



CADTH EVALUATION

INDEPENDENT ASSESSMENT

Submitted to Health Canada by CADTH
Prepared by: SECOR Consulting

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1. CONTEXT

Canada’s federal, provincial, and territorial health care decision-makers rely on the Canadian Agency for Drugs and Technologies in Health (hereafter, “CADTH”) to provide credible, impartial advice and evidence-based information about the effectiveness of drugs and other health technologies. In response to recommendations from the 2009 Conference of Deputy Ministers (CDM) assessment, CADTH has embarked on a multi-phase organizational transformation to deliver its products and services in a more effective, efficient, and customer-focused manner.

This review represents Phase I of a four-year program-wide evaluation process under the guidance of a steering committee consisting of CADTH senior leaders and Health Canada leaders. The review both informs the transformation process and complies with the requirements of CADTH’s funding agreement with Health Canada for a program review to be conducted in 2011.

SECOR Consulting was engaged to independently conduct the review. It was initiated in mid-September 2011 and completed in early December 2011. SECOR’s mandate was to:

- Assess the performance to date of the four selected product line case studies;
- Assess the current state of CADTH’s transformation progress; and
- Provide CADTH with findings and supporting recommendations to improve the impact of its customer offerings.

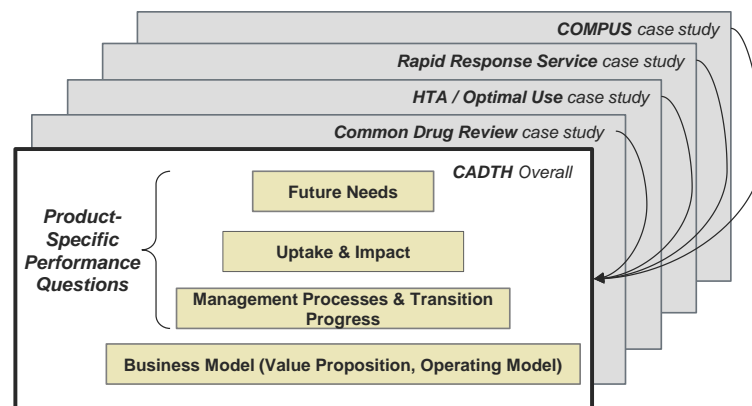
The product lines in scope for this review include:

1. **Common Drug Review** (hereafter, “CDR”)
2. **Health Technology Assessment** (hereafter, “HTA”)/**Optimal Use** (hereafter “OU”)
3. **Rapid Response Service** (hereafter, “RRS”)
4. **Canadian Optimal Medication Prescribing and Utilization Service** (hereafter, “COMPUS”)

2. EVALUATION METHODOLOGY

CADTH was assessed at the business model level and in terms of performance on three specific dimensions through the lens of the four product case studies.

Analytical Framework



Key questions were explored along each dimension:

- **Business Model:** What is CADTH's value proposition (target customers, offering, value for money)? What business model is used to deliver the value proposition? How effective is the business model?
- **Management Processes and Transition Progress:** Is CADTH a value-maximizing, results-focused learning organization? What is the current state of CADTH's transformation progress?
- **Uptake and Impact:** Is CADTH providing information products that are needed, useful, and being used by health care providers and decision-makers in Canada? Is CADTH having an impact on decisions made by health care providers and decision-makers across Canada?
- **Future Needs:** Is CADTH positioned to meet the needs of health care system policy-makers and decision-makers?

The following inputs were used to conduct the evaluation (please see *Sources* for details):

- **CADTH documents and data:** Review and analysis of CADTH operational, financial, and impact data between 2007 and 2011, with additional information from interviews with CADTH staff and subject matter experts
- **Stakeholder consultations:** 69 interviews with internal (board, management, staff) and external (customers, committee members, thought leaders) stakeholders based on target list provided by CADTH and the steering committee
- **RRS customer survey:** 66 responses to online survey of current and past RRS customers
- **External literature:** Grey and published literature, including the 2009 CDM assessment of CADTH
- **Evaluation Steering Committee:** Guidance provided during regular Steering Committee meetings.

Note: The scope of this review was an internal analysis of CADTH data and stakeholder consultations. External analysis (e.g., relative competitive positioning, benchmarking against comparable organizations) is within the scope of the subsequent phases of CADTH's multi-phase evaluation process.

3. FINDINGS AND RECOMMENDATIONS

3.1 CADTH OVERALL

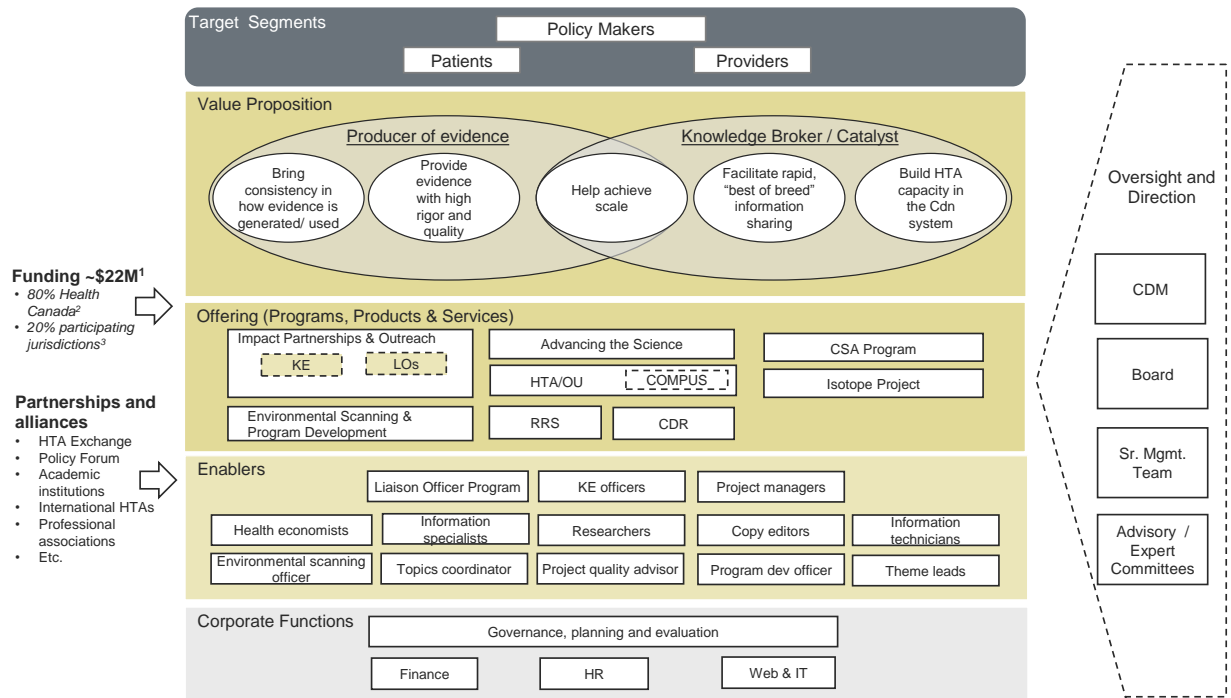
3.1.1 CURRENT STATE

CADTH has an important and sizeable mandate as an independent national HTA agency, and is nationally and internationally recognized for its unique role as a knowledge organization. CADTH's stated mission is "to provide decision-makers with the evidence, analysis, advice, and recommendations they require to make informed decisions." This is achieved via two parallel but interdependent value propositions:

1. As an **HTA producer** delivering the benefits of scale, consistency, and high-quality products to participating jurisdictions via core products; and
2. As a **knowledge broker**, helping to create and nurture an environment for evidence generation and adoption across Canada via participation in several programs. For example, CADTH plays a

secretariat role in supporting the HTA Exchange, Policy Forum, and Canadian Network for Environmental Scanning in Health..

Overview of CADTH Business Model



Source: SECOR analysis; interviews with CADTH stakeholders; CADTH Annual Business Plan 2010-2011, 2011-2012; CADTH website

1. Total 2011-2012 funding by core product line: \$12.8M for HTA; \$5.1M for CDR; \$4.0M for COMPUS. Special grant of \$2.0M for Isotopes project excluded from funding total.
 2. Total 2011-2012 Health Canada funding: \$11.4M for HTA, \$1.5M for CDR, \$4.0M for COMPUS
 3. Total 2011-2012 jurisdictional funding (provided at per capita rate): \$1.4M for HTA; \$3.6M for CDR

To deliver its mandate, CADTH depends on — and has established — a broad network of alliances and partnerships at the jurisdictional, national, and international levels. This is enabled by CADTH’s Liaison Officer Program, Knowledge Exchange team, expert and advisory committees, the Theme Lead role, and participation in the HTA Exchange and the Policy Forum. CADTH is supported by a dedicated resource for partnerships and alliances.

CADTH delivers programs, products, and services with a ~\$22M envelope, of which 80% is funded by Health Canada and 20% by participating jurisdictions.

CADTH has evolved significantly since the 2009 CDM review: the agency is in the midst of a multi-faceted transformation into a more customer-focused orientation, and a working culture that is more open, collaborative, and able to continuously improve. Among many changes that have or will occur, CADTH has centralized the intake and prioritization processes for customer requests (please see *Appendix: A1. Central Intake and Prioritization Process* for details); combined COMPUS with HTA/Optimal Use offerings; and reframed the Rapid Response Service (RRS). Additionally, CADTH has updated the role it plays in various forums (e.g., HTA Exchange, Policy Forum) to advance its knowledge broker/catalyst role. Further, CADTH is refining its evaluation framework to assess impact and support continuous improvement.

CADTH’s transition towards a customer-focused orientation and culture is welcomed and has been noticed by some external stakeholders, and several internal staff. Examples of change identified by external stakeholders include noticeable increase in CEO engagement, a reframed RRS, and the introduction of a patient submission process. Staff members are noticing a shift towards decision-making based on

collective priorities and less on unique interests. Staff also commented on the fact that CADTH has centralized its internal operations: “Priorities are not set in isolation anymore.”

CADTH will be increasingly relevant to the Canadian HTA landscape: Over the short to medium term, CADTH stakeholders expect an escalation in the volume and complexity of technology appraisals. Consequently, they are looking to CADTH for important leadership to help them navigate a complex and rapidly evolving operating environment. The Policy Forum is beginning to support these efforts, but there is significantly more to be done.

3.1.2 CHALLENGES AND OPPORTUNITIES

Business Model

- CADTH’s mandate is large and its unique contribution is not clear to all stakeholders, given there are several other HTA-producing organizations at the jurisdictional and national levels (e.g. Ontario Health Technology Advisory Committee [OHTAC], L’Institut national d’excellence en santé et en services sociaux [INESSS], Institute of Health Economics [IHE]). CADTH’s stated mission (impacting health decisions) is, in part, disconnected from some aspects of its current portfolio of activities:
 - While customers highly value the products and services they receive, their expectations of CADTH differ from what thought leaders, CADTH leaders, and other stakeholders hold for the organization. For example, there are differences across groups with respect to the expectations for driving the uptake/adoption of evidence, informing senior policy decision-making, and playing a role as a knowledge broker (see additional points that follow).
 - It is not universally clear who CADTH’s core customer is: health system policy/decision-makers, health authorities, care providers, or patients/patient groups? The portfolio currently reflects service to all four; however, knowledge generated by CADTH is not always used to inform decision-making. This is pulling resources in many directions rather than focusing on what may be the most effective use of these limited resources.
 - CADTH’s role as facilitator/broker is viewed to be as important as, or even more important than, its producer role, but this is not reflected in the current resource allocation or stated value proposition. Specifically, there is a lack of both internal and external clarity regarding CADTH’s role on the Policy Forum and HTA Exchange.
 - It remains challenging to drive consistency or reduce duplication of activities in a defederalized model where Ontario, Quebec, and Alberta have significant in-house capabilities; British Columbia is in the process of building non-drug HTA capacity.
- CADTH’s approach to developing its partnership and alliance network is viewed to be largely reactive; key gaps still exist:
 - CADTH can further develop its relationships with local producers (e.g., OHTAC, INESSS, IHE) to better exchange learnings and achieve scale.
 - CADTH is well placed to collaborate with other health and innovation agencies (e.g., Canadian Institutes of Health Research [CIHR], Industry Canada, and manufacturers) to help health systems use technology to deliver on system goals.

Processes and Transition Progress

- CADTH demonstrated to the reviewers openness to critical feedback and continuous learning. This is also reflected in CADTH's multi-stage process of transforming into a customer-focused, value-creating agency.
- Several key stakeholders (external and internal) are not aware of the key features and timelines of CADTH's transformation towards a customer-centred orientation. Therefore, there are perceptions that little has changed since the 2009 CDM review, and lingering views about the legacy culture and organizational model ("*academic,*" "*closed,*" "*competitive*" versus "*collaborative*").
- The evaluation framework does not yet reflect a systematic way to concretely measure whether value is being delivered. Without this it will be challenging to assess CADTH's value proposition.

Uptake and Impact

- Several HTA/OU/COMPUS projects have demonstrated a modest uptake by customers of CADTH advice. Given that these core products comprise more than half of CADTH's budget, clarity around the return on investment is important. *NOTE: in the review of each product line (see sections that follow), some initial hypotheses on drivers and barriers of uptake are tabled.*
- Although CADTH's ability to impact health system decisions is inherently constrained in the context of a defederalized system (i.e., unable to fully contextualize evidence at the jurisdictional level), some levers are within CADTH's control:
 - The expectation for adoption of evidence for decision-making is not front and centre in the relationship between CADTH and its customers.
 - Senior decision-makers are not always engaged at the outset of a project, throughout the project, nor for the duration of the period between the release of the evidence and the ultimate making of a decision.
 - Jurisdictions have little "skin in the game": users do not directly pay for the services consumed, and there is no formal commitment to use the evidence in decision-making in some capacity.
 - Liaison officers (LOs) are not consistently providing sufficient proximity to government contacts at all levels, and are not connected enough to support contextualization.
 - Timeliness of evidence production continues to be an issue. Stakeholders have indicated that sometimes a decision has already been made or the information is no longer relevant by the time a product is developed (for all products except RRS).
 - Some customers are not aware of the full portfolio of CADTH products, resulting in missed opportunities for CADTH to have an impact on health system decision-making.

