In person
or virtual

RARE DISEASE 2022 FALL CONFERENCE

Planning for Proof-of-Concept Programs to Transform Vision to Reality

November 21-22, 2022
Toronto, Ontario
(Exact location to be confirmed)

We are excited to invite you to the CORD 2022 Fall Conference! This two-day conference will bring together experts and participants that will engage in strategic planning sessions to arrive at proposals for key components within the three pillars of the Rare Disease Program.

CORD Canadian Organization for Rare Disorders

Fall 2022 Conference Outline

Planning for Proof-of-Concept Programs to Transform Vision to Reality

November 21 - 22, 2022

Toronto, Ontario*

(**Virtual option will also available**)

(*Exact location to be confirmed)

Rare Disease 2022 Fall Conference

From Vision to Reality: Canada's Rare Disease Drug Strategy
Transforming Commitment to Investment in Optimal Patient Outcomes

Overview

In 2019, the Canadian government committed $1 billion to setting up Canada's Rare Disease Drug Strategy with the goal of providing access to effective therapies for persons living with rare diseases. For the past three years, the Canadian Organization for Rare Disorders has been hosting monthly multi-stakeholder webinars and bi-annual conferences with a singular focus: how to invest the $1 billion start-up funding and $500 million annual commitment to achieve optimal patient outcomes and returns on investment to the health system and society.

This opportunity comes at a time with many transformative and life-saving therapies emerging as the first effective treatments for rare and ultra-rare patients with progressive, severe or life-threatening conditions. By their very nature, novel drugs targeting small patient populations with limited natural history studies require novel clinical trials, including short, small, single-arm, non-placebo-controlled designs and reliance on real-world patient reported outcomes data collected during clinical trials and into real-world usage. Furthermore, because many new orphan-designated drugs are targeted toward specific genetic mutations, increasing the likelihood of benefit and reducing potential for harm, companion diagnostics are key components of the clinical trials, regulatory approval processes and real-world usage.

Unfortunately, cost-effectiveness, or health technology assessment (HTA), processes have not transitioned much beyond traditional assessment tools and benchmarks, with the inevitable outcomes that rare disease drugs mostly do not meet (traditional but arbitrary) standards of clinical or cost-effectiveness set by the HTA agencies. Most also do not adequately take into consideration the fact that small patient numbers may drive individual-patient price upward while the overall budget impact remains very low.

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After three years of consultation, Canada's rare disease community is in agreement. To assure optimal patient outcomes as well as optimal societal benefits, a Rare Disease Drug Program must transcend a list of funded drugs. Canada can demonstrate global leadership by implementing a highly effective, cost-effective, and sustainable RD Drug Program built upon three pillars. These are: (1) Network of Rare Disease Centres of Excellence; (2) Adaptive pathways for accelerated access with real-world monitoring and patient data collection and analysis; and (3) Patient integration in all areas and at all levels of rare disease management and drug utilization. The very good news is that 75% to 90% of infrastructure and expertise are already available. What we need is 'smart' investment to leverage, expand, coordinate and integrate existing human and facility resources, fill in program gaps, sponsor learning and demonstration projects, and also train and support patient organizations and patients to integrate them throughout the program.

1. **Invest in a rare disease infrastructure built around a Network of Rare Disease Centres of Excellence,** that can serve as the "hubs" for other sites to assure every rare disease patient has access to timely diagnosis, specialist care, individualized best drug access, comprehensive care close to home, enrollment in patient information management program, and participation in real world data collection.
2. **Invest in alternative pathways for drug access** that can be customized to the specific requirements of each rare condition and therapeutic option to provide affordable, consistent and sustainable access for all patients regardless of where they live in Canada. Overall, the drug system must meet the triple goals of: (1) Patients receiving affordable and timely access to individualized best therapy; (2) Healthcare systems and public and private drug plans are able to reasonably predict and manage health and drug budgets to achieve an optimal return on health resources while meeting the needs of the population and individuals; and (3) Researchers and manufacturers experience adequate incentives to invest in rare disease drug research and achieve also return on investment through the distribution of therapies to patients.
3. **Patients are fully engaged as partners throughout the drug program**, including the level of individual decision making on therapeutic options, design and delivery of healthcare and drug-related services, regulatory and health technology assessment, pathways for access (criteria for managed access plans), and patient information management (including patient registries and real-world data collection and use).

Fall Conference: Planning for Proof-of-Concept Programs to Transform Vision to Reality

Goals: The goals of the conference are to develop demonstration projects that can serve as "proof of concepts" for the key elements of an essential Rare Disease Drug Program to support effective and cost-effective use of rare disease therapies.

During the conference, participants will engage in strategic planning sessions to arrive at proposals for key components within the three pillars of the Rare Disease Program, building on the discussions in the CORD June Rare Disease Drug Conference and subsequent webinars.

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PILLAR 1

(a) Network Centres of Excellence to Optimize Rare Disease Drug Program from Diagnosis to Life-Long Patient Engagement

