

Introduction to Organ and Tissue Costing

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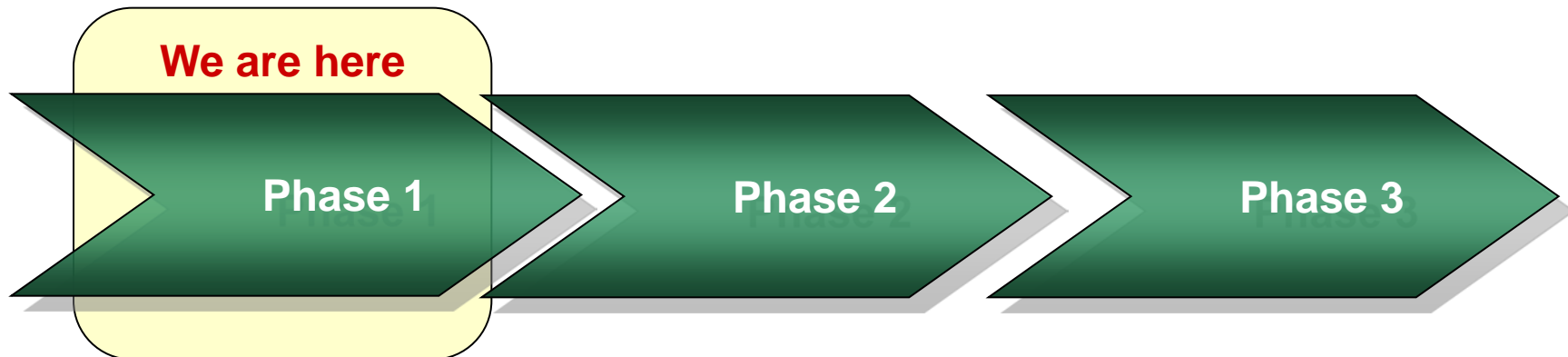


Draft Overview: Costing Presentation to Steering Committee

- Costing Project Overview
- OTDT System Costs
 - Organs
 - Tissues
- OTDT Investment – Selected International Jurisdictions
- Estimating Costs – Other Diseases
- Next Steps / Wrap-up



Costing Project Overview



- Identify current state OTDT costs along the organ and tissue process flows from existing data sources
- Note data gaps, limitations and assumptions
- Based on strategic direction arising from expert committees' discussions, identify areas where additional research is required to cost system design options
- Undertake detailed costing
- Utilize detailed costing information to support development of the business case for recommendations in the national OTDT plan

Summary – Organ Donation and Transplantation Estimated Annual Direct Operating Costs

ESTIMATED ANNUAL DIRECT OPERATING COST \$298.5 M - \$443.3 M (in 2009 dollars)

Cost Category	Donation		Transplantation		Total	
	Lower	Upper	Lower	Upper	Lower	Upper
Hospital	\$9.1	\$11.6	\$106.7	\$170.2	\$115.8	\$181.7
Lab			\$9.7	\$38.3	\$9.7	\$38.3
OPO (HR)	\$0.8	\$13.7			\$0.8	\$13.7
Physicians	\$3.7	\$4.4	\$13.4	\$23.0	\$17.0	\$27.4
Pharmacare			\$150.3	\$170.6	\$150.3	\$170.6
Pt	\$0.4	\$1.4			\$0.4	\$1.4
OPO (Transp)	\$4.5	\$10.2			\$4.5	\$10.2
Total	\$18.5	\$41.1	\$280.0	\$402.1	\$298.5	\$443.3

Identified Organ Donation and Transplant Costing Gaps and Limitations

- Gaps in organ donation and transplantation costs, for example:
 - Specialized infrastructure
 - Capital costs (equipment and facility / space)
- Key limitations in costing study include:
 - Physician and OPO costs have been estimated with limited information
 - Deceased donation costs have been estimated with limited information
 - Incomplete utilization data
 - Analysis does not evaluate costs and assumes costs are comprehensive/complete

Summary – Tissue Donation and Transplantation Estimated Annual Operating Costs

TOTAL ESTIMATED ANNUAL OPERATING COST EXCEEDS \$63.1 M (in 2009 dollars)