Future Health Technology Appraisal Needs

- There is a consistently held view that CADTH will become increasingly relevant to the Canadian HTA landscape. Stakeholders expect an escalation in both the volume and complexity of health technology appraisals. They are concerned about their capacity to handle the escalating demand from new technologies, especially if the landscape of players across the multiple categories of technology appraisals continues to be so fragmented.
- Customers are contemplating how CADTH can help address this evolution, but are unsure if CADTH is ahead of the curve, or capable of expanding its mandate, given its limited resources, capabilities, and track record to date.
- There is a divergence of opinions on two key aspects of the future mandate: 1. Whether the Pan-Canadian Oncology Drug Review (pCODR) should be consolidated with CDR; and 2. Whether a centralized HTA process for non-drugs is needed in Canada. CADTH's role in shaping or resolving these debates is not clear.

- To help customers plan ahead, CADTH can provide better visibility on:
 - Upcoming technologies and potential associated issues: CADTH’s Horizon Scanning services are deemed important, but not currently delivering the necessary value; and
 - CADTH project pipeline: Customers want a better understanding of the pipeline (e.g., online visibility of the projects being considered, the status of current projects, and what is available post-project).

3.1.3 RECOMMENDATIONS

As part of its current strategic plan and ongoing transformational journey, CADTH has already begun (or will soon begin) to address many of the identified challenges and opportunities.

Elements of Current CADTH Plans that Can Address Several of the Identified Challenges and Opportunities

LENS OF ANALYSIS	CHALLENGES & OPPORTUNITIES	STATED CADTH PRIORITIES & INITIATIVES
Business Model	<p>CADTH’s unique contribution is unclear to many; stated mission seems disconnected from what is being operationalized on the ground</p> <p>Approach to partnership and alliance network can be more strategic</p>	<p>Improved Use of Evidence</p> <ul style="list-style-type: none"> ○ Actively participate as member of the HTA Exchange; cultivate collaboration amongst members to identify priorities, coordinate capacity ○ Explore opportunities to establish network of rapid response producers to share information and to reduce duplication of effort <p>Organizational Efficiency</p> <p>Develop plan to enhance and leverage partnership between CADTH and all jurisdictions to coordinate HTA capacity</p>
Processes & Transition Progress	<p>Few customers and stakeholders are aware of transformation</p> <p>Lingering views about previous culture and org model are shaping some negative perceptions: “academic,” “closed,” “competitive” vs. “collaborative”</p>	<p>Customer Satisfaction</p> <ul style="list-style-type: none"> ○ Implement customer service strategy to support shift towards customer-service culture
Uptake & Impact	<p>Although ability to impact health system decisions is inherently constrained by de-federalized system ... variations in uptake (within a region or product area) suggest some levers are within CADTH control</p>	<p>Customer Satisfaction</p> <ul style="list-style-type: none"> ○ Introduce new central intake and prioritization process: <ul style="list-style-type: none"> • New Portfolio Committee evaluates each project request to determine strategic fit with CADTH priorities • Topic assessment checklist used to evaluate projects considers criteria such as timelines for deliverables, potential for impact, and readiness of customer to use evidence • Theme Leads are committed to engaging more

		with customers throughout process Grow the Business <ul style="list-style-type: none">Impact Strategy that ensures products are focused on customers' needs and supported by adaptation to meet local context
Future Needs	Customers are thinking about where HTA is going, are worried about dealing with the demand (volume, complexity), and are contemplating where CADTH can fit ... but not sure CADTH is ahead of the curve, unsure whether CADTH is capable of expanding its mandate	Customer Satisfaction <ul style="list-style-type: none">Host Canadian Network for Environmental Scanning in Health (CNESH) to unite a permanent network to identify new and emerging technologies Improved Use of Evidence <ul style="list-style-type: none">Work with key partners to initiate an annual process for establishing national priorities for the conduct of health technology assessmentsEngage with pharmaceutical and medical device companies to better understand R&D trends and anticipate pipelineCreated an Industry Liaison Forum to meet with senior officials from the two major pharmaceutical industry trade associations (Rx&D and BIOTECCanada) on a semi-annual basis to share information and to look for ways to address areas of mutual concern

Although CADTH's stated plans and pipeline of initiatives readily map to the challenges and opportunities uncovered during this review, we recommend in the section that follows that some aspects of the plans receive greater emphasis and investment than is currently being contemplated. Additionally, there are some ideas tabled below that are new, and could occur in addition to the current strategic plan. The combined set of recommendations forms a balanced portfolio of actions that range from operational improvements to opportunities for more strategic repositioning.

1. REPOSITION CADTH'S VALUE PROPOSITION

Objective *Clarify and align value proposition with a unique, value-adding role that CADTH can and should occupy, reflective of the emerging realities of the Canadian health system and HTA landscape*

1A. Reposition CADTH's value proposition as an efficient facilitator and broker of HTA knowledge, and align strategy and portfolio accordingly

- Clarify CADTH's mandate and value-add for Policy Forum, HTA Exchange, and Horizon Scanning.
- Prioritize plan to formalize collaborations with other Canadian producers (Ontario, Quebec, Alberta, and British Columbia) to leverage collective capacity beyond meetings and discussions (i.e., formal agreements on capacity planning and information sharing).

1B. As an HTA producer, align resources to a clarified target customer and unique value proposition

- Identify and communicate with absolute clarity about who the target customer is and what success means in delivering value for money:

- Achieve clarity on when CADTH should lead in the generation of evidence, when to partner with other producers, and when to act only as a facilitator of knowledge.
- Prioritize goals for the uptake/adoption of CADTH evidence as part of the value proposition, coupling it more closely to evidence production. Currently this goal is not explicitly understood or embraced by participating jurisdictions. Furthermore, incorporate the measurement of the value created by the use of CADTH advice into a service “contract” with jurisdictions, in order to gather information on impacts achieved.
- Deprioritize any evidence generation that does not align with highest priority value propositions to target segments and reallocate resources appropriately.

Outcome *Clearly defined value-proposition and target segments, with aligned product offering and investments*

2. SHAPE THE EVOLVING HTA LANDSCAPE IN CANADA

Objective *Provide leadership to shape and develop the pan-Canadian HTA agenda, and coordinate capacity to increase value and efficiency*

2A. Prioritize efforts to shape the HTA landscape by anticipating HTA needs of jurisdictions and the country

- Begin with a bottom-up forecast of expected demand by technology type, by jurisdiction, for the next three to six years (including technologies currently outside of CADTH’s scope, but identified in the field as potential adjacent areas for expansion of CADTH’s mandate).
- Continue to form strategic alliances with HTA producers, and key federal and jurisdictional industry/innovation/economic development agencies.
- More strategically involve and engage manufacturers (drug, device) to anticipate pipelines.
- Leverage transformed Receptor Environment (see Recommendation #3 below) to proactively anticipate forward-looking needs and issues.

Outcome *National HTA landscape reflecting current and emerging health priorities, supported by shared capacity of HTA producers*

3. ESTABLISH A FAVOURABLE LOCAL RECEPTOR ENVIRONMENT FOR THE UPTAKE OF HTA EVIDENCE

Objective *Address key barriers to adoption and impact of HTA appraisals*

3A. Establish a robust context-adding program within jurisdictions to enable significantly better uptake of HTA evidence produced across the portfolio

- Proactively create an ecosystem of partners to add further context locally to evidence that is produced centrally by CADTH or other HTA research groups.
- Transform/add to local CADTH LO presence to be more directly aligned with senior ministry decision-makers (versus only a liaison/linkage role). Implementing this will likely require incremental,

more senior resources in order to provide the required coverage, level of engagement, and degree of influence.

3B. Foster more discipline and jurisdictional commitment to the intake, prioritization, adoption, and post-market assessment process

- Ensure that requests are aligned with jurisdictional priorities and that top decision-makers are kept abreast of activity
- It is critical to assess customer readiness to use CADTH evidence to inform decision-making when prioritizing project requests.
- Revisit the jurisdictional tiered funding model (e.g., fee for service arrangements where appropriate) in an effort to enlist more commitment for the uptake and use of information.
- CADTH and jurisdictions should develop a mutual understanding of the impact of CADTH advice in order to reinforce the value provided by CADTH. This requires the participation of customers in order to access the required impact data.

Outcome *Increased uptake and impact of CADTH evidence; minimized barriers to impact beyond CADTH's control*

4. WIDELY COMMUNICATE TRANSFORMATION OBJECTIVES

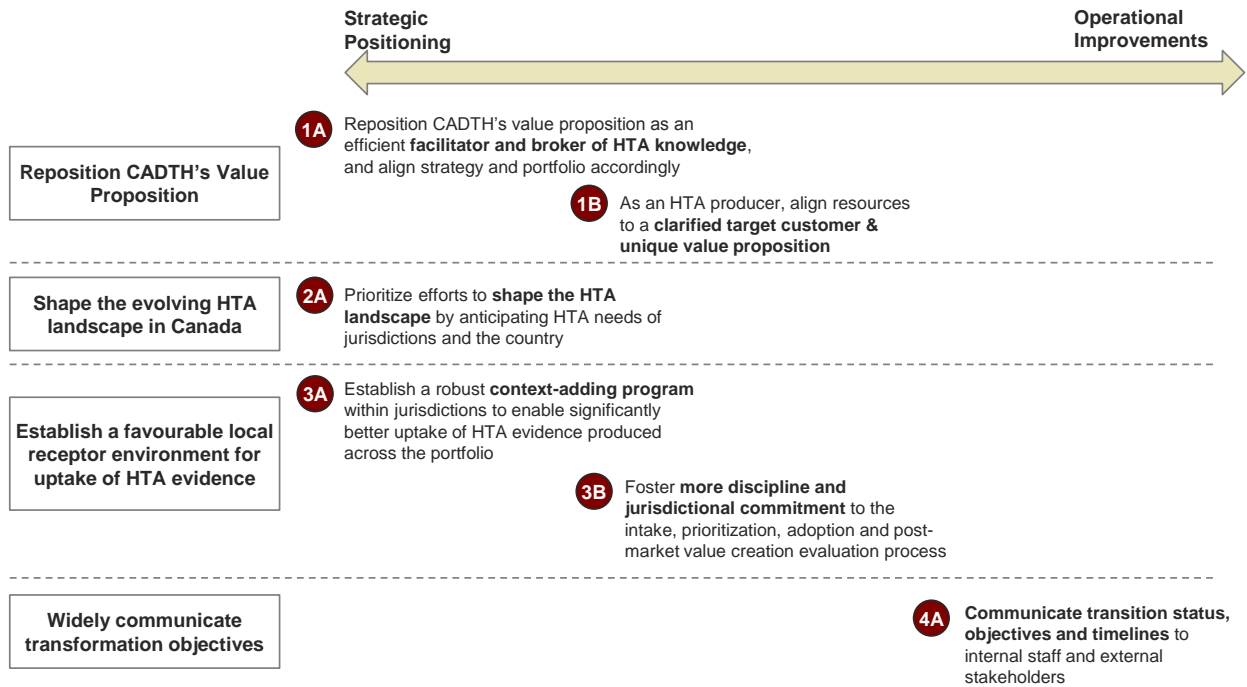
Objective *Proactively align stakeholder expectations of CADTH's mandate, vision, and strategic direction*

4A. Communicate transition status, objectives, and timelines to internal staff and external stakeholders

- Adapt messaging to focus on how organizational transformation affects each stakeholder group.
- Deliberately signal cultural shift to a customer-focused organization, and a focus on value for money.
- Show evidence of impact from changes being made, and mechanisms to course-correct where expected impacts are not being realized.
- Put organizational chart and key processes (central uptake, prioritization) on intranet/internet.

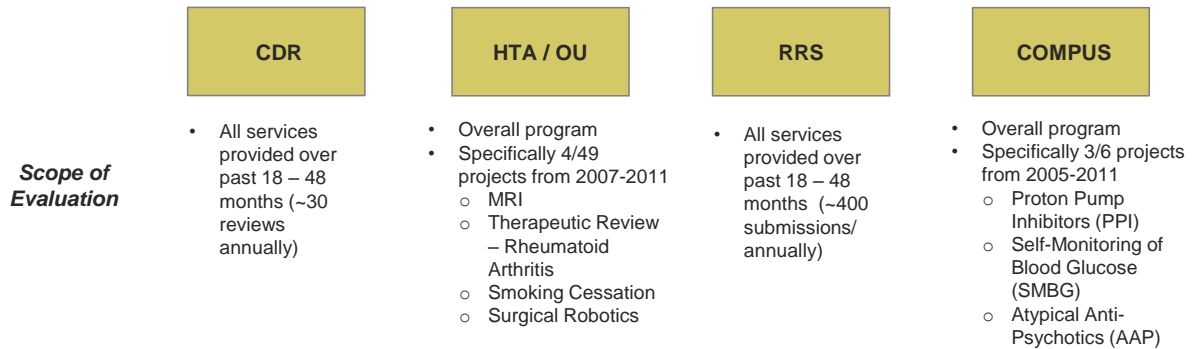
Outcome *Stakeholders with common understanding of CADTH's customer-focused culture and increased engagement with CADTH*

Summary of CADTH Overall Recommendations



3.2 OVERVIEW OF PRODUCT CASE STUDIES

The following diagram shows the scope of evaluation for each of the four product lines that were used as case studies for this review.



3.2.1 COMMON DRUG REVIEW

PRODUCT OVERVIEW

CDR is a single federal, provincial, and territorial (F/P/T) process established in 2002 to review and make formulary listing recommendations on drug technologies to participating public drug plans. The scope of CDR currently includes new drugs (more than 70% of submissions), new indications of existing drugs, and new drug combinations not yet marketed. It excludes off-patent medicines, drugs for hospital use only, oncological injectables, and over-the-counter medicines.

