Canadian Policy in Fostering Orphan Drug Development
Introduction

- Canada is developing a federal framework for rare diseases.

- Steps are being taken to improve the clinical trial environment in Canada and coordinate the new federal framework within the investigational and treatment contexts, and the needs of payers.
Why move on orphan drugs now?

**Current Priorities:** Guided by Canadian government initiatives including Regulatory Cooperation Council and Red Tape Reduction.

**Current Regulations:** A significant number of orphan drugs have been approved through the traditional pre-market review; however, significant gaps remain that result in the lack of access to and regulatory coverage over orphan drugs.

**Rare Disease Patients:** Some have gained access to orphan drugs through clinical trials or Special Access Programme. Approximately 60% of US orphan drugs have received general approval in Canada. Continued access after conclusion of trials, funding by provinces are common concerns.
Provisions would be incorporated in a new Division of the *Food and Drug Regulations* including:

- **Orphan drug designation** with criteria and processes that are aligned with those of the US and EU so collaboration is possible

- **Regulator’s advice for clinical trials**, including provision of formal advice by Health Canada or in conjunction with international regulators

- **Transparency and information sharing** throughout the lifecycle of the drug so that key decision makers (including healthcare providers, health technology assessors (HTAs) and patients) have the ability to access it at the most appropriate time
  - Includes posting of orphan drug designations, CT registration and disclosure, posting of market authorizations and post-market plans associated with orphan drugs

- **Life-cycle approach** to take into account a wide body of evidence before and after a drug is marketed
**Orphan drug designation: Description**

**Description:**
Process and criteria for designating a drug as an orphan drug

**Process:** Infrastructure would be set up to align with the existing international orphan drug designation processes and perhaps recognizing designation from acceptable international regulators (acceptance of US and EU designations still in discussion)

**Criteria:** Demonstrate prevalence rate of not more than 5 in 10,000 persons, and that the drug is intended for the diagnosis, treatment, mitigation or prevention of a life-threatening, seriously debilitating, or serious and chronic disease or condition and is necessary because there is no existing therapy for the rare disease; or, if there is an existing therapy for the rare disease, the drug would provide substantial therapeutic benefit for the patients with the rare disease
Benefit:

**Patients, healthcare providers and HTAs:** Transparency = chance to provide input in the early stages of drug development, to help design the studies with respect to quality of life benchmarks

**Industry:** Early protocol advice without charge for SMEs and reduced charge for larger enterprises; priority review and waiver/remission of filing fees for market authorization applications for SMEs; specific requirements for benefit-risk assessment (as part of post-market plan); and 8 years of market exclusivity

**Researchers and Regulator:** Maximize limited resources by enabling coordinated research efforts through international collaboration and harmonization on regulating orphan drugs. Standardization of REB review to eliminate duplication and burden for the research community.
Providing Protocol Advice

**Description:**
- Provision of formal, structured scientific advice by Health Canada
- Ability to include early input from patients, experts and HTAs
- Acceptance of foreign advice and/or participation in joint protocol advice (with EU and US)
- Potential expanded access to orphan drugs in clinical trials

**Benefit:**
- Patient-centred approach
- Key decision makers and patients have the ability to access and input at an earlier time -- when it’s most valuable
- Ability to better aggregate data throughout the lifecycle
Life-cycle Approach (1)

Description:
Focus on benefits, harms and uncertainties. Framework has similar scientific requirements as for the regulation of new drugs and includes built-in flexibility for small clinical trials and other types of information to support approval.

Pre-Market:
• Pre-clinical/clinical data, quality, labelling
• Copy of the designation; regulatory status in other countries, a description of the limitation of evidence available to determine benefits and harms; and a plan for gathering and reporting information for ongoing benefit harm assessment and proposed steps to reduce uncertainties about benefits and harms.

Authorization:
• Health Canada may issue an authorization to enable the gathering and dissemination of information necessary to reduce uncertainties regarding the benefits and harms of drugs intended for use in rare disease populations.
Life-cycle Approach (2)

Post-Market:
- Ability for Health Canada to reassess all or part of a market authorization.
- Ability to direct a market authorization holder to compile information; conduct tests or studies; monitor the orphan drug for the purpose of obtaining additional information about its effects on safety; require label changes.

Benefit:
Transparency and information sharing throughout the life-cycle of the drug so that key decision makers and Canadians have the ability to access it at the most appropriate time for their respective needs.

Operational Impacts:
- Expected to change how data comes in during the post-market period.
  - Some data will be submitted on a schedule, based on post-market plan.
  - Some data will be submitted as per changes initiated by the applicant (manufacturing, broadening indication, etc.)
End goal: Alignment of Evidentiary Needs

Current paradigm

- Regulators
  - Quality, safety, efficacy (first 3 hurdles)
  - Benefit–risk profile
- Payers
  - Relative efficacy/effectiveness
  - Cost versus health benefit
  - Budget impact (4th hurdle)
- Emphasis on RCT, most often placebo-controlled

Future paradigm?

- Regulators
  - Quality, safety, efficacy
  - Benefit–risk profile
- Payers
  - Relative efficacy/effectiveness
  - Cost versus health benefit
  - Budget impact
- Dedicated relative efficacy/effectiveness assessment?
  - Emphasis on RCT, most often active- and placebo-controlled
  - Cost-effectiveness/utility analyses
  - Budget impact analysis
  - Active-controlled RCT
  - Adaptive Phase III–IV trials
  - Observational studies
  - Meta-analysis

Assessors | Assessment focus | Studies/data
---|---|---
• Orphan drug framework will link to existing patent protections, i.e. *Patented Medicines (Notice of Compliance) Regulations* and to the data protection term of eight years.

• Additional policy considerations are being entertained for market exclusivity for new indications for approved compounds.
Next Steps

- Continue to consult with other decision makers, including Canadians, health care professionals, payers, academia, and industry, as well as international partners.

- Table a new regulatory framework.

- Continue to promote changes in regulatory culture.