age groups are no longer immune from the threat of CVD due to an increase, over the past 15 years, in those with high blood pressure, diabetes and obesity.[4]

In response to its stakeholders, CADTH has completed many reports on CVD. Currently, CADTH is working on five health technology assessments (HTAs). These include: HMG Co-A (3-hydroxy-3-methylglutaryl coenzyme A) reductase inhibitors in the primary prevention of CVD; ablation for atrial fibrillation; antiplatelet agents in the secondary prevention of vascular events in adults with acute coronary syndrome and adults undergoing coronary angioplasty; surgical robotics for cardiac procedures; and new anticoagulants for the prevention of thrombotic events. CADTH is also working on a rapid review on the clinical effectiveness of PET scanning for the detection of CVD. Previous HTA reports completed in this area include:

- Drugs for Pulmonary Arterial Hypertension: A Systematic Review of the Clinical-Effectiveness of Combination Therapy (2009)
- Dabigatran or Rivaroxaban Versus Other Anticoagulants for Thromboprophylaxis After Major Orthopedic Surgery: Systematic Review of Comparative Clinical-Effectiveness and Safety (2009)
- Telehealth for Acute Stroke Management (Telestroke): Systematic Review of Analytic Studies (2008)
- Primary Prevention of Sudden Cardiac Death in High Risk Patients (2007)
- Implantable Cardiac Defibrillators for Primary Prevention of Sudden Cardiac Death in High Risk Patients (2007)
- CT and MRI for Selected Clinical Disorders (2005)
- Clopidogrel in Cardiovascular and Cerebrovascular Disease (2004)

In 2009, CADTH's rapid response service authored 16 reports on technology issues associated with CVD. A December 2009 scan of Canadian HTA producers revealed that CVD is an important area of focus with most agencies conducting reviews in this field. As such this portfolio will require coordinated efforts and information sharing with other agencies in this area. For example, CADTH is currently a co-applicant on an Alberta Heritage Foundation for Medical

Research grant that is attempting to use HTA to develop tools for cardiovascular disease management in Alberta and will be able to bring these tools to a pan-Canadian audience.

2. Potential Impact

While data on the incidence and prevalence of CVD is lacking,[5] there is evidence that it accounts for the death of more Canadians than any other disease.[6] The incidence of CVD is expected to increase as the population ages and new populations that were previously unaffected by CVD become susceptible.

CVD is the leading economic burden of disease in Canada, with total direct costs (hospital care, drugs, physician care, other institutional services) of $6.8 billion and indirect costs (relating to mortality, and short and long term disability) of $11.6 billion in 1998.[7] Because of the widespread health system impact of changes in policy and practice in CVD, it can be reasonably assumed that the creation of a priority theme relating to CVD presents opportunities for CADTH to contribute to the sustainability of Canada's health care system.

Over the past seven years, CADTH's extensive involvement in this area has helped us establish strong relationships with leaders in this field. In particular, CADTH continues to work closely with the Canadian Cardiovascular Society on a number on initiatives. It is reasonable to conclude that knowledge exchange efforts and the potential uptake of CADTH products and services could be significant, if CADTH continues to work closely with thoracic society leaders and explores opportunities with the Canadian Lung Association.

3. Feasibility

CADTH has the resources and the expertise to deliver this priority theme. Canadian thoracic specialist leaders are eager to work with CADTH and have embraced evidence and sustainability informing practice change. Previous work demonstrates CADTHs ability to successfully fulfill commitments.

4. Risks

CVD is considered a low risk area of work for CADTH. No problems have been encountered in the work CADTH has previously undertaken. Political risk with groups who have special interests in CVD (e.g. health care professional, patient advocacy groups) is possible if CADTH's work does not align with their position or if they are not consulted where appropriate. However, such risks are not unique to the CVD disease portfolio and CADTH works and consults extensively with these groups to minimize where possible these risks.

5. Health System Focus and Link to Health Outcomes

The selection of CVD as a priority theme is anticipate to have a significant impact at a health ministry level because it has been identified as a crucial health policy issue across Canada. Since CVD is the leading cause of hospital admissions, it is believed that work in this area will also have a significant impact at a hospital level.

CVD relates to important health system priorities that have been identified by jurisdictions. These include: aboriginal health, diagnostic imaging, health human resources, elderly care, disease prevention, health promotion and patient/family/community based health care.

Assessments of new technologies relating to CVD also have the potential to impact important health system outcomes, particularly the protection of population health and reducing health inequalities within jurisdictions.

References

1. Heart health strategy could produce dividends. *Health Edition*. 2010;14(6). Available from: http://www.healthedition.com/archives/021210_m.pdf

2. *Health research - investing in Canada's future 2003-2004*. Ottawa: Canadian Institutes of Health Research; 2004. Available from: http://www.cihr-irsc.gc.ca/e/24939.html

3. Smith E. *Canadian heart health strategy and action plan: key findings*. Ottawa: Canadian Heart Health Strategy and Action Plan; 2009. Available from: http://www.chhs-scsc.ca/web/?page_id=464

4. *A perfect storm of heart disease looming on our horizon*. Ottawa: Heart and Stroke Foundation; 2010. Available from: http://www.heartandstroke.com/atf/cf/%7B99452D8B-E7F1-4BD6-A57D-B136CE6C95BF%7D/Jan23_EN_ReportCard.pdf

5. Heart and Stroke Foundation of Canada. *Chapter 4: Health outcomes*. In: The growing burden of heart disease and stroke in Canada 2003. Ottawa: The Foundation; 2003 [cited 2009 Aug 18]. Available from: http://www.cvdinfobase.ca/cvdbook/En/.

6. *Statistics - Incidence of Cardiovascular Disease*. In: HeartandStroke. Ottawa: Heart and Stroke Foundation; 2005 Feb 4 [cited 2008 Feb 8]. Available from: http://ww2.heartandstroke.ca/Page.asp?PageID=33&ArticleID=1077&Src=news&From=SubCategory.

7. Manuel DG, Leung M, Nguyen K, Tanuseputro P, Johansen H. Burden of cardiovascular disease in Canada. *Can J Cardiol*. 2003 Aug;19(9):997-1004.