Eighteen drug plans, including six federal, nine provincial, and three territorial plans, participate and pay into CDR (all jurisdictions except Quebec). All participating jurisdictions use CDR as an input to the decision-making process. Other internal and external stakeholders involved in CDR include manufacturers, the Review Team, the Canadian Drug Expert Committee (CDEC), specialist experts, and patient groups.

CDR receives ~\$5M in annual funding, 70% of which comes from participating jurisdictions. The CDR team has the capacity to conduct up to 35 reviews annually; they have conducted 21 to 33 reviews each year since 2008. Reviews range in length from 11 to 43 weeks.

Following the 2009 CDM review of CADTH, two key changes were introduced to the offering as of May 2010:

- Creation of a formal Patient Input Process
- Expansion of mandate to include New Combinations, to eliminate need for jurisdictions to appraise these drugs individually.

CURRENT STATE

CADTH is clearly delivering against the core objectives of the CDR. It provides decision-makers with credible, impartial, evidence-based advice on clinical safety efficacy and pharmacoeconomic analysis. Additionally, it maximizes impact of resources and expertise while reducing duplication of effort between jurisdictions. Customers comment that CDR offers great value for money.

Drug plans highly value the quality of CDR evidence; they indicate it is a key input to decision-making. According to IMS Health's Provincial Reimbursement Advisor (IMS' PRA), listing congruence with CDR recommendations is 92% across participating jurisdictions.

CDR is bringing consistency (process, level of scientific rigour) and transparency to upstream clinical effectiveness evaluation. In certain cases, the unbiased, independent nature of the review can be used by jurisdictions to negotiate the price of drugs.

CDR expenses have consistently remained within budget. CADTH manages the number of reviews it conducts so that it operates within the CDR budget.

CHALLENGES AND OPPORTUNITIES

Business Model

- Customers recognize the limitations to achieving “consistency,” given legacy drug policy frameworks that have evolved within each jurisdiction. Customers are aware of the variations across jurisdictions, and even within a jurisdiction (i.e., inter-regional variations in access to technologies). Given that the volume and complexity of technologies is expected to escalate, these variations will also increase:
 - For instance, the evolution of personalized medicine can be expected to further increase variations within and across jurisdictions. Monitoring the development of this and other trends will be imperative for helping customers anticipate future challenges to their frameworks.
- In some jurisdictions there is duplication of CDR activities. For example, some analyses are repeated or are tailored by participating jurisdictions; further, all drugs are reviewed separately in Quebec. Through partnerships with other resources that are already conducting similar appraisals, CADTH should be actively sharing output, minimizing duplication, and transferring learnings with Canadian and non-Canadian agencies.
- Manufacturers' requests to redact confidential information of full reports limit jurisdictional ability to justify coverage decisions and share information with regional health authorities.

Processes and Transition Progress

- The value-add of the newly created patient submission process is unclear internally and to patient groups:
 - British Columbia and Ontario have parallel patient submission processes that seem more intuitive and engaging than CADTH's approach.
 - There is no common understanding on what is valuable in terms of patient input, or how it is used.

- Given that CADTH has streamlined its expert committees by combining the COMPUS Expert Committee with the Canadian Expert Drug Advisory Committee to form the Canadian Drug Expert Committee (CDEC), some have expressed concern that committee meetings could be “too rushed” to consider all CDR and optimal use issues properly.
 - There is some concern about the limited experience of some CDEC members (learning curve).
- CADTH does not track data on listing discrepancies and thus does not have a full understanding of the drivers behind discrepancies.

Uptake and Impact *(please see Appendix: A2. Common Drug Review: Highlights of Analysis for details)*

- Jurisdictions make decisions that are congruent with core CDR recommendations 80% to 100% of the time.
- However, listing rates/times have declined over time. It is important for CADTH to understand the reasons for these declines, although a number of issues are likely outside of CADTH’s control.

Future Needs

- An escalation in demand for therapeutic appraisals is expected (volume, complexity); jurisdictions feel ill-equipped with required capacity or appropriate expertise.
- Several areas where scope of CDR could expand, but with mixed opinions from the field on whether CADTH could realistically take on more:
 - Harmonize reviews for adjacent technology areas such as vaccines, hospital drugs, and new indications for generic or repurposed drugs
 - Oncology (during interviews with key informants, diverging opinions were voiced over the integration of pCODR into CADTH)
 - Taking a leadership role in shaping the HTA approach to biosimilars; specialty drugs such as those for orphan/rare disease drugs and other biologics; and personalized medicine/diagnostic biomarkers tests
 - Framing the value equation for the system-wide cost-benefit of drugs in a chronic disease, self-care paradigm.
 - More than 70% of health system costs are driven by chronic conditions, but most of the health care spending is in hospitals, which are designed for acute care episodes. Spending will eventually need to shift from hospital care to community/in-home care. This implies that self-management will be the new paradigm, in which medication is a large component. Health systems everywhere are on the path to update the methods by which they assess the value of medicines beyond the straight cost to the drug plan, and move towards a system value perspective.
 - Initiating pre-Notice of Compliance (NOC) reviews with partners for drugs already introduced in other Organisation for Economic Co-operation and Development (OECD) countries, similar to the newly launched Excellence in Clinical Innovation and Technology Evaluation (EXCITE) program for medical technologies at MaRS in Ontario.

RECOMMENDATIONS

Recommendations proposed for CADTH overall (Section 3.1.3 above) will go a long way towards addressing many challenges and opportunities across the portfolio, including those flagged for CDR in the prior section. The recommendations in this section are specific to CDR challenges not fully covered by the CADTH overall recommendations.

CDR1. Incorporate assessment of ideas proposed by the field for CDR mandate expansion into next strategic planning cycle and CDM discussions

- Ideas tabled include harmonizing reviews for adjacent technologies (vaccines, hospital drugs, new indications, repurposed drugs); integrating pCODR into CADTH; shaping the HTA approach to biosimilars, specialty drugs, and personalized medicine/diagnostic biomarkers tests; redefining the cost-benefit value equation of drugs in a chronic disease paradigm; and initiating pre-NOC reviews for drugs introduced in other OECD countries.

CDR2. Understand and address the drivers of jurisdictional variation in listing conditions and timing. For issues outside of CADTH control, table issues to the CDM in order to maximize consistency post-CDR handover

- This will require more routine capture of data on listing decisions and timing, and focused interventions for levers within CADTH's control. For issues stemming from the different drug policy frameworks in each province, the national Common Drug Pricing committee may go a long way in achieving resolution. If not, then CADTH should table issues to the CDM.

CDR3. Further explore opportunities to engage in dialogue with industry to anticipate each other's needs and minimize avoidable activities and investments

- Establish a transparent forum for communicating with industry to share issues and needs in order to help shape the R&D pipeline based on health care system needs. *Note: the CADTH-Industry Liaison Forum can be a key vehicle to achieve this.*

CDR4. Catalyze more rapid decision-making in jurisdictions with lengthening timelines (e.g. Ontario, Alberta) through regular interactions after CDR recommendation is made; explore an LO-like role in Ontario

- Closely monitor status of decision-making after CDR reviews are complete, to better understand the issues influencing listing decisions.
- Explore an LO-like role in Ontario.

CDR5. Develop a common understanding of how patient input will be used in reviews both internally and externally

- Ensure all stakeholders understand the value of patient input and agree on how patient input should be used in reviews and communicate this to patient groups.
- Investigate the need to further harmonize patient submission process with local practices (e.g., British Columbia, Ontario).

CDR6. Disclose full CDR reports

- Enable jurisdictions to share CDR report evidence and information with regional health authorities to support health authority drug review process.

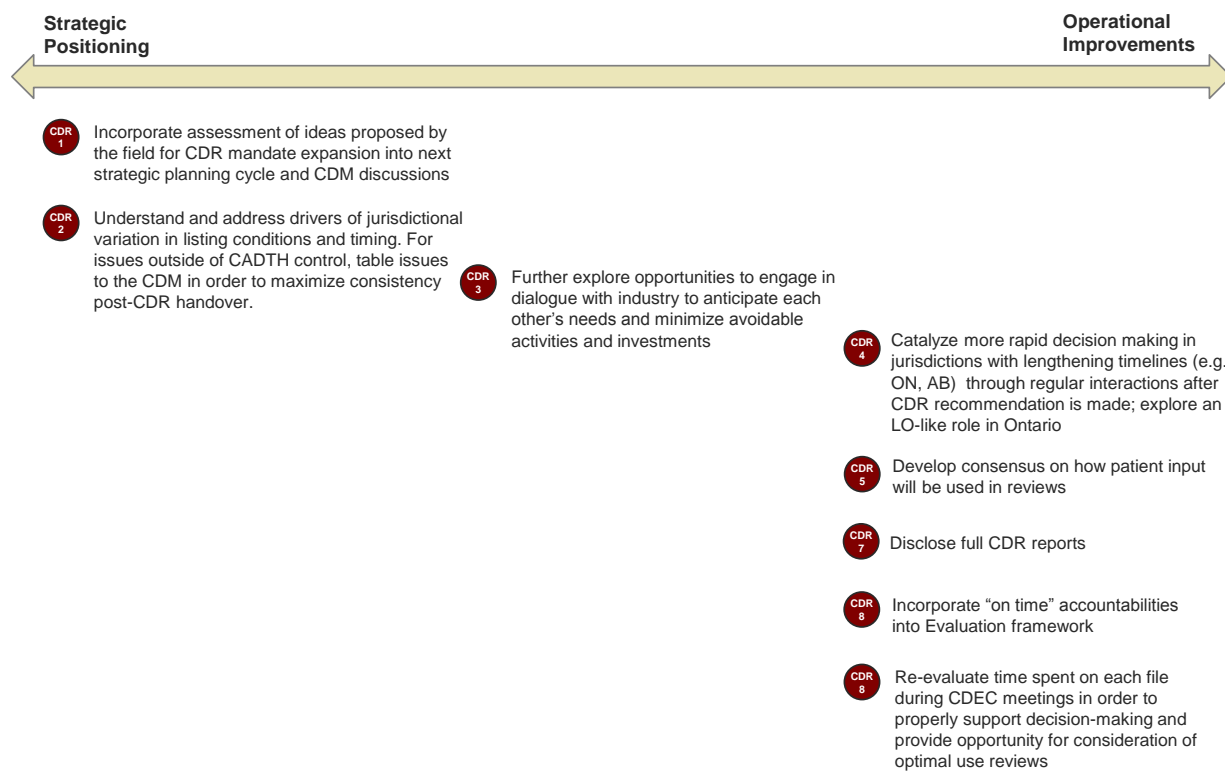
CDR7. Incorporate “on time” accountabilities into the evaluation framework

- While the majority of drug reviews are delivered on time, there is opportunity for CADTH to better understand source of delays that occur in the process.

CDR8. Re-evaluate time spent on each file during CDEC meetings in order to properly support decision-making and provide an opportunity for optimal use reviews

- Set and adhere to agendas based on equal consideration of CDR and optimal use priorities.

Summary of CDR Recommendations



3.2.2 HTA/OPTIMAL USE

PRODUCT OVERVIEW

Health Technology Assessment (HTA)/Optimal Use (OU) projects are comprehensive assessments of health care technologies that include drugs, non-drug devices, systems, and services identified as priorities by member jurisdictions. Therapeutic reviews (TR), recently introduced to the HTA/OU portfolio, are comprehensive assessments of a single drug, a drug class, or a drug category. TRs are conducted concurrently with the CDR of the same drug class or category; review scope and depth are determined by member jurisdictions and CADTH.

Member jurisdictions, excluding Ontario and Quebec, contribute 11% of the \$12.8M funding for CADTH's HTA programs; Health Canada funds the balance.

During CADTH's transformation, key changes introduced to the HTA/OU portfolio include:

- Integrating COMPUS projects into the HTA/OU portfolio
- The Policy Forum taking on the additional role of providing strategic direction and advice related to non-drug technologies, while one committee (the Drug Policy Advisory Committee [DPAC]) remains responsible for guiding drug-related optimal use projects.

The scope of this review included mini case studies on three HTA/OU projects (Smoking Cessation; Surgical Robotics; MRI) and one Therapeutic Review pilot (TR — Rheumatoid Arthritis).

CURRENT STATE

HTA products are generally found to be informative by customers and are especially valued by those without in-house HTA capacity, who rely on CADTH for the majority of evidence-based research.

The products also supplement capacity of jurisdictions with in-house drug technology review capabilities, such as Alberta and Ontario. In the case of the Surgical Robotics project, the Alberta in-house HTA provider worked together with CADTH to develop the final product, allowing Alberta to assign its resources to other priority projects. All customers acknowledge CADTH's unbiased, comprehensive research methodology used to produce the reports.

There has been some impact on policy decision-making, with notable uptake in British Columbia, Saskatchewan, and Ontario based on the scope of this review. For example, British Columbia, Saskatchewan, and Ontario increased coverage on smoking cessation pharmacotherapies, using CADTH evidence as an input. CADTH itself uses its reports for non-decision-making purposes, such as the publication of evidence in journal articles or the dissemination of information to health care providers at conferences.

CADTH has worked to continuously improve its products. Efforts include:

- Increasing the usability of reports with the use of Knowledge Exchange (KE) tools and inclusion of advice in the reports. Integrating HTA and Optimal Use has encouraged HTA reports to go beyond conclusions and provide recommendations for stakeholders.
- Introducing formal performance improvement structures. At the end of recent HTA projects, lessons learned have been captured and the majority of these recommendations have been applied to subsequent HTA projects
- Increasing stakeholder engagement in the research phase. This has allowed CADTH to gather feedback on scope, research questions, and required timeline much earlier, to ensure the relevant questions are answered. It also decreases the “surprise factor” for stakeholders in the final outcome of the project.
- Merging CDR, HTA, and OU research databases to increase ease of information sharing, which is especially beneficial for TR research.