2009	Comments	\$ millions
Domestic Tissue Banking	-based on use of Goss Gilroy costs (2002) and CBS Supply Survey (2008) - costs led by ocular only donations (\$4.3 million) and cadaveric MSK banking (\$2.7 million)	\$ 10.8
Importation	-dental ~\$8 million; excludes soft tissue and skin tissue imports for dental use - mostly from importation of bone products (78%)	\$ 42.5
Transplantation	- corneal transplants only - mostly hospital (61%) and surgeon (15%) fees	\$ 9.8
TOTAL		\$ 63.1

Identified Tissue Donation and Transplant Costing Gaps and Limitations

- Domestic Tissue Banking
 - Data drawn from a source that is dated, anonymized and based on a small sample
 - Understanding of investment in, and depreciated value of tissue facilities and capital equipment is limited
- Importation
 - Demand (utilization volumes) and the proportion which is imported has been estimated using available data
 - Work to better understand imported volumes and costs is underway at CBS
- Transplantation
 - Costing focuses on corneal transplants
 - Represents ‘best estimate’ with numerous sources of provincial data being used for costing

Summary – Organ Donation and Transplantation Estimated Annual Operating Costs

TOTAL ESTIMATED ANNUAL OPERATING COST EXCEEDS \$400 M (in 2009 dollars)

	Estimate Cost (\$ millions)
Organs	\$298.5 - \$443.2
Tissues	> \$63.1
Infrastructure	> \$24.6

Examples Recent OTDT Investments

New Funding	Deceased Donors (PMP)		Transplants (PMP) Organ	Areas of Investment	Targeted Outcomes
	Organ	Tissue			
Australia: \$136.4 M AUD over 4 years (July 2008)	12.1	•Data not available	52.7	<ul style="list-style-type: none"> • National networks/authorities (ODT & TDT) • Specialist hospital staff and systems for organ donation • Hospital funding for donation costs • National professional awareness and education • Community awareness and education • Support for donor families • National transplantation processes 	<ul style="list-style-type: none"> • 30 – 50 % increase in organ dpmp • Increase of up to 370 organs/year
United Kingdom £16.5M - 2008/09 £26.5M - 2009/10	13.5	<ul style="list-style-type: none"> •Ocular: 34.5 •Surgical bone: 53.2 	57.8	<ul style="list-style-type: none"> • UK Wide organ donor organisation • Strengthened network of dedicated organ retrieval teams • Doubling of the number of front line donor coordinators • Make organ donation a usual rather than unusual event 	<ul style="list-style-type: none"> • 50% increase in organ dpmp over 5 years • Increase of 1200 organs/year
Canada TBD	14.6	<ul style="list-style-type: none"> •Ocular: 77.5 •Surgical bone: 68.5 	62.6	<ul style="list-style-type: none"> • To be determined based on national strategic plan 	<ul style="list-style-type: none"> • TBD

Estimating Costs - Other Diseases

Disease	Estimated Costs from National Strategies
Diabetes	<ul style="list-style-type: none"> \$4.66 B annually in total health care costs (2000\$) Projected to increase to \$8.14 B by 2016 (1996\$)
Cancer	<ul style="list-style-type: none"> Direct health care costs \$177.5 B over next 30 years
Cardio-vascular	<ul style="list-style-type: none"> Over \$22 B annually in total health care costs lost productivity (2000\$)

Diagnostic Category	Total Estimated Burden of Illness / year (billions)
Cardiovascular diseases	\$22.6
Musculoskeletal diseases	\$20.0
Cancer	\$17.4
Loss of Vision	\$15.8
Injuries	\$15.5
Endocrine and related diseases (diabetes)	\$ 4.2

2007 CAD

These costs represent order of magnitude and vary depending on types of costs included

Next Steps / Wrap-up

Guiding questions:

1. As a Steering Committee, what costing information do you need to assess the affordability of recommendations for a national OTDT system?
2. What costing information do Deputy Ministers need to see to support a credible business case for a national OTDT system?