

PRISM | Promoting Rare-Disease Innovations through Sustainable Mechanisms

ACCESSING NEW TREATMENTS FOR RARE DISEASES: WHAT DOES RATIONAL, FAIR, AND EQUITABLE LOOK LIKE?

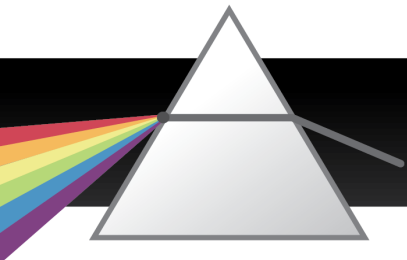
publichealth.ualberta.ca

April 29th, 2025



OVER THE NEXT 70 MINUTES...

- How are new treatments for rare diseases made accessible to patients in Canada?
- How does this compare with other countries?
- What does *rational, fair, and equitable* access mean?
 - Industry perspective
 - Patient perspective
 - Clinician perspective
 - Public payer perspective



WHO PAYS?

Public drug plans

- Federal, provincial, and territorial governments
- Coverage focused on certain populations

Private drug plans

- Often employer-sponsored, but sometime purchased by individuals
- Limits on coverage per year or over life of patient

Pay out of pocket

- Individuals pay for drug themselves
- Often not possible given high cost of drug

Patient support programs

- Offered by pharmaceutical companies
- Provides access on a compassionate basis

Clinical trials

- Patients enroll in trial
- Provides access to drugs still in development

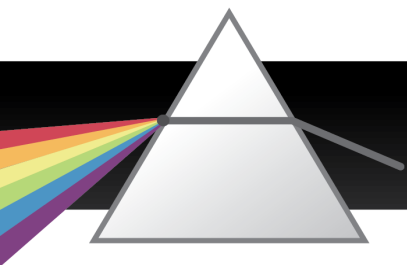


WHO PAYS?

Treatments for rare diseases: Mainly public drug plans

Cost of new gene therapy based treatments

Name	Rare inherited condition	Main symptoms	Response	Cost/patient (USD millions)
Luxturna	Retinal disease	Blindness	Preserves some eyesight	0.85
Zolgensma	Spinal Muscular Atrophy	Loss of muscle, loss of ability to breath, walk & swallow, death	Preserves muscle function	2.1
Casgevy/ Lyfgenia	Sickle cell anaemia	Crippling pain, organ damage, stroke, death	Eliminates pain crises	2.2-3.1
Hemgenix	Haemophilia B	Uncontrolled bleeding, death	Substantially reduces bleeds	3.5