CHALLENGES AND OPPORTUNITIES

Business Model

- There is agreement amongst stakeholders and thought leaders on the importance of CADTH strategically engaging with its network to better deliver on its value proposition:
 - Other HTA agencies in Canada need to be viewed as partners with capacity to leverage; no clear strategy in place to avoid duplication of effort.
 - Increased engagement with industry would help CADTH to understand and influence the pipeline of technologies and help create a pull from the jurisdictional health systems.

- While expert committees often reach out for expertise to key thought leaders, it has not been done systematically, resulting in missed opportunities to gain early buy-in from key opinion leaders.

Processes and Transition Progress

- Budgeting process for HTA projects is limited, creating a risk of inefficient resource allocation (CADTH has already recognized this issue, and is currently addressing it):
 - Additionally, budgeting and cost tracking by project in the KE department is limited, making return on investment of KE tools difficult to assess.
- Rigidity of methodology sometimes hinders the timeliness of the HTA/OU projects.
- After the organizational transformation, CADTH streamlined its advisory and expert committees. However, by having one advisory group (DPAC) providing input on all drug products, there is a risk of overshadowing HTA/OU projects with CDR issues.
- KE Officers do not always have a clear understanding of customers' needs; since information is passed along through LOs, KE officers have limited direct communication with customers.

Uptake and Impact *(please see Appendix: A3. HTA/OU: Highlights of Analysis for details)*

- Multiple challenges to achieving adoption of the evidence and recommendations:
 - Jurisdictions have little “skin in the game”: users do not directly pay for the service and there is no formal commitment to use the evidence.
 - Approaches to decision-making on non-drug technologies are fragmented in each jurisdiction. Some jurisdictions do not have a systematic approach to review non-drug technologies; decision-makers for non-drug technologies often sit at different levels within each jurisdiction.
- Variations in uptake (by project, or by jurisdiction) suggest some opportunities to drive better adoption:
 - Senior decision-makers are not always engaged at the outset, throughout, and after the product is released.
 - Policy-makers still find reports long and difficult to digest.
 - A lack of contextualization and lack of recommendations make reports irrelevant to many.
 - Timeliness continues to be an issue. Stakeholders have indicated that sometimes a decision has already been made or the information is no longer relevant by the time a product is developed.
 - LOs are not consistently providing sufficient proximity to government contacts at all levels, and are not connected enough to support contextualization.

Future Health Technology Appraisal Needs

- Many more non-drug technologies are being introduced to the market (especially new technologies for remote/point-of-care monitoring; convergence of drugs and devices) — jurisdictions will not have the capacity to stay abreast of the volume and complexity of new technologies.
- Opinions are divided among thought leaders and customers on the need for a framework for a centralized Canadian approach for non-drug technology appraisal:
 - Some thought leaders believe that due to fragmented policy environment, a “one-size-fits-all approach” to review of non-drug technologies is not possible; the “ideal” model will likely be jurisdiction specific.

- Others envision a hybrid model where some sub-segments of technologies are reviewed centrally, while others are reviewed locally, based on agreed-upon criteria.
- Others still believe that CADTH's key value proposition is to achieve scale in drug and non-drug appraisals, inasmuch as the volume of new technologies is expected to escalate. A centralized intake process will achieve this.
- Customers expressed interest in continued investment in TRs, although some concede that methodology needs to be improved:
 - TRs help customers review multiple related drugs at once, increasing capacity of ministries to implement recommendations for portfolios of drugs.

RECOMMENDATIONS

Recommendations proposed for CADTH overall will go a long way to address many challenges and opportunities identified for HTA/OU. The recommendations tabled in this section address additional issues specific to the HTA/OU portfolio.

OU1. Take the lead in getting closure on the debate about the need/viability of a centralized process for non-drug technology assessments

- CADTH is already taking steps to convene a committee of thought leaders to discuss this issue.

OU2. Leverage outreach conducted by CADTH expert committees as a means to gain buy-in from key opinion leaders

- Actively engage sceptics and critics early on, to develop their understanding of CADTH's product development process and the evidence produced.
- Involve key opinion leaders across jurisdictions so that they can become champions of CADTH's work.

OU3. Continue to increase ease of use and relevance of reports. CADTH could consider:

- Circulating report briefings to all customers that highlight key messages of the report in a succinct way
- Continuing to develop recommendations to include with reports wherever applicable; suggesting key issues (e.g., social, cultural, and political issues) for jurisdictions to consider when digesting evidence and making decisions; providing economic models for customers to input their own jurisdictional data.

OU4. Build flexibility into the methodology to better address the timeliness issues

- Continue to focus on understanding and meeting the information requirements necessary to make decisions, instead of rigidly following a comprehensive project methodology.

OU5. Continue to refine TR methodology to align with CDR timelines

- Customers indicate that TRs are most useful when released alongside a related CDR recommendation. This allows jurisdictions to consider all related evidence at once.

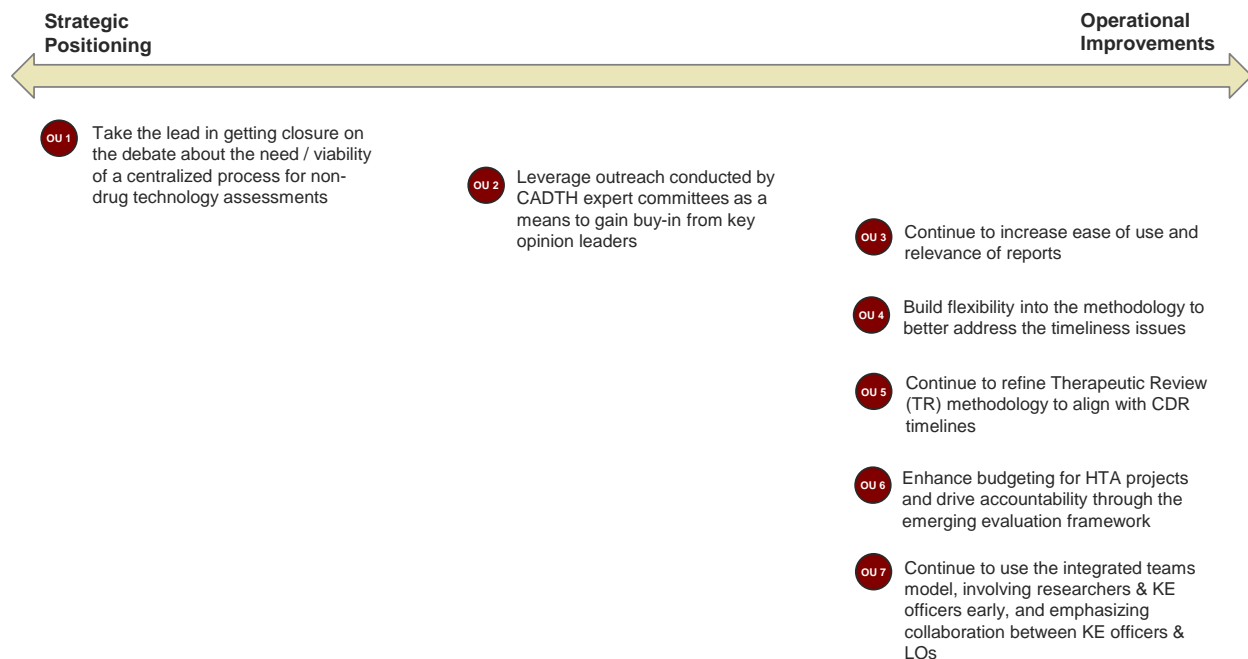
OU6. Enhance budgeting for HTA projects and drive accountability through the emerging evaluation framework

- Once project scope is agreed upon by customer, develop project budget based on historical data.
- Build accountability for project expense into the CADTH evaluation framework by setting targets for return on investment and cost versus actuals.

OU7. Continue to use the integrated teams model, involving researchers and KE officers early, and emphasizing collaboration between KE officers and LOs

- Integrating researchers and KE officers early in the project will contribute to a smoother transition from the research stage to the tool development stage.
- Encouraging collaboration between KE officers and LOs is helpful to ensure KE officers have a full understanding of a customer’s context and needs. This in turn increases effectiveness of KE tools.

Summary of HTA/OU Recommendations



3.2.3 RAPID RESPONSE SERVICE

PRODUCT OVERVIEW

The RRS complements CADTH’s product portfolio by providing decision-makers with the best available evidence in a timely manner when a full HTA assessment is either not possible or not appropriate. RRS was launched in 2005 as the Health Technology Inquiry Service (HTIS), and later changed its name to Rapid Response Service in summer of 2010. The scope of RRS includes health technologies (drugs, devices, medical and surgical procedures, and diagnostic tests), and patient outcomes research; it excludes primary data collection (surveys, environmental scans, etc.).

RRS responds to ~400 requests annually at an estimated cost of \$2.4M (excluding overhead). Member jurisdictions exclude Ontario and Quebec. RRS is utilized by multiple customer groups, including health ministries, regional health authorities, and hospitals, largely to inform policy or clinical practice decision-making or to understand background information on a particular topic. The highest-volume users are Saskatchewan in terms of absolute requests (~40% of all requests), and the Northwest and Yukon Territories in terms of requests per capita.

CURRENT STATE

CADTH has demonstrated an ability to adjust its HTA offering to address customer needs for less detailed and comprehensive information gathering. RRS is designed to provide targeted information to customers, with a quick turnaround time.

Based on a survey conducted of 66 RRS users, the majority agree that RRS meets their needs; timeliness is the most appreciated product characteristic (*please see Appendix: A5. Rapid Response Service Customer Survey for details*). Quality and credibility of response is the second-most appreciated characteristic. One-third of customers surveyed indicated that they would change nothing about RRS. Some explicitly noted the added benefit that RRS is available at no incremental service charge.

Almost all customers surveyed indicated that they would probably or very likely use RRS again. Most customers would recommend RRS to policy-makers and clinical practitioners.

RRS provides a unique service; only one-third of customers surveyed are aware of alternative sources of RRS-like information. Local library or self-directed were identified to be the main alternative providers of similar services. Customers choose to use RRS over alternative services due to timing, quality of information, and quality of service.

CHALLENGES AND OPPORTUNITIES

Business Model

- Impact created by RRS does not fully reflect CADTH's value proposition. The majority of RRS requests do not support decision-making at the government level:
 - While government users more often request RRS to inform decision-making, non-government organizations are the primary users of RRS (approximately two-thirds of total requests). (*Please see Appendix: A4. Rapid Response Service: Highlights of Analysis for details.*)
- RRS is creating a tension for CADTH. While it is a highly customer-responsive innovation and offering (and customers are quite satisfied), it puts into question CADTH's credibility as a producer of rigorous scientific evidence:
 - Although RRS accounts for ~10% of CADTH's operating budget, there are perceptions that the limited resources are being diverted from the more rigorous scientific evidence generation that informs senior level decision-making.

- It is a concern to a few customers that RRS' scope is restricted by CADTH's mandate (e.g., no vaccine research).

Processes and Transition Progress

- CADTH solicits formal feedback from customers after each completed request. To address a low rate of feedback, CADTH recently developed an e-survey to make it easier for customers to provide information to CADTH. This needs to be further promoted and used.

Uptake and Impact

- Inconclusive evidence is one of the leading reasons why customer needs are not met by RRS. This, in turn, leads to customer dissatisfaction:
 - Other frequently cited reasons are an insufficient response to the research question and relevance of information.
 - Some customers experience challenges in defining the research question appropriately, thus limiting value of RRS.
- Customer suggestions on improvements to RRS that would increase impact include increased turnaround time, contextualization, and level of critical appraisal:
 - Some believe that policy-makers without background in academia require appraisal of evidence and recommendations to increase the relevance of findings, at all levels of requests.

Future Needs

Future needs were not identified, given the nature of RRS as a reactive service that responds based on customer needs.

RECOMMENDATIONS

Recommendations proposed for CADTH overall will go a long way to address many challenges and opportunities identified for RRS. The recommendations tabled in this section address additional issues specific to the RRS product.

RRS1. Align resource allocation across RRS user groups and the intended use of the report based on a clarified value proposition (supported by CADTH Overall Recommendation #1)

- Prioritize service to government users whose purpose is to use the RRS to support decision-making.

RRS2. Ensure that requests align with jurisdictional priorities, in order to limit the number of potentially low-impact requests (supported by CADTH Overall Recommendation #3B)

- Ensure requests to CADTH align with jurisdictional priorities and a threshold for making requests is embraced.
- If usage of RRS is as an entry point to the rest of CADTH's portfolio, or to a continuum of decision-making, then clarify this as the rationale for prioritizing a given request.

RRS3. Continue to work with customers to accurately define research question and understand customer requirements

- Embed an intermediate touch point with clients in the event that initial research does not yield expected information.