- Designating Rare Disease Centres of Excellence and Centres of Distinction. The WHO has endorsed a Global Network of Rare Disease Centres of Excellence linking national Rare Disease Centres within regions and also to local resources, with the goal that every rare disease patient will have access, directly or by remote consultation, to a specialist centre of care. Within the global framework, the Canadian Network of Rare Disease Centres of Excellence, when fully operationalized, are envisioned to provide up-to-date expertise on diagnostics, management, treatment, and monitoring as well as coordination of comprehensive care and support. In addition, the Canadian network will encompass programs serving specific disease groups, many of which are recognized today as international centres of expertise. These include; Inherited Metabolic Diseases Program and Network, Ottawa Pediatric Bone Health Research Group and The Canadian Consortium for Children's Bone Health/Canadian Alliance for Rare Disorders of the SkeletonHypophosphatasia, Canadian Neuromuscular Network, Canadian Fabry Disease Initiative, and Canadian Haemophilia Treatment Centres
- Centers of Excellence will also serve as reference sites for diagnosis and consultation and collaboration on best practice guidelines. Models of hubs connected to community-based care, including primary healthcare providers and local support resources include: Cancer Strategy – Canadian Partnership Against Cancer; Ontario Rare Disease Strategy [Implementation Plan 2018]; Politique québécoise pour les maladies rares [2022]
- Next steps for setting up RD Centres of Excellence include:
    - Defining the roles of the Canadian Organization for Rare Disorders (CORD), Maternal Infant Children and Youth Research Network (MICYRN) and Children's Healthcare Canada
    - Agreeing on Canadian criteria for Centers of Excellence and allied Centres of Distinction, adapted from international best practices (WHO model, NORD COEs)
    - Developing Terms of Reference for allied Rare Disease Groups (Canadian Disease-Specific Networks, European Reference Networks)
    - Agreeing on and implementing procedures for application, review and designation
    - Identifying and requesting resource requirements: Human resources, facilities, technology, management, financial

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(b) Diagnostic Programs: Newborn Screening to Adult On-set Disorders

The keys to optimal drug utilization are timely, accurate diagnosis, timely access to the treatment matched to the patient profile, and on-going access to patient information necessary to analyze beneficial, adverse and/or no drug effects for the individual and across the population. By "thinking smart" and applying "smart" technology, we can enhance existing healthcare infrastructures to rapidly and accurately diagnose a rare condition and refer the patient to a Rare Disease Centre of Excellence that can provide an accurate diagnosis, propose a best-practice care and treatment plan, liaise with the local care community for on-going support, and enroll the patient in a digital information platform (a.k.a. patient registry) to effect regular submission of patient treatment information and health status indicators (biomedical, clinical, and quality of life).

- Genetic Diagnostic Programs. Newborn Screening and New Baby Testing: For many rare conditions, the path toward a timely, accurate diagnosis begins at birth with newborn screening. While some provincial programs have expanded NBS, there are no national standards and no procedures for adding new tests. Over the past decade Ontario has emerged as one of the frontrunners with provincial program based in Children's Hospital of Eastern Ontario (CHEO).
- Genomic Testing: As technology continues to improve, clinician experience continues to increases, the number of targeted therapies continue to proliferate, and sequencing costs continue to decline, genome sequencing will become increasing standardized in diagnosis and care of rare disease patients. CHEO is also the hub for Genome Canada funded pilot programs targeted therapies proliferate, and costs n next-generation exome and genome sequencing.
- Patient Information Management Platforms: Patient data management systems are essential d for collecting, integrating and analyzing different types and sources of data from pre-and post-diagnostic (genetic, genomic, phenotypic, and familial) tests, clinical trials, and therapeutic interventions, clinician-generated information as well as, patient-generated real-world-data including response to treatment, quality of life, and long-term patient outcomes. In Canada, some well-established patient registries serve some these functions including: Canadian Bleeding Disorders Registry and Canadian Hemophilia Registry; Canadian Cystic Fibrosis Registry; Canadian Pharmacogenomics Network for Drug Safety. As importantly, open access patient platforms support patient submission of patient-relevant information, patient control over use of their information, and patient input on choices related to their care. Platforms that can serve these purposes include: NORD IAMRARE platform (used by CHEO-led research project); LunaDNA (San Diego), and Varient (University of Toronto).

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Additionally, a number of digital tools, platforms, and software solutions available or being developed in Canada contribute to combining and/or transforming genetic and genomic information with other patient data to effect more complete and useable diagnostic information. Viable programs include PhenoTips, Varient, and Khure Health

- Research investment in clinical trials networks such as Maternal Youth Children Infants Research Network (MYCIRN), Cheer Child Health Clinical Trials, Cystic Fibrosis Canada Accelerating Clinical Trials (CF CanACT). Invest in rare disease research programs such as Life Sciences Ontario, Montreal InVIVO, UHN Toronto Hospital for Sick Children, BC Children's Hospital Research Institute Rare Disease Group, UBC Hayden Lab Centre for Molecular Medicine and Therapeutics, Centre for Commercialization of Regenerative Medicines

PILLAR 2

Provide best therapeutic access for individuals and population

- Informed early access to experimental, innovative and breakthrough therapies through rare disease clinical trials network
- Timely access to approved therapies through clinical trials, compassionate access, special access, early access, managed access, named patient access, and coverage with evidence developing programs.
- Patient-engaged platforms for collection of real-world data including biomarker, clinical, and quality of life reports. On individual basis, determine responsiveness and adapt treatment accordingly. Through population analysis, understand impact in real-world usage and adapt access criteria and outcome measures to evaluate long-term population and societal impact.

PILLAR 3

Assure optimal outcomes by integrating patients and families are as members of the care team and through system.

- Set up processes for patients and families to access up-to-date and understandable information on best practices, including all treatment options. Through Centres of Excellence, provide timely access to experts and to participate in informed decision making.

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- Provide meaningful and transparent pathways for patients and patient organizations to participate in therapeutic reviews, in Health Canada clinical trial and regulatory process and HTA processes at CADTH, INESSS, and provincial levels.
- Engage patients and patient organizations in patient information platforms
- Provide financial and other material support to patient organizations to meaningfully engage in all aspects of the Rare Disease Strategy and Rare Disease Drug Program.
- Support skills training and support for patient group leaders, advocates and patients to meaningfully participate in decisions and management of their own healthcare management