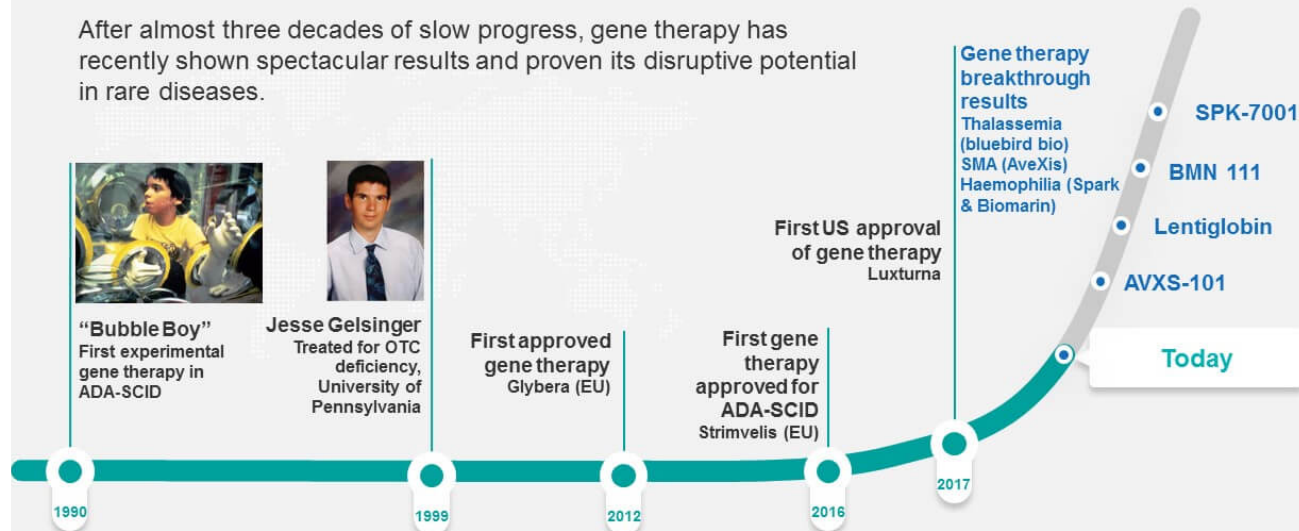


WHO PAYS?

- US FDA estimates: 10-20 new gene therapies by next year
- This doesn't include:
 - Therapies that don't involve genes or cells e.g. enzyme replacement therapy
 - Therapies for hard-to-treat or rare cancers

The Medical Promise Of Gene Therapy Has Become A Reality

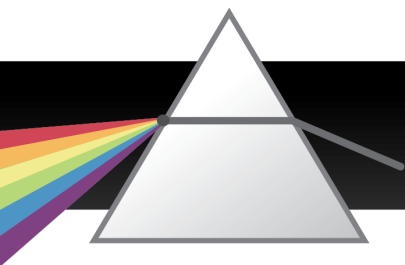
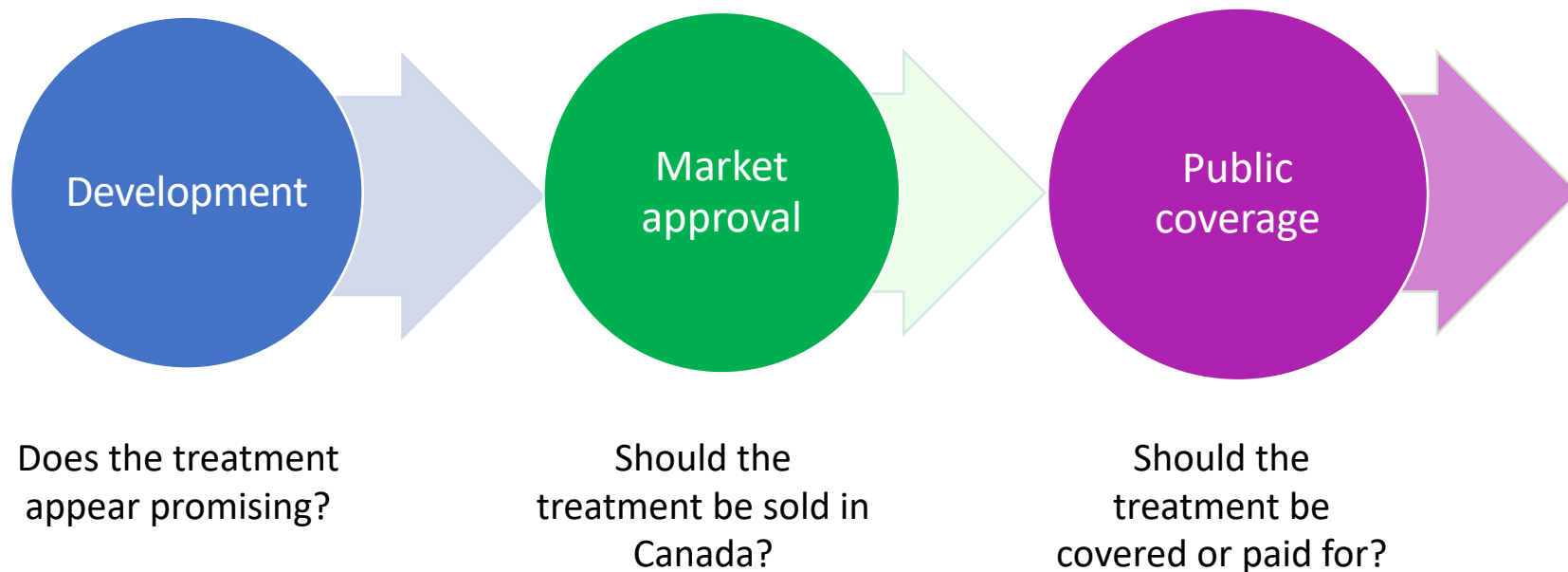
After almost three decades of slow progress, gene therapy has recently shown spectacular results and proven its disruptive potential in rare diseases.