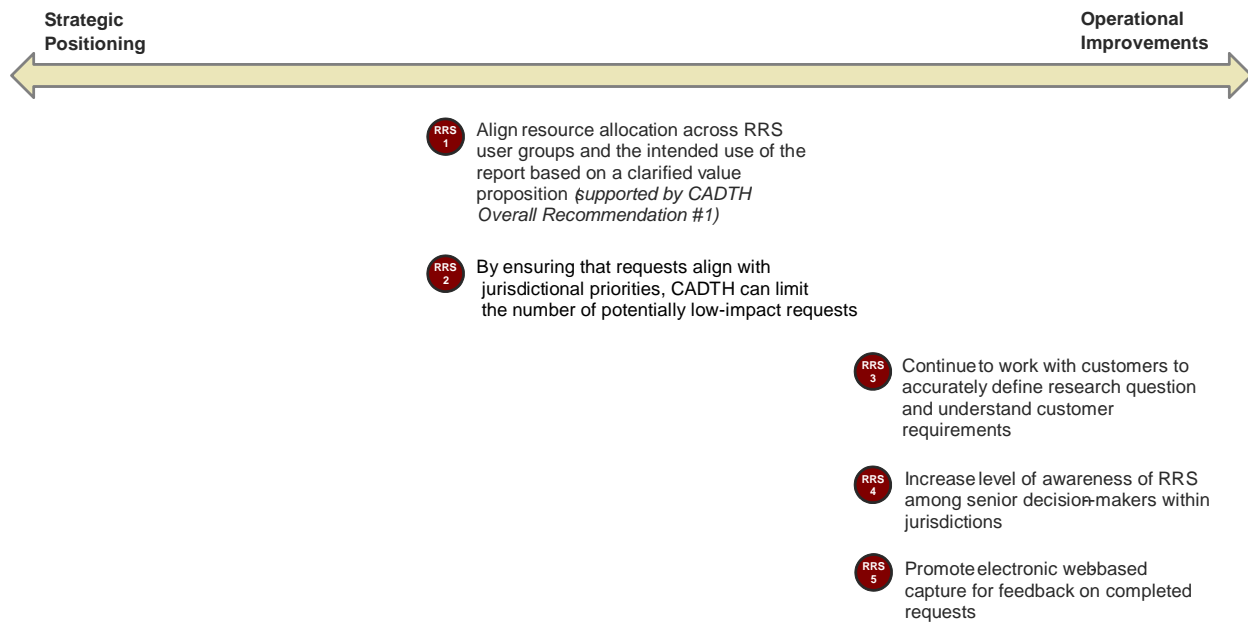
RRS4. Increase level of awareness of RRS among senior decision-makers within jurisdictions

- Enhance communication efforts through LOs to senior decision-makers to highlight availability of RRS, particularly to support decision-making.

RRS5. Promote electronic web-based capture for feedback on completed requests

- Further encourage the use of CADTH’s new online feedback form, possibly through the LOs.

Summary of RRS Recommendations



3.2.4 COMPUS

PRODUCT OVERVIEW

COMPUS has been offered since March 2004 with the goal of optimizing drug-related health outcomes and cost-effective use of drugs by identifying and promoting optimal drug prescribing and use. To achieve this goal, COMPUS evidence is targeted towards policy-makers, health care providers, and end-users (patients).

The COMPUS project portfolio is characterized by large and lengthy projects that address issues aligned with broad, national priority themes. CADTH has completed six COMPUS reports from September 2005 to the present with an annual funding envelope of ~\$4M. Funding is provided solely by Health Canada; jurisdictions do not fund COMPUS but are considered to be customers of the program.

As part of CADTH’s transformation, COMPUS has been recently incorporated into the HTA/OU product portfolio, resulting in a broader scope that now includes review of both drug and non-drug technologies.

The scope of this review includes mini case studies on the Proton Pump Inhibitor (PPI), Self-Monitoring of Blood Glucose (SMBG), and Atypical Antipsychotic (AAP) projects.

CURRENT STATE

COMPUS projects have contributed to some changes in health care policy in a few jurisdictions and have provided tools and educational material for providers and patients. Provinces with roles accountable for optimizing drug use (e.g., British Columbia) are especially well positioned to implement COMPUS findings. Evidence gains further traction when CADTH partners with academic detailing groups within jurisdictions (where available) to disseminate evidence to providers. COMPUS' expert committee advice and KE tools are especially valued by those without an academic detailing program or resource.

Over time, there has been demonstrated improvement in development and delivery of COMPUS projects (quality, project and scope management, and stakeholder feedback process). Customers recognize that CADTH has developed a rigorous and credible methodology. Timelines have improved by holding stakeholder feedback on clinical analysis and economic analysis in parallel instead of sequentially. KE officers have been integrated into the project teams to increase the usability of tools.

CADTH has demonstrated openness to partnering with patient and professional groups. The AAP project was born out of dialogue with the Canadian Psychiatric Association and agreed upon as a priority by the COMPUS Advisory Committee (CAC). The Canadian Diabetes Association revised its previous opinion of opposing a limit to the number of blood-glucose test strips used, to align with CADTH evidence.

CHALLENGES AND OPPORTUNITIES

Business Model

- COMPUS products are challenged for value delivery because they require working differently with and influencing policy-makers, health care providers, and end-users (patients) — each with different priorities and needs:
 - The valuable contribution of KE is not optimally focused towards CADTH's goal of influencing senior decision-makers. The majority of efforts are currently directed at patient or provider groups without the intent of gaining buy-in to influence policy decision-making.
- Senior decision-makers do not have an obligation to use the product, nor do they fund it directly (or indirectly).
- A handful of customers voiced concern that selection of COMPUS projects does not always reflect jurisdictional and health system needs, although evidence and recommendations remain unbiased:
 - This is because some COMPUS projects were initiated as spin-offs from CDR reports which were based on industry submissions.

Processes and Transition Progress

- Tension remains between conducting rigorous research and delivering output in a timely manner. Finding ways to develop the minimum amount of information required to inform decision-making is a significant challenge.

- As with HTA/OU projects, budgeting for COMPUS projects is limited, risking inefficient allocation of resources:
 - Additionally, budgeting and cost tracking by project in the KE department is limited, making return on investment of KE tools difficult to assess.

Uptake and Impact *(please see Appendix: A6. COMPUS: Highlights of Analysis for details)*

- Despite rigorous clinical and economic evidence, uptake of COMPUS products has been impeded due to local jurisdictional environments:
 - *At policy level:* fiscal limitations, and lack of dedicated roles responsible for utilizing advice, political will, contextualization, and local resources (money, people) to adopt CADTH advice.
 - *At health care provider and end-user level:* fiscal restrictions limit the implementation or uptake of advice; lack of regional academic detailing groups.
- CADTH can work more strategically with patient advocacy groups, providers, or key opinion leaders to gain buy-in for COMPUS projects:
 - Patient advocacy groups have previously demonstrated a reluctance to change current practice, possibly because of their lack of awareness; they may also be influenced by the industry.
 - Disease advocacy groups should also be considered in CADTH's network of alliances. In the case of the SMBG project, CADTH underestimated the influence of the Canadian Diabetes Association on health system decision-makers.
 - Providers and key opinion leaders have previously remained unconvinced by CADTH's evidence.

Future Needs

Given that COMPUS is being incorporated into the HTA/OU product, future needs of COMPUS customers are largely reflected in the needs of HTA/OU users. Below are recommendations that highlight key learnings from COMPUS case studies to be considered for new HTA/OU projects.

RECOMMENDATIONS

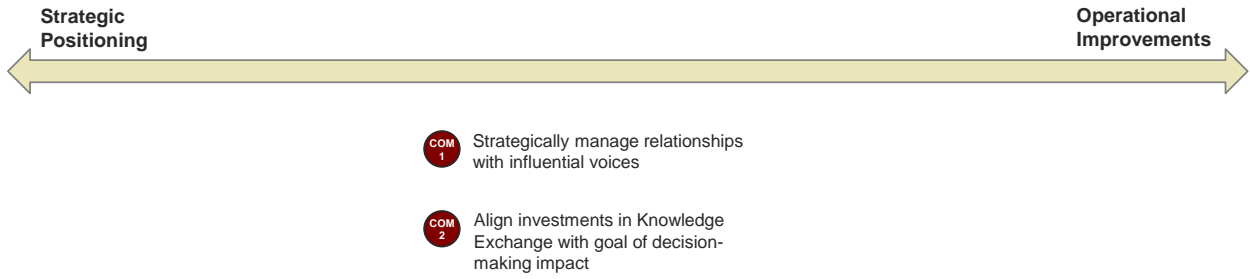
COM1. Strategically manage relationships with influential voices

- Develop opportunities to work with advocacy groups, key opinion leaders, and professional organizations to gain buy-in for projects.

COM2. Align investments in KE with goal of decision-making impact

- Increase outreach efforts towards government users to encourage uptake of evidence, and to health care networks or providers to influence decision-making at the government level.

Summary of COMPUS Recommendations



4. SUMMARY OF RECOMMENDATIONS

The following table summarizes the recommendations for CADTH overall, and for each product line. As noted above, several of these recommendations are aligned with current stated strategic and transformational plans, and therefore could form the basis for enhancing those plans. Some recommendations (such as CADTH Overall #3 — Establish Receptor Environment) would be incremental to current plans, and would need to be weighed relative to other strategic and operational investments through the course of the next strategic and business planning cycles.

Strategic Recommendations

CADTH OVERALL	1A	Reposition CADTH's value proposition as an efficient facilitator and broker of HTA knowledge , and align strategy and portfolio accordingly
	1B	As an HTA producer, align resources to a clarified target customer and unique value proposition
	2A	Prioritize efforts to shape the HTA landscape by anticipating HTA needs of jurisdictions and the country
	3A	Establish a robust context-adding program within jurisdictions to enable significantly better uptake of HTA evidence produced across the portfolio
	3B	Foster more discipline and jurisdictional commitment to the intake, prioritization, adoption, and post-market evaluation process
CDR	CDR1	Incorporate assessment of ideas proposed by the field for CDR mandate expansion into next strategic planning cycle and CDM discussions
	CDR2	Understand and address drivers of jurisdictional variation in listing conditions and timing. For issues outside of CADTH control, table issues to the CDM in order to maximize consistency post-CDR handover
	CDR3	Further explore opportunities to engage in dialogue with industry, to anticipate each other's needs and minimize avoidable activities and investment
HTA/OU	OU1	Take the lead in getting closure on the debate about the need/viability of a centralized process for non-drug technology assessments
	OU2	Leverage outreach conducted by CADTH expert committees as a means to gain buy-in from key opinion leaders
RRS	RRS1	Align resource allocation across RRS user groups and request purposes based on a clarified value proposition (<i>supported by CADTH Overall Recommendation #1</i>)
	RRS2	By ensuring requests align with jurisdictional priorities, CADTH can limit the number of potentially low-impact requests (<i>supported by CADTH Overall Recommendation #3B</i>)
COMPUS	COM1	Strategically manage relationships with influential voices
	COM2	Align investments in KE with goal of decision-making impact

Operational Recommendations

CADTH OVERALL	4A	Communicate transition status, objectives, and timelines to internal staff and external stakeholders
CDR	CDR4	Catalyze more rapid decision-making in jurisdictions with lengthening timelines (e.g., Ontario, Alberta) through regular interactions after CDR recommendation is made; explore an LO-like role in Ontario
	CDR5	Develop consensus on how patient input will be used in reviews
	CDR6	Disclose full CDR reports
	CDR7	Incorporate “on time” accountabilities into Evaluation framework
	CDR8	Re-evaluate time spent during CDEC meetings on each file in order to properly support decision-making and provide opportunity for consideration of optimal use reviews
HTA / OU	OU3	Continue to increase ease of use and relevance of reports
	OU4	Build flexibility into the methodology to better address the timeliness issues
	OU5	Continue to refine TR methodology to align with CDR timelines
	OU6	Enhance budgeting for HTA projects and drive accountability through the emerging evaluation framework
	OU7	Continue to use the integrated teams model, involving researchers and KE officers early, and emphasizing collaboration between KE officers and LOs
RRS	RRS3	Continue to work with customers to accurately define research question and understand customer requirements
	RRS4	Increase level of awareness of RRS among senior decision-makers within jurisdictions
	RRS5	Promote electronic web-based capture for feedback on completed requests

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- Lynda Jobin (Vice-President, Corporate Services, CADTH)
- Glenna Benson (Vice-President, Programs, CADTH)
- Andrew Dzuba (Evaluations Advisor, CADTH)
- Karen Lee (Director, Health Economics, CADTH)
- Stephanie Smith (Liaison Officer, New Brunswick, CADTH)
- Abby Hoffman (Assistant Deputy Minister, Health Policy, Health Canada)
- Barbara LeBrun (Director, Office of Pharmaceuticals Management Strategies, Health Canada)
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| ● Rhonda Boudreau | ● Andra Morrison | ● Bill Strutt |
| ● Janet Crain | ● Michelle Mujoomdar | ● Kyle Trenwith |
| ● Sara Khangura | ● Seema Nagpal | |

5. SOURCES

CADTH Documents and Data

CASE STUDY	SOURCE
CADTH Overall	<ul style="list-style-type: none"> ○ CADTH website ○ 2006-2010 CADTH Annual Reports ○ 2007-2011 Health Canada Progress Reports ○ 2010-2012 CADTH Annual Business Plans ○ 2011-2012 CADTH Board of Directors' Meeting, CEO Update ○ September 2011 interim reporting organizational charts ○ Lists of CADTH committee members ○ Impact documents <ul style="list-style-type: none"> • Uptake, Impact and Challenges • Citation databases • Tracking of COMPUS Impact Activities 2009-2011 • CADTH HTA Impact Database 2011 ○ Financial documents <ul style="list-style-type: none"> • 2007-2011 budget versus actual cost, by product • 2007-2011 overhead and fixed cost, by product
Common Drug Review	<ul style="list-style-type: none"> ○ 2007-2010 data on reviews by type of submission, by type of recommendation ○ December 2010 Procedure for Common Drug Review ○ Number of patient submissions and lead time for all calls for input until 7 September 2011 ○ 2011 CDEC member and patient group survey of patient input process
Rapid Response Service	<ul style="list-style-type: none"> ○ 2005-2011 Rapid Response (HTIS) database of completed reviews ○ “CADTH’s Rapid Response Service: Providing Relevant and Timely Evidence for Canadian Health Care Decision-Makers” presentation ○ Rapid Response Service Procedures
HTA/Optimal Use COMPUS	<ul style="list-style-type: none"> ○ List of HTA and COMPUS projects from 2007 onwards ○ HTA and COMPUS guidelines, process descriptions ○ “Evidence has left the building,” uptake tracking documents ○ For each sub-case study (if available): <ul style="list-style-type: none"> • Final reports • Project protocols • Lessons learned documents • KE tools, including presentation and outreach effort documents

