CAPT 2024 Conference

Are healthcare systems ready for advanced therapeutics?

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Are healthcare systems ready for advanced therapeutics?

Starting the conversation

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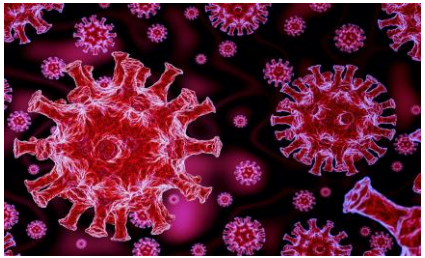
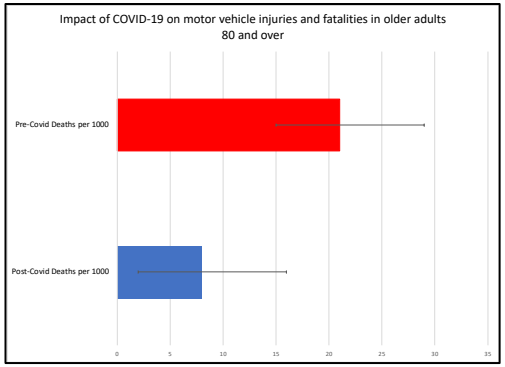
Technology and societal transformation (1)



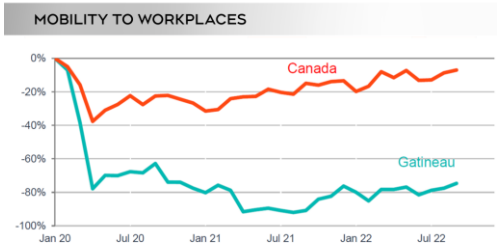
SARS-CoV-2

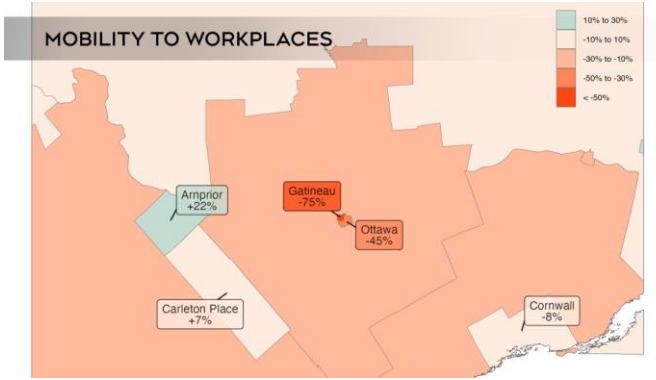
Lockdown



Videoconferencing

(and Teams, Webex, Google Meet)

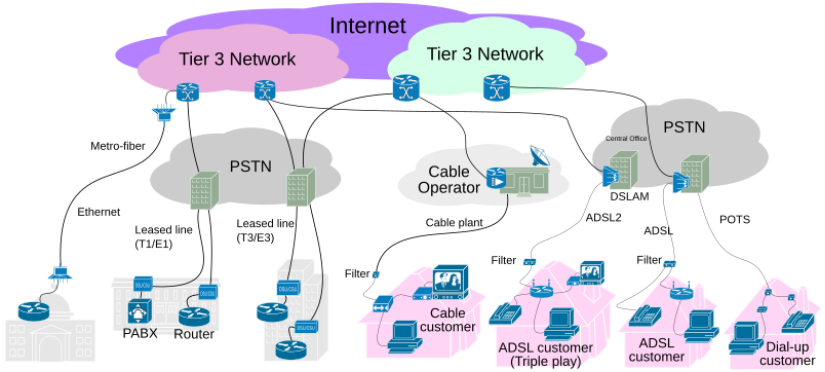




1. Rapoport MJ, Chee JN, Aljenabi N, Byrne PA, Naglie G, Ilari F, et al. Impact of COVID-19 on motor vehicle injuries and fatalities in older adults in Ontario, Canada. Accident Analysis & Prevention. 2021 Jul 1;157:106195.
2. https://ottawa.ctvnews.ca/ottawa-gatineau-slow-to-see-downtown-traffic-recover-but-outlying-areas-see-growth-1.6165521

Takeaway

- Videoconferencing has changed:
  - Where and how we live
  - When and how we drive / commute
  - How we dress
  - How we deliver and receive healthcare