PRISM

Promoting Rare-Disease Innovations
through Sustainable Mechanisms

WHAT STEPS ARE INVOLVED IN ACCESSING NEW TREATMENTS?



DEVELOPMENT

Generating ideas

Basic science research to:

- 1) Understand a disease
- 2) Identify disease “targets”

Searching for compounds

- Millions of compounds screened for link with targets
- Structure of selected compounds modified optimize link with targets

Conducting pre-clinical studies

Studies in animals to evaluate safety, efficacy and toxicity of modified compound (potential new therapy)

Conducting clinical trials

Trials in humans to assess:

- Phase I: Is it safe?
- Phase II: Does it work?
- Phase III: How well does it work compared to existing treatments or placebo?



PRISM

Promoting Rare-Disease Innovations
through Sustainable Mechanisms

MARKET (REGULATORY) APPROVAL

“New Drug Submission”

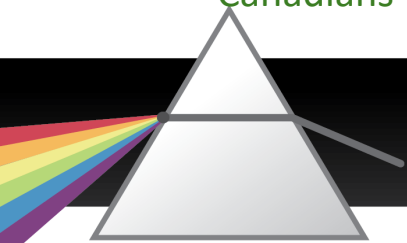
- Made to Health Products and Foods Branch (HPFB) of Health Canada
- HPFB mandate: “protect the safety and well-being of Canadians”

Comprehensive Review

- Reviews information on new drug’s safety, efficacy and quality
- Involves scientists, clinical consultants and advisory committees (sometimes including patient representatives)

Approval for market/sale

- Review concludes that potential benefits outweigh risk of harms
- Company granted permission to sell drug in Canada



PRISM

Promoting Rare-Disease Innovations
through Sustainable Mechanisms

PUBLIC COVERAGE

Canada's Drug Agency (CDA)*

- Makes **recommendations** on whether a new drug should be publicly funded to participating drug plans
- Expert committee assesses “clinical effectiveness and cost-effectiveness, as well as patient and clinician perspectives, of a drug”

Pan-Canadian Pharmaceutical Alliance (pCPA)

- **Negotiates prices** on behalf of provincial, territorial and federal public drug plans
- Goal is to achieve greater value through combined purchasing power

Individual public drug plans

- Makes final **decision** on whether to fund a drug
- Enters into a “listing agreement” with company

*INESSS in Quebec



PRISM

Promoting Rare-Disease Innovations
through Sustainable Mechanisms

PAN-CANADIAN REIMBURSEMENT RECOMMENDATION PROCESS

Parallel market approval/regulatory review

Pre-submission

- Confirm eligibility
- Hold pre-submission meeting
- Issue call for input
- Assemble review team
- Recruit clinical experts

Application

- Receive required documents from sponsor
- Accept file for review
- Initiate review

Review

- Collect input from interested parties
- Review evidence and prepare draft report
- Send draft report to sponsor for comment
- Finalize report
- Send report to expert review committee

Recommendation

- Hold meeting of Expert Committee
- Draft recommendation
- Issue draft recommendation to sponsor and drug programs
- Post draft recommendation for feedback
- Reconsider recommendation (if applicable)
- Issue final recommendation to sponsor and drug programs
- Post final recommendations

Implementation

- Convene implementation advice panel if drug plans request implementation support
- Issue draft report to sponsor and drug programs
- Finalize report
- Post report