External Sources

- “Independent Assessment of CADTH,” John Wright (2009)
- “Analysis of drug coverage before and after the implementation of Canada’s Common Drug Review,” Gamble et al. (Oct 24 e-pub)
- “Canada’s Common Drug Review 2003 through 2010,” CDR Tracker 2010 Annual Report, Wyatt Health Management (March 2011)
- No. of published listings, listing congruence by province and average time-to-listing, Provincial Reimbursement Advisor, IMS (2007-2010)
- “Prescription Drugs Part 1 — Common Drug Review: An F/P/T Process,” Report of the Standing Committee on Health, House of Commons Canada (December 2007)
- “Health Technology Assessment (HTA): Lessons Learned from the International Community,” Dev Menon (2011)

Stakeholder Consultations (69 stakeholders consulted)

STAKEHOLDER GROUP	NAME	AFFILIATION	NAME	AFFILIATION
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	Eric Lun	BC	Judy McPhee	NS
	Shelley Canitz	BC	Mary Hill	NS
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	Lauren Donnelly	SK	Barbara Raymond	FED
	Carol Renner	MB	Harold Boudreau	FED
	Dan Skwarchuk	MB	Janice Ma	FED
	Dr. Paul Van Caesele	MB	Jocelyn Gardner	FED
	Rob Shaffer	MB	Karen Philp	FED
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	Karen Lee	CADTH	Stephanie Smith	CADTH
	Elaine MacPhail	CADTH	Ann Vosilla	CADTH
	Michelle Mujoomdar	CADTH		

APPENDICES

APPENDIX

A1. Central Intake and Prioritization Process

A2. Common Drug Review: Highlights of Analysis

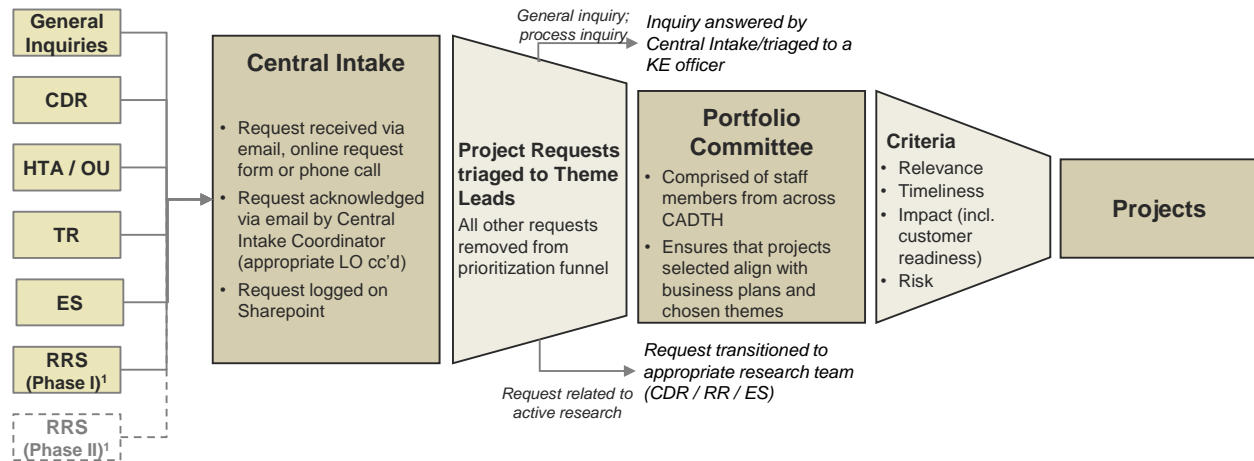
A3. HTA/Optimal Use: Highlights of Analysis

A4. Rapid Response Service: Highlights of Analysis

A5. Rapid Response Service Customer Survey: Questions and Highlights of Findings

A6. COMPUS: Highlights of Analysis

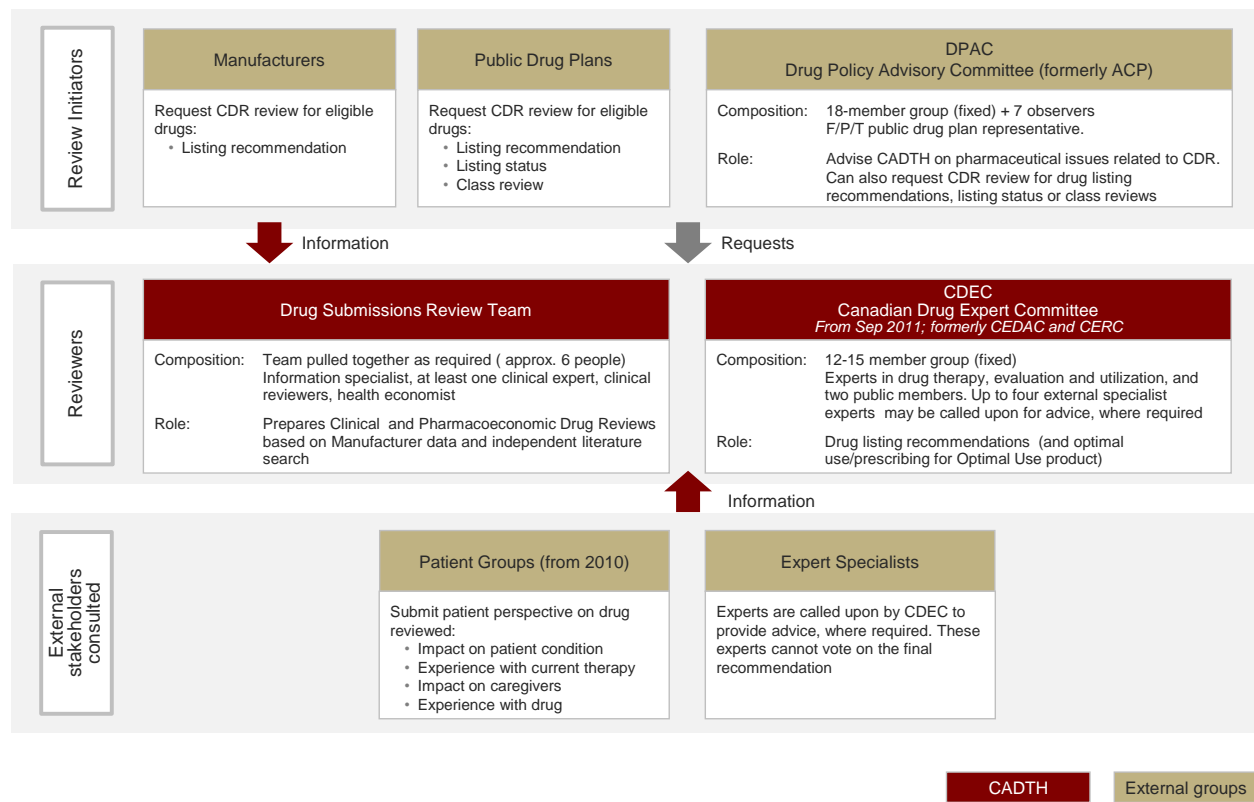
A1. CENTRAL INTAKE AND PRIORITIZATION PROCESS



¹Central intake currently provides request intake and triage support for RRS. CADTH is considering having Central Intake produce lower-level RRS reports.

A2. COMMON DRUG REVIEW: HIGHLIGHTS OF ANALYSIS

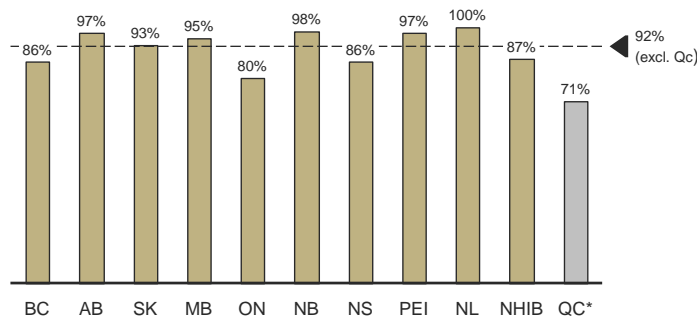
CDR Stakeholder Engagement



CDR Impact Analysis

According to IMS' PRA, listing congruence with CDR recommendations ranges from 80% to 100% across participating jurisdictions:

Congruence with CDR Recommendation
Percent, 2007-2010



Definition of congruence by IMS PRA:

Congruence is considered in the broader sense beyond absolute matching of CDR recommendation types to the exact provincial listings (i.e. match by the "letter" of the CDR recommendation). Rather congruence should reflect provincial listing agreement with the "letter and spirit" of the CDR recommendations.

In this broad sense, when a CDR recommendation for instance, is to "not list at the stated price", and a manufacturer and a province negotiate down the price prior to issuing a list/list in similar manner or list with criteria/condition, then by the "spirit" of the CDR recommendation, it will be accurate to count the post-CDR negotiated provincial listing decision as congruent with CDR's recommendation.

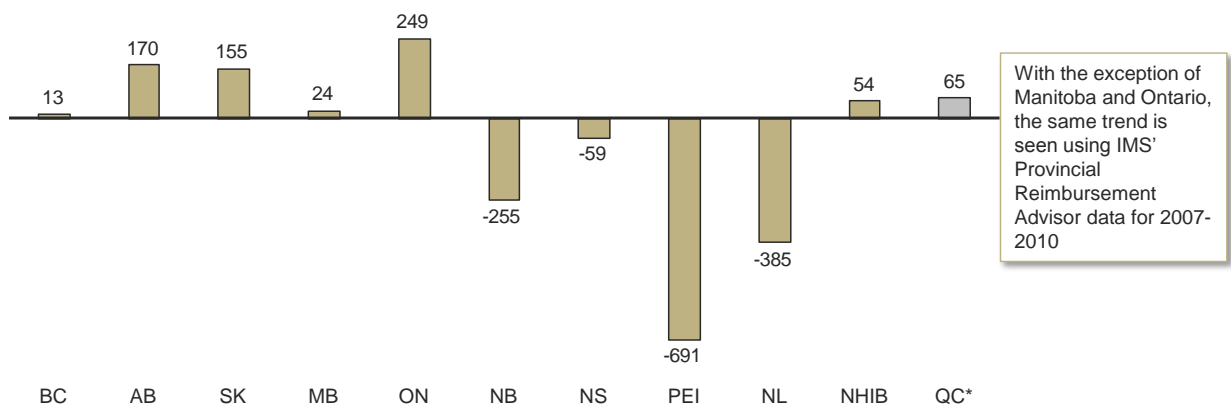
*For reference only. Quebec does not participate in CDR

Change in Median Time-to-Listing Before and After Implementation of CDR

Implementation of CDR has not led to decreased time-to-listing for all jurisdictions:

- The largest increases have occurred in provinces with greater in-house review capacity, such as Ontario (+249 days) and Alberta (+170 days).
- Median time-to-listing has decreased for Atlantic provinces (between -691 and -59 days).

Change in days, for drugs that received their NOC between May 26, 1999 and May 26, 2004 (before CDR) and between May 27, 2004 and May 27, 2009 (after CDR implementation)



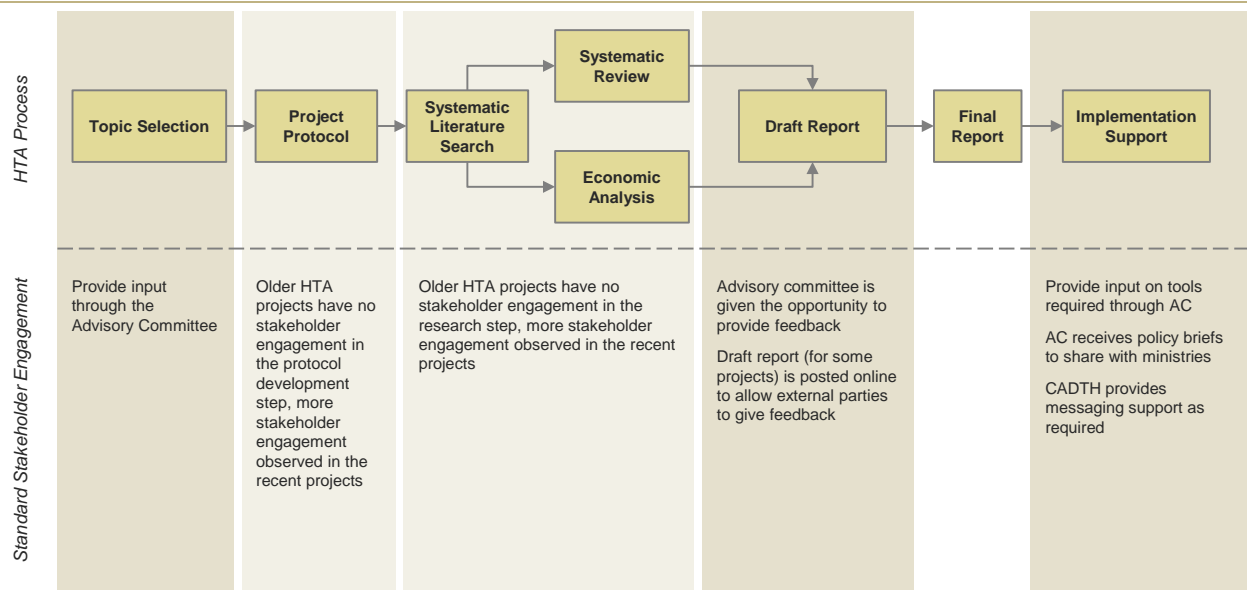
With the exception of Manitoba and Ontario, the same trend is seen using IMS' Provincial Reimbursement Advisor data for 2007-2010

*For reference only; Quebec does not participate in CDR

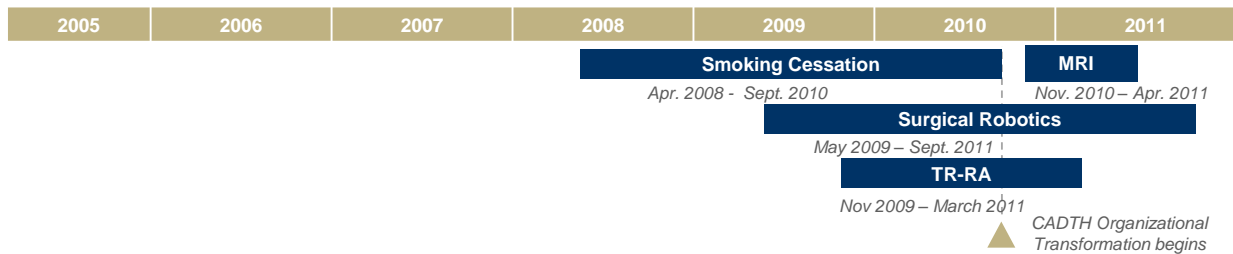
Source: Gamble et al., Analysis of drug coverage before and after the implementation of Canada's Common Drug Review, CMAJ October 24, 2011 cmaj.110670; published ahead of print October 24, 2011; SECOR Analysis