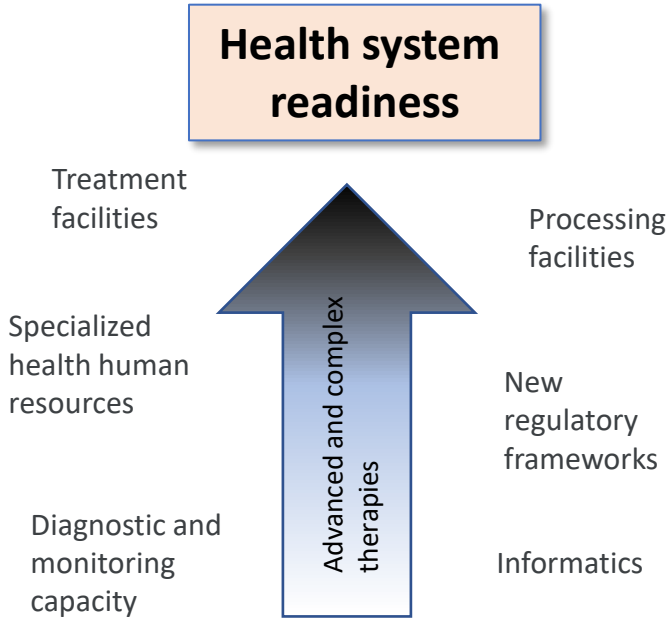
- However – we were prepared for this transformation through:
  - Internet
  - Broadband connectivity
  - Cloud platforms
  - Webcams and microphones
  - Browser-based platforms

Transformational technology?

- *Advanced therapeutic products* are typically personalized, developed at point of care, and manufactured, distributed and used in ways that differ significantly from traditional health products[1]
- *Complex therapies* are are context dependent-- Defined by interacting components, reliance on behaviours, reliance on groups/organizational levels, and allowance for tailoring[2,3]

Examples

- Fecal microbiota transplantation (FMT)
- Autologous / allogeneic stem cell therapy
- Gene therapy / editing
- Closed loop diabetes therapy
- Gene-modified cell therapy (e.g., CAR-T)
- Minimally invasive oesophagectomy
- Integrated care models
- Bispecific T-cell engagers (BiTEs)

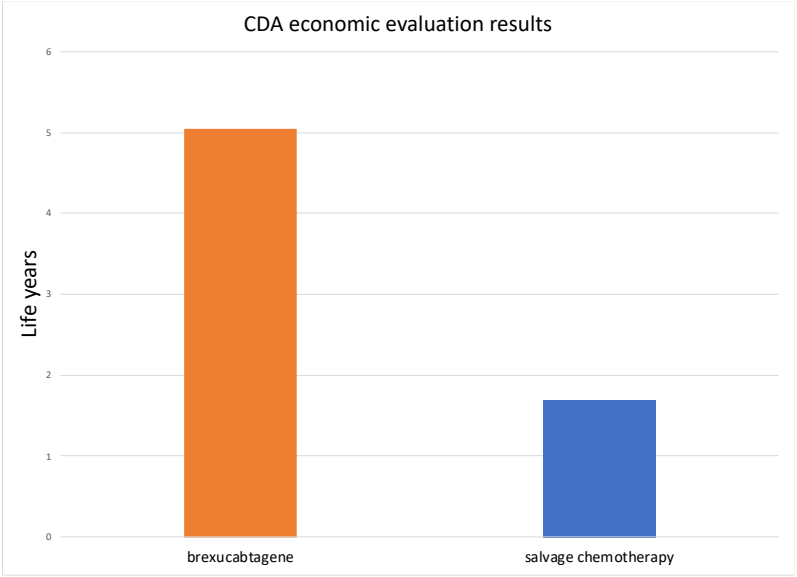


1. https://laws-lois.justice.gc.ca/eng/acts/f-27/page-3.html#h-1174034
2. Craig, Peter, Paul Dieppe, Sally Macintyre, Susan Michie, Irwin Nazareth, and Mark Petticrew. 2008. "Developing and Evaluating Complex Interventions: The New Medical Research Council Guidance." BMJ 337 (September): a1655. https://doi.org/10.1136/bmj.a1655.
3. Skivington, Kathryn, Lynsay Matthews, Sharon Anne Simpson, Peter Craig, Janis Baird, Jane M. Blazeby,