Clinical experts

Clinical experts

Clinical experts

Clinical experts

Patients & caregivers

Patients & caregivers

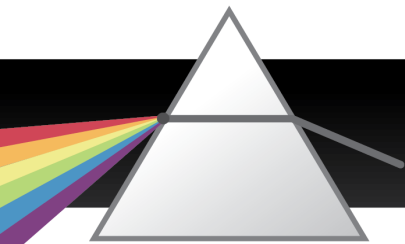
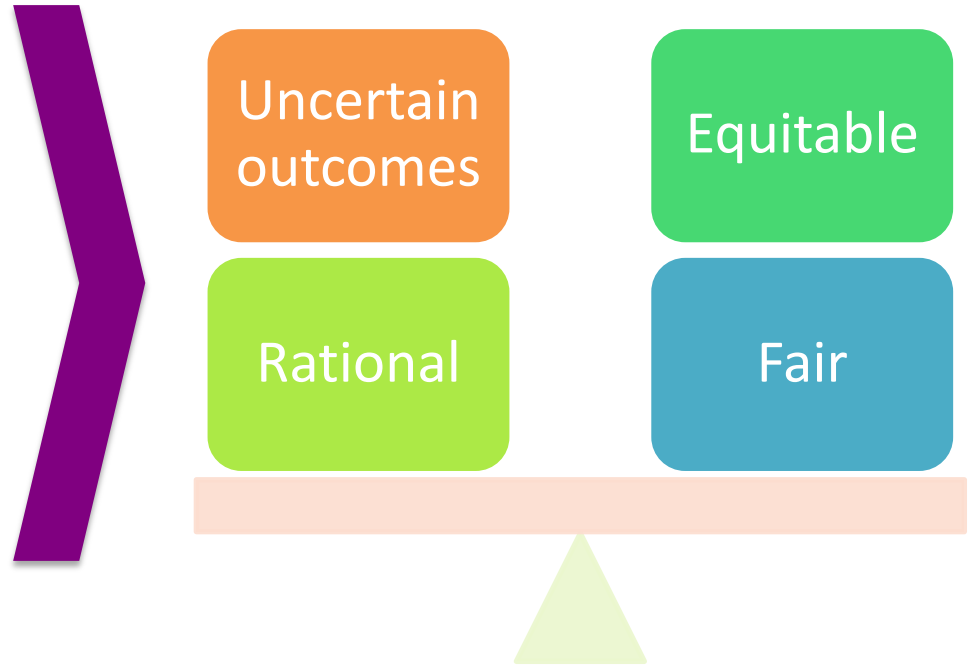
Patients & caregivers

180 days

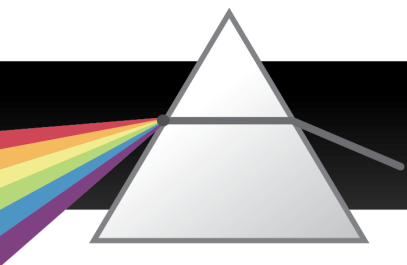
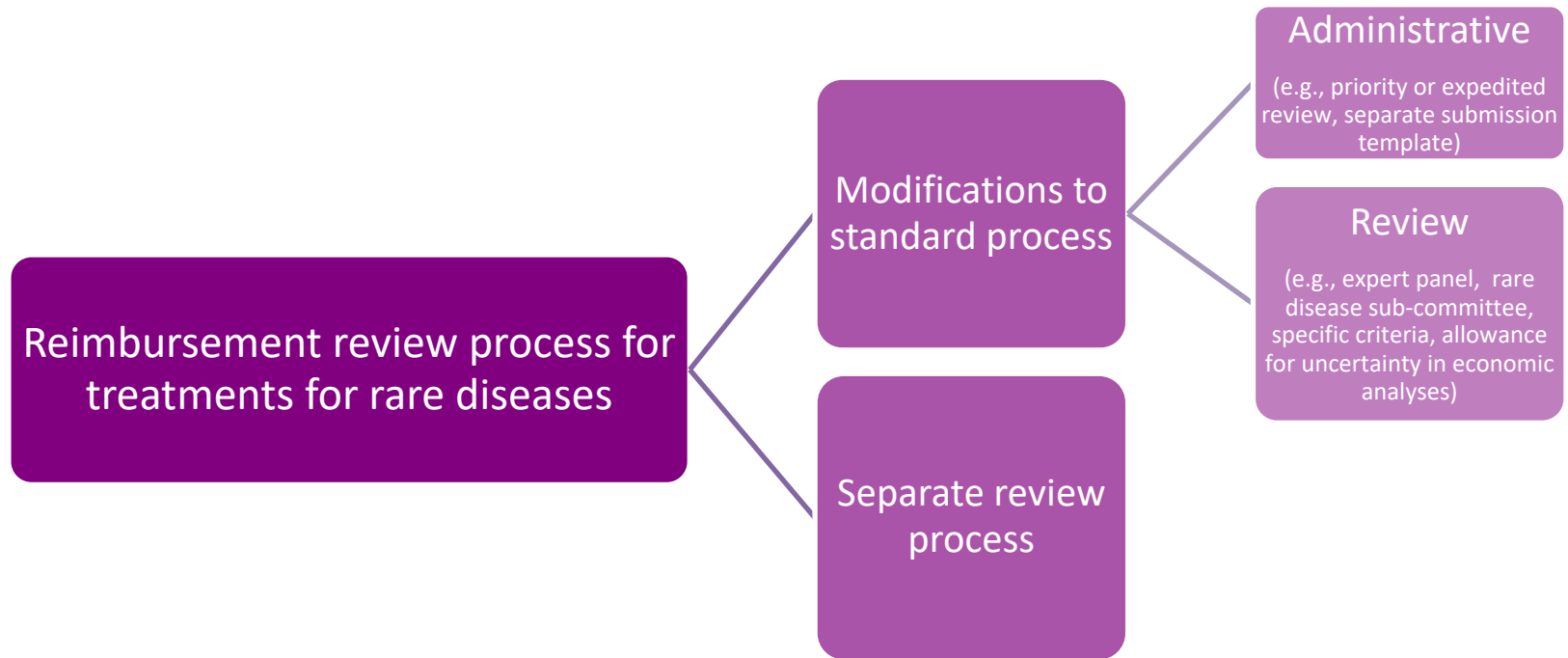
WHAT ABOUT SPECIAL CONSIDERATIONS FOR TREATMENTS FOR RARE DISEASES?