A3. HTA/OU: HIGHLIGHTS OF ANALYSIS

HTA/OU Process and Stakeholder Engagement

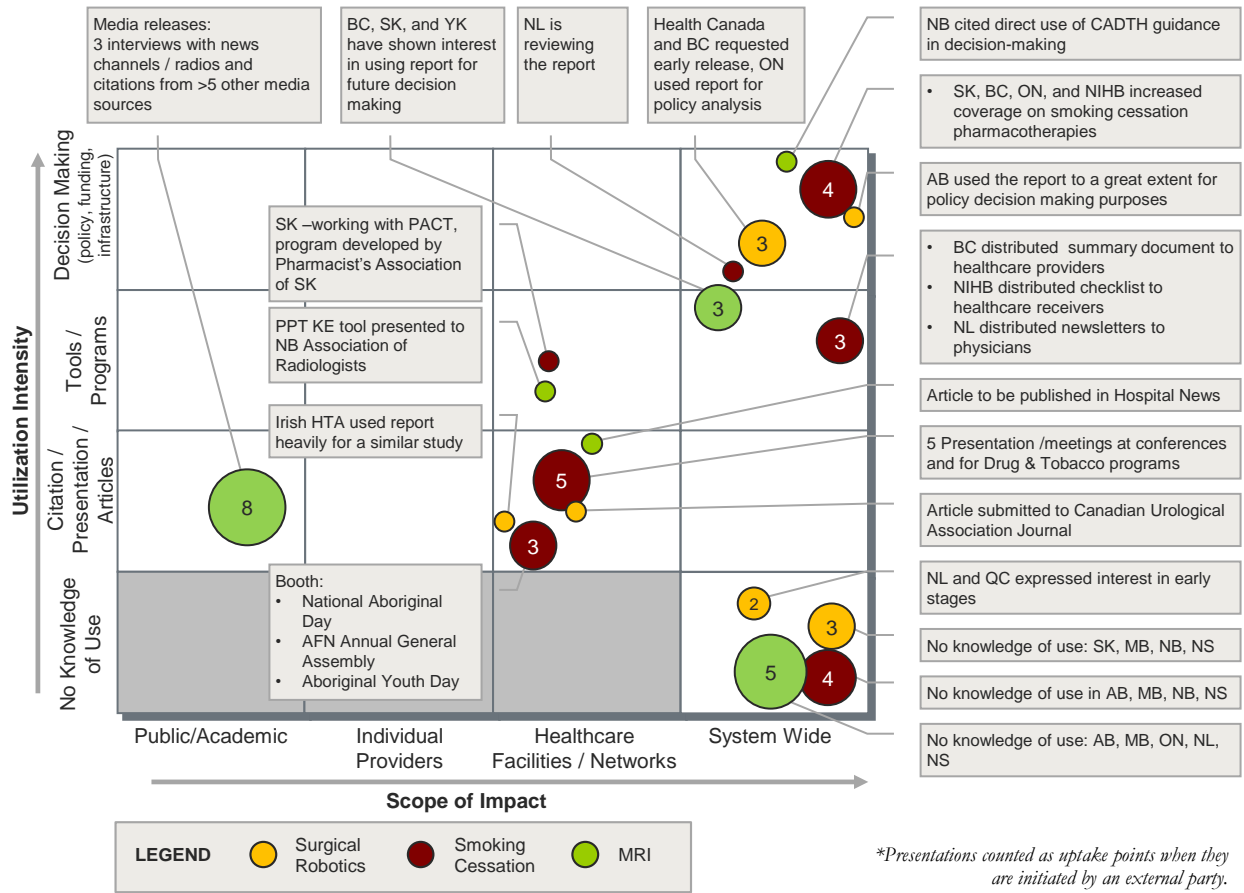


HTA/OU Case Study Overview



Project Details	Smoking Cessation	Surgical Robotics	TR-Rheumatoid Arthritis	MRI
Investigation Question	"To compare the clinical effectiveness and cost effectiveness of pharmacologic agents for smoking cessation"	"To assess the clinical and cost-effectiveness of robotic surgery compared with open or laparoscopic procedures"	"To investigate the comparative effectiveness, harms, and cost-effectiveness of biologic response modifier agents for adults with rheumatoid arthritis"	"To provide guidance in the purchasing of 3.0T MRI scanners or 1.5T MRI scanners"
Cost	\$513k	\$521k	\$425k	\$179k
Project Complexity	<ul style="list-style-type: none"> High: 13 investigation questions 	<ul style="list-style-type: none"> Normal: 5 investigation questions 	<ul style="list-style-type: none"> Normal: 4 investigation questions 	<ul style="list-style-type: none"> Low: 5 investigation questions
Project Initiator / Advisory Committee	<ul style="list-style-type: none"> BC – Executive Director of Drug Intelligence, in Pharmaceutical Services ACP 	<ul style="list-style-type: none"> BC –Vancouver Health Authority Device and Systems Advisory Committee 	<ul style="list-style-type: none"> Advisory Committee on Pharmaceuticals (ACP) ACP 	<ul style="list-style-type: none"> NB – Deputy Minister of Health N/A
Impact	<ul style="list-style-type: none"> SK, NIHB, BC, ON increased smoking cessation pharmacotherapies coverage BC and NIHB distributed the tools to providers and the public 	<ul style="list-style-type: none"> AB used the draft report as an input into its decision making process and policy analysis BC & ON requested early release of the report to use as an input into its policy analysis 	<ul style="list-style-type: none"> Some discussion about intended policy adjustments/changes in BC, SK, ON, NS; no policy changes have occurred to the best of CADTH's knowledge 	<ul style="list-style-type: none"> CADTH's guidance report was the foundation of NB's decision to purchase only 1.5T MRIs BC, SK, and YK shown interest in using report for future decision making

HTA/OU Case Study Impact Analysis

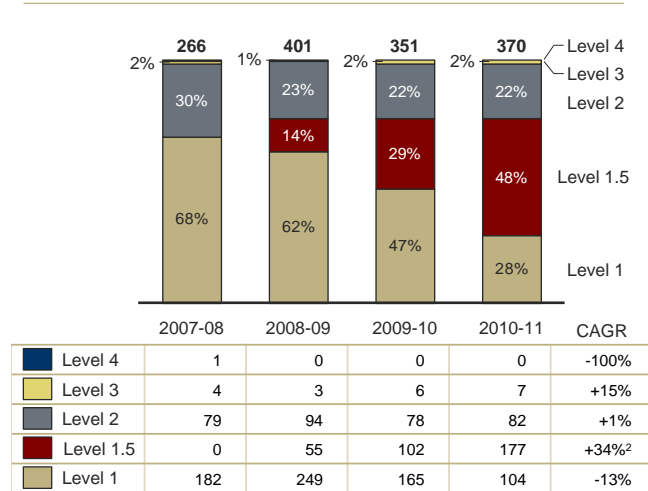


A4. RAPID RESPONSE SERVICE: HIGHLIGHTS OF ANALYSIS

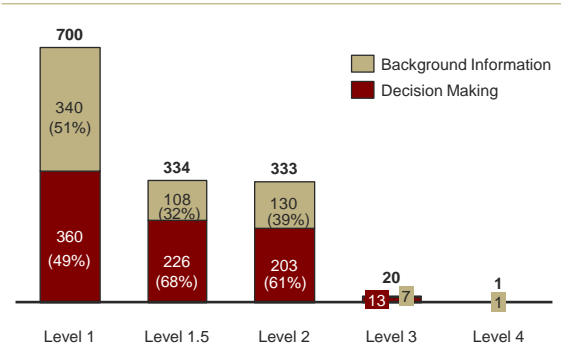
RRS Demand Analysis

The majority of RRS requests are level 1 and level 1.5 (~75%). Customers indicate that low-level requests are used as often as higher-level requests to support decision-making.

RRS requests by level
Completed requests¹



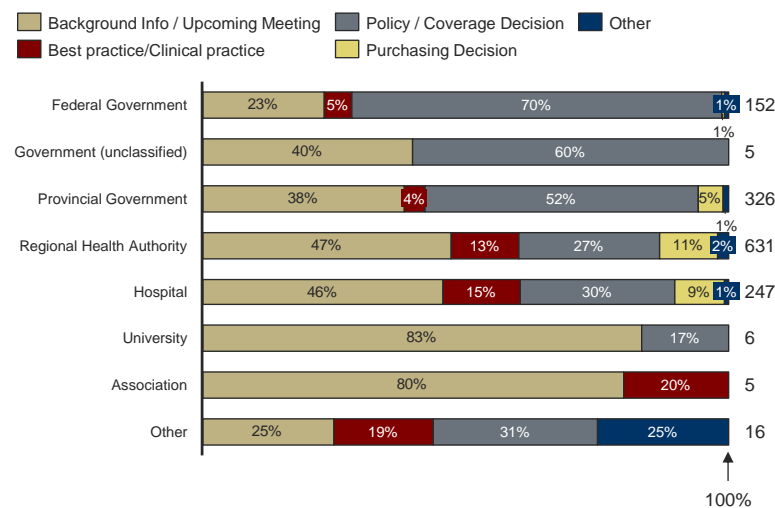
RRS requests by purpose
Completed requests¹, 2007-2011



¹ Excludes CADTH internal requests for RRS
² CAGR for level 1.5 calculated from 2008 onwards

Governments use the RRS more than other users to inform decision-making. However, non-government organizations are the primary users of the RRS (approximately two-thirds of requests).

Purpose of RRS Requests by Type of Customer
Percent of completed requests, 2008-2010



Type of Customer by Organization
Percent of completed requests, 2008-2010

Type of Organization	Number of Requests	% of Total Requests
Federal Government	152	11%
Provincial Government	326	23%
Regional Health Authority	631	45%
Hospital	247	18%
Other	36	3%

¹ Excludes CADTH internal requests for RRS

A5. RAPID RESPONSE SERVICE CUSTOMER SURVEY: QUESTIONS AND HIGHLIGHTS OF FINDINGS

RRS Survey Questions

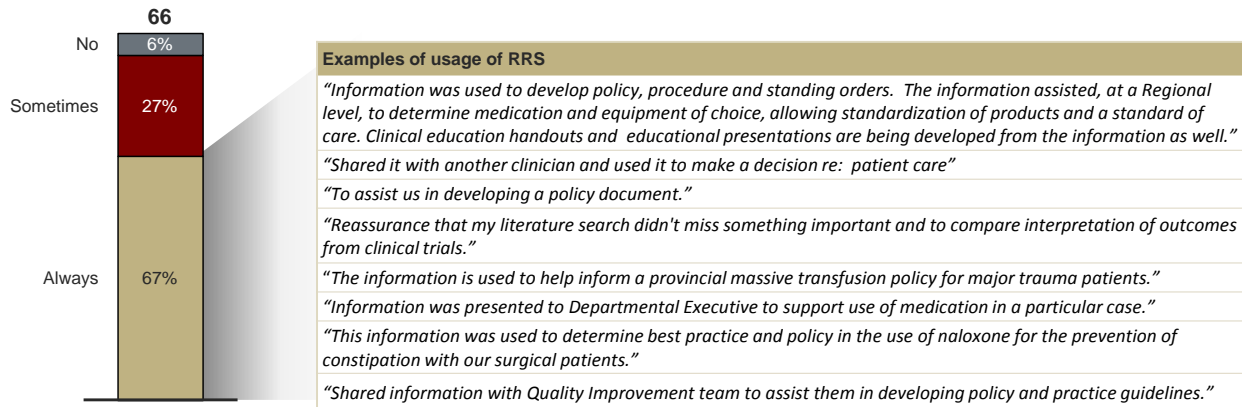
THEME	QUESTIONS
RRS Overall Service	<ul style="list-style-type: none"> ● How do you make your Rapid Response Service (RRS) request(s)? ● When was the last time you used the RRS? ● How many times have you made a request to the RRS within the last 12 months? ● Overall, has the RRS met your needs? ● If not always, why? (please select all that apply) ● With respect to the RRS, please share your opinions on: <ul style="list-style-type: none"> • Would you use this service again? • Would you recommend this service to anyone else? • If yes, who would you recommend it to? (please select all that apply)
Experience with Last Product Requested	<ul style="list-style-type: none"> ● Reflecting on your most recent request, what did you intend to do with the information? (please select all that apply) ● For your most recent request, please provide details how you ended up using the information. ● For your most recent request, did the product meet your needs? ● If the product did not completely meet your needs, why? (please select all that apply) ● For your most recent request, could you have acquired evidence/information similar to that found in your requested RRS product from other sources? ● If yes, where? (please select all that apply) ● Why did you choose to use the RRS instead of services elsewhere? (please select all that apply)
User Information	<ul style="list-style-type: none"> ● What jurisdiction do you live in? ● What is the name of your organization? ● What is the nature of your organization? ● What is your position? ● Your name (optional)

RRS Survey Highlights of Findings

Customers' needs are generally well met by the RRS. For the most recent request, two-thirds of respondents had their needs fully met by the RRS.

Degree of customers' needs met by the RRS for the most recent request

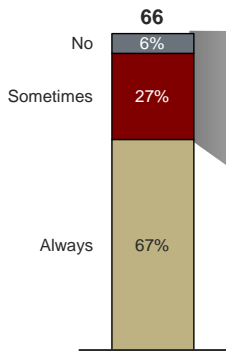
Percent of complete responses (n=66)



One-third of respondents had their needs not fully met by the RRS. Inconclusive evidence is one of the leading reasons why customer needs were not met by RRS. Other frequently cited reasons are an insufficient response to the research question (38%) and relevance of information (24%).