T cell therapies

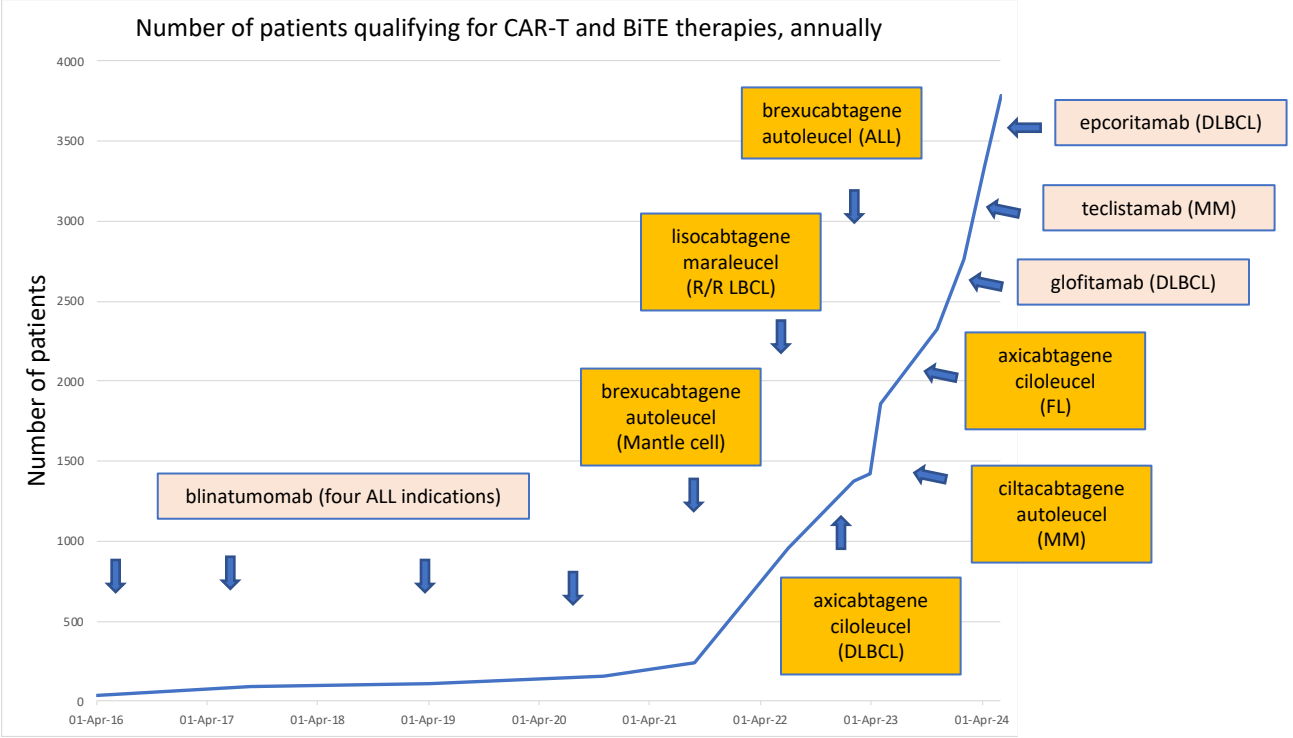
[PG-0304] brexucabtagene autoleucelfor the treatment of adult patients with relapsed or refractory B-cell precursor acute lymphoblastic leukemia (ALL)

Treatment	Component	Value
		Discounted LYs
Salvage chemotherapy	Event-free	0.68
	Progressed disease	1.01
	Total	1.69
Brexu-cel	Event-free	3.05
	Progressed disease	1.99
	Total	5.04



delta = **3.35 QALYs**

Who benefits?



Why is this a challenge to implement?

- Increased utilization
  - If admission to hospital is required, there is much less flexibility to increase capacity
  - Hybrid solutions that involve outpatient administration, reliable monitoring and access to critical care services may be needed

- Therapies can be costly
  - CAR-T therapies have all costs upfront – payers may take more risks than with ongoing therapy
  - However ongoing therapy may create more challenges for patients and care providers

Those who have knowledge, don't predict.
Those who predict, don't have knowledge.

--Lao Tzu, 6th Century BC

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