Features of most treatments for rare diseases

- For small numbers of patients
- For often inherited conditions that start in childhood
- Lack of alternative treatments
- Potentially life-changing or life-saving outcomes



WHAT ABOUT SPECIAL CONSIDERATIONS FOR TREATMENTS FOR RARE DISEASES?

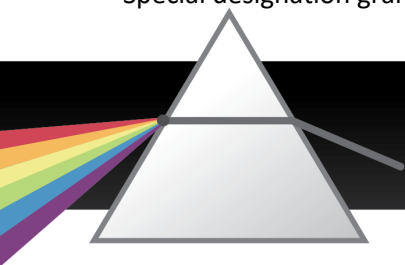


WHAT ABOUT SPECIAL CONSIDERATIONS FOR TREATMENTS FOR RARE DISEASES?

Other countries with modified processes:

JURISDICTION	ELIGIBLE DRD	ANNUAL BUDGET IMPACT	MODIFIED PROCESS
France	Innovative: - Received “orphan drug” status* and - Meets one of the following conditions: 1) New type of care 2) May be clinically significant advance 3) Meets need not sufficiently covered	< €30 million	- No HTA required - Reimbursed at price set by manufacturer
		≥ €30 million	- HTA required - Fast tracked process
Germany	Received “orphan drug” status* at regulatory approval	< €50 million	- No HTA required - Reimbursed at price set by manufacturer
		≥ €50 million	- HTA required - Standard process
The Netherlands	Received “orphan drug” status* at regulatory approval	< €2.5 million	- No HTA required - Reimbursed at price set by manufacturer
		≥ €2.5 million	- HTA required - Standard process

*Special designation granted by regulatory bodies to drugs intended to treat rare diseases



WHAT ABOUT SPECIAL CONSIDERATIONS FOR TREATMENTS FOR RARE DISEASES?