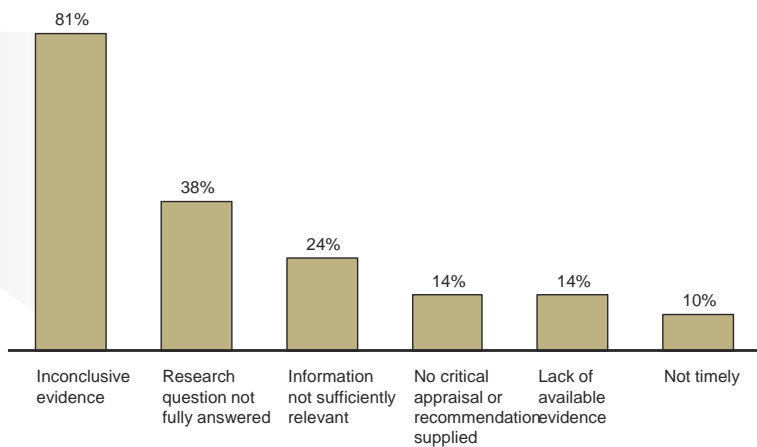
Degree of customers' needs met by the RRS

Percent of complete responses (n=66)



Reasons provided why customers' needs not met by the RRS

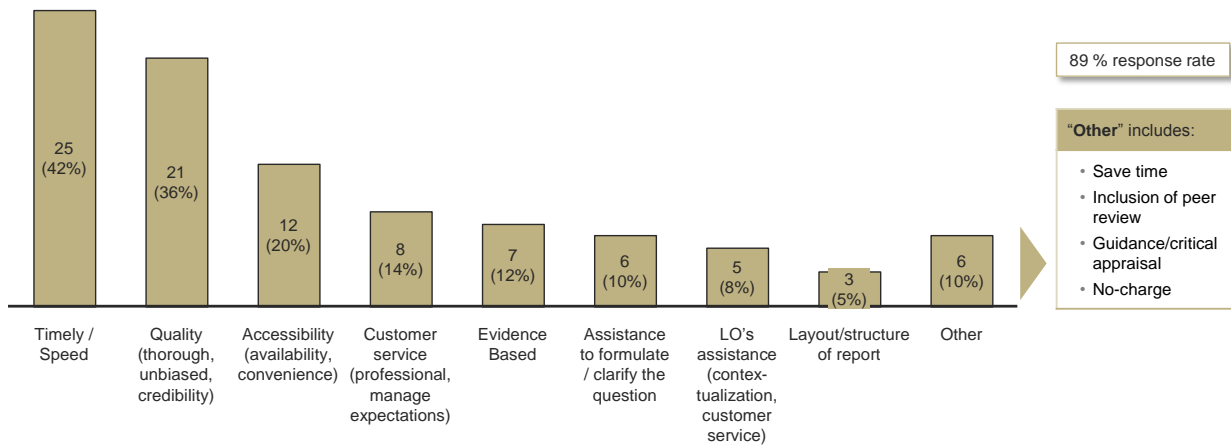
Percent of complete responses (n=21)*



* Sum of responses is greater than 100%, as respondents were asked to select all that applied

Customers most appreciate the RRS for its timeliness and quality.

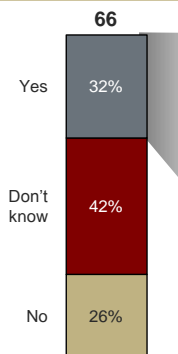
Classification of what customers like about RRS (unprompted, open-ended question)
 Percent of complete responses (n=59)*



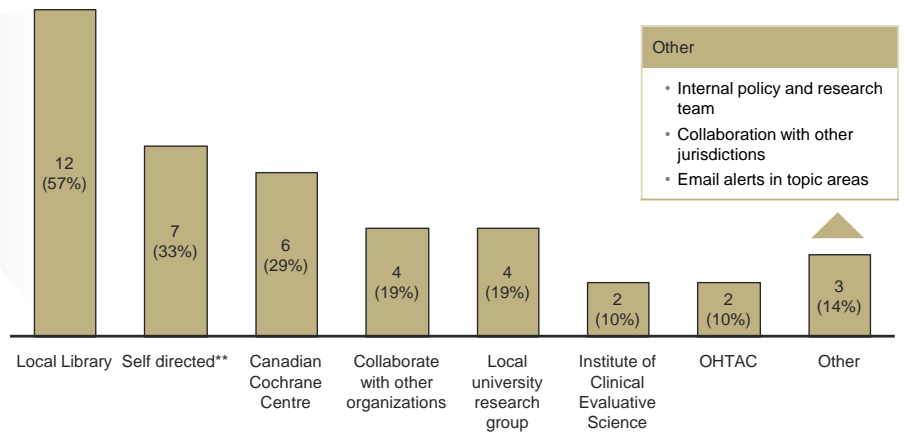
* Sum of responses is greater than 100%, as respondents were asked to select all that applied

Most customers use the RRS as they are unaware of alternatives. Those who indicate that they can find similar information provided by RRS elsewhere identify the local library, self-directed research, and the Canadian Cochrane Centre as sources.

Customer awareness of alternative RR-like services
 Percent of complete responses (n=66)



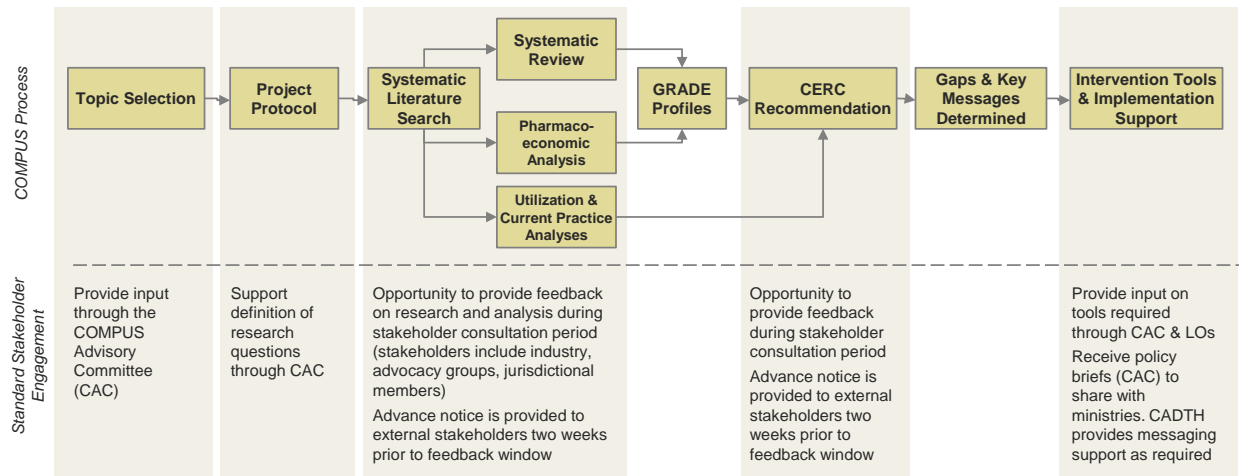
Customer awareness of alternative sources of RRS-like information
 Percent of complete responses (n=21)*



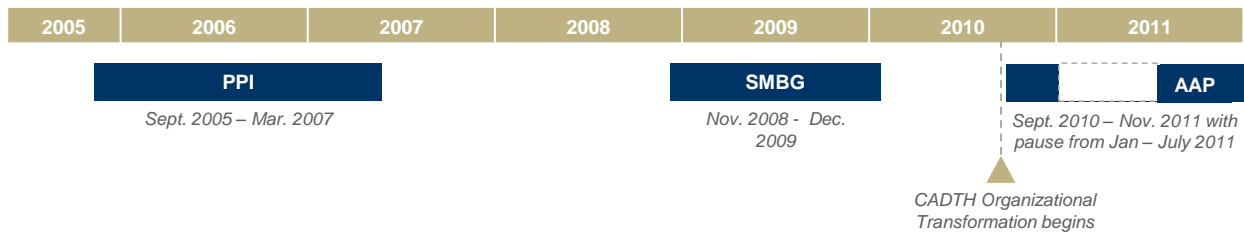
* Sum of responses is greater than 100%, as respondents were asked to select all that applied
 ** Self-directed research was not offered as an option and may be underestimated as a result

A6. COMPUS: HIGHLIGHTS OF ANALYSIS

COMPUS Process and Stakeholder Engagement



COMPUS Case Study Overview

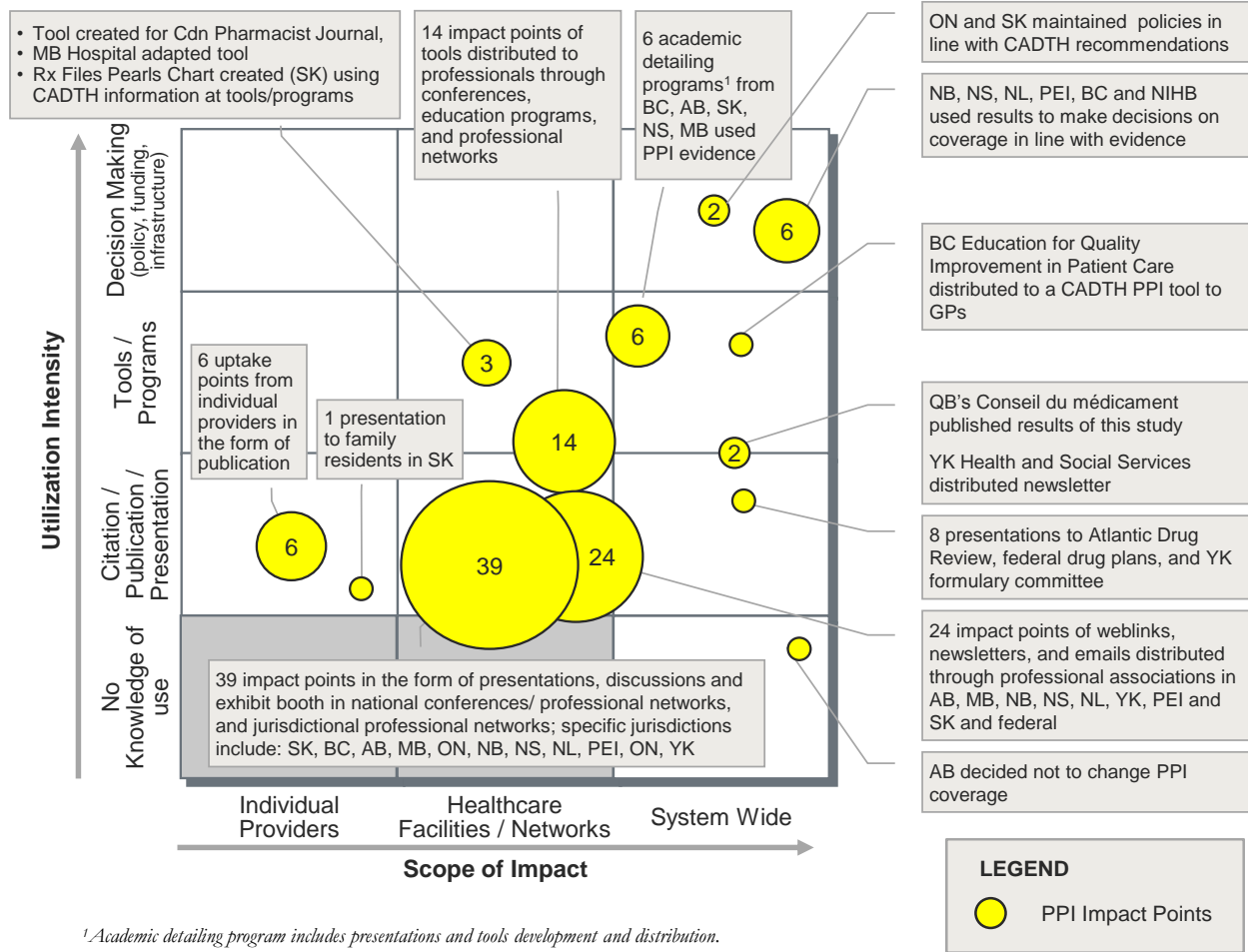


Project Details	PPI	SMBG	AAP
Investigation Question	"To address the use of PPIs for the management of GERD, dyspepsia, PUD, Helicobacter pylori infection, and nonsteroidal anti-inflammatory drug-associated ulcer"	"Optimal use of blood glucose test strips in patients with type 1, type 2, and gestational diabetes mellitus"	"To assess the use of atypical antipsychotic combination therapy, as well as high-dosing treatment strategies, in adolescents and adults with schizophrenia"
Cost¹	• \$4.3M ²	• \$3.3M ²	• \$0.58M
Level of Complexity	• High: early COMPUS project with underdeveloped methodology	• High: available evidence developed through inconsistent research methodologies, making it difficult to analyze and compare; 14 investigation questions	• Normal: 8 investigation questions
Project Initiator	• Conference of Deputy Ministers	• Conference of Deputy Ministers	• CAC
Advisory Committee	• CAC	• CAC	• CAC
Impact	<ul style="list-style-type: none"> All jurisdictions except for AB continued existing policies to limit coverage of PPIs AB continued to provide coverage to name-brand PPIs against CADTH's advice 	<ul style="list-style-type: none"> PEI decided against expanding coverage of test strips based on CADTH's work NS changed its policy to limit test strip coverage; policy change was reversed shortly after it was announced due to lack of political will 	• TBD: draft recommendations posted for stakeholder feedback

COMPUS Case Study Impact Analysis

The **PPI project** has gained traction in many jurisdictions:

- Outreach efforts are largely concentrated on dissemination of evidence to health care networks and providers



¹Academic detailing program includes presentations and tools development and distribution.