Jurisdictions with modified processes affecting DRDs:

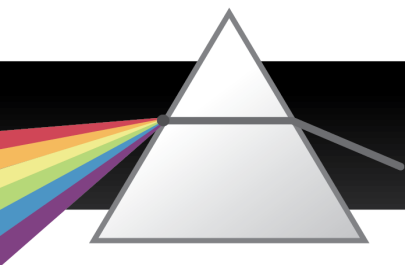
JURISDICTION	ELIGIBLE DRD	MODIFIED PROCESS
Italy	Received orphan drug status at regulatory approval	- HTA required - Fast tracked process
	Innovative drug: 1) Addresses unmet need 2) Significant added therapeutic value 3) High quality clinical trials	Access provided through special fund for up to 36 months
Scotland	Meets definition of ultra orphan drug 1) Prevalence of ≤ 1 in 50,000 2) European Medicines Agency (EMA) orphan designation 3) Condition is chronic and severely disabling 4) Condition requires highly specialised management	- HTA required - Made available for up to three years during which additional evidence is generated
Australia	Meets all of the following conditions: 1) For clearly definable disorder 2) Do not meet cost-effectiveness requirements but are considered clinically effective 3) No alternative non-therapeutic modality exists 4) Annual cost represents unreasonable burden to patient/family	- HTA required - May be considered through Life Saving Drug Program



WHAT ABOUT SPECIAL CONSIDERATIONS FOR TREATMENTS FOR RARE DISEASES?

Jurisdictions with completely separate process for DRDs:

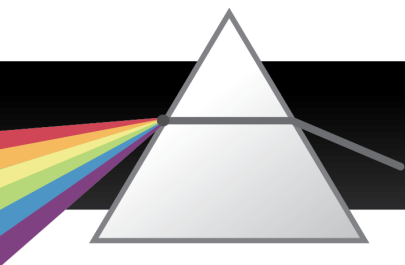
JURISDICTION	ELIGIBLE DRD	DRD PROCESS
United Kingdom – NHS England	Meets all of the following conditions: 1) Target population so small that treatment is concentrated within a few centres 2) Chronic and severely debilitating condition 3) Technology is used within a highly specialised service 4) High acquisition cost 5) Need for national commissioning	• Specialized review committee with expertise in DRDs • Evaluation methods that account for challenges involved in treatments for small populations



PUBLIC COVERAGE

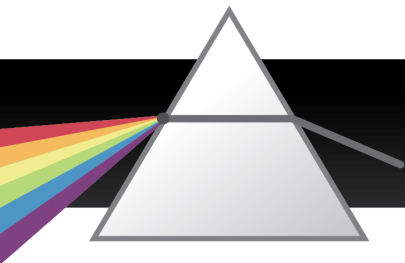
As of September 2022

Product (trade name)	CDA	INESSS	Australia	Catalonia (Spain)	Germany	Italy	Netherlands	Scotland	Sweden	UK
Asfotase alfa (Strensiq)	F	D	D	n/e	F	D	n/e	n/e	n/e	F
Burosumab (Crysvita)	F	D	n/e	n/e	F	F	n/e	F	F	F
Cerliponase alfa (Brineura)	F	F	F	n/e	F	F	n/e	n/e	n/e	F
Elosulfase alfa (Vimizim)	F	F	F	n/e	F	F	D	D	F	F
Lumacaftor/ ivacaftor (Orkambi)	D	D	F	n/e	F	F	F	D	F	D
Nusinersen (Spinraza)	F	F	F	F	F	F	D	F	F	F
Tolvaptan (Jinarc)	D	D	F	F	n/e	F	F	F	D	F



WHERE DO WE GO FROM HERE?

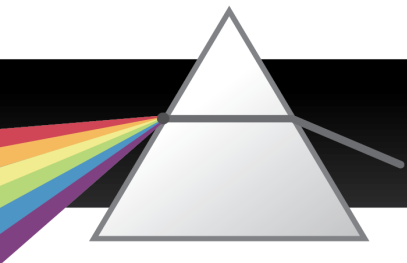
- Common challenges:
 - Affordable, sustainable access
 - Increasing number of high cost treatments
- Common responses?
 - How do we better manage clinical uncertainty?
 - How do we better manage financial uncertainty?



STAKEHOLDER PERSPECTIVES



Do you have a diagnosis that's
more affordable?



SOME DEFINITIONS

Equitable: Everyone should have a fair opportunity to attain their full health potential; therefore, individuals may require different approaches or supports to achieve similar outcomes

Fair: Providing care and resources in a way that is just, unbiased and responsive to individual needs and circumstances; ensuring that individuals have an opportunity to achieve health without discrimination

Rational: making decisions based on evidence, logic, and sound reasoning that are typically aimed at achieving the best outcomes with the most efficient use of resources

