WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

Value in Healthcare (ViHC)
Ontario Type 2 Diabetes Pilot

Kick-off Meeting Pre-read

16 February 2018

Objectives for kick-off

Agree on foundations for value-based health systems

Share global best practice examples of value-based healthcare (VBHC)

Agree how to leverage positive work already underway in Canada

Begin discussions about Ontario's health system for Type 2 diabetes patients

Agenda

Topic	Presenter	Time
Welcome address	Joshua Tepper, President and CEO, Health Quality Ontario	**9.00 - 9.10am**
The patient's perspective	Charlene Lavergne	**9.10 - 9.20am**
Introduction to the World Economic Forum	Vanessa Candeias, Head of Global Health and Healthcare System Initiative	**9.20 - 9.30am**
Value-based healthcare and pilot approach	Mathieu Lamiaux, Senior Partner and Managing Director, BCG	**9.30 - 9.55am**
Opportunity for Q & A		**9.55 - 10.05am**
Building off current successes • Informatics: Diabetes Action Canada • Informatics: ICES • Informatics: LMC Registry	Prof. Catharine Whiteside, Executive Director A/Prof. Baiju Shah, Scientist and Endocrinologist Priya Narula, Endocrine Physician Assistant	**10.05 - 10.30am**
Break		**10.30 - 10.45am**
Building off current successes • Benchmarking: HQO • Payments: Ontario MOHLTC • Delivery organization: Diabetes Canada	Dr. Joshua Tepper, President and CEO Fredrika Scarth, Director, HQO Liaison & Program Development Russell Williams, Vice President, Government Relations and Public Policy	**10.45 - 11.10am**
Value-based healthcare diagnostic		**11.10 - 11.55am**
Wrap-up	Jonathan Lim, Project Leader, BCG	**11.55 - 12.00pm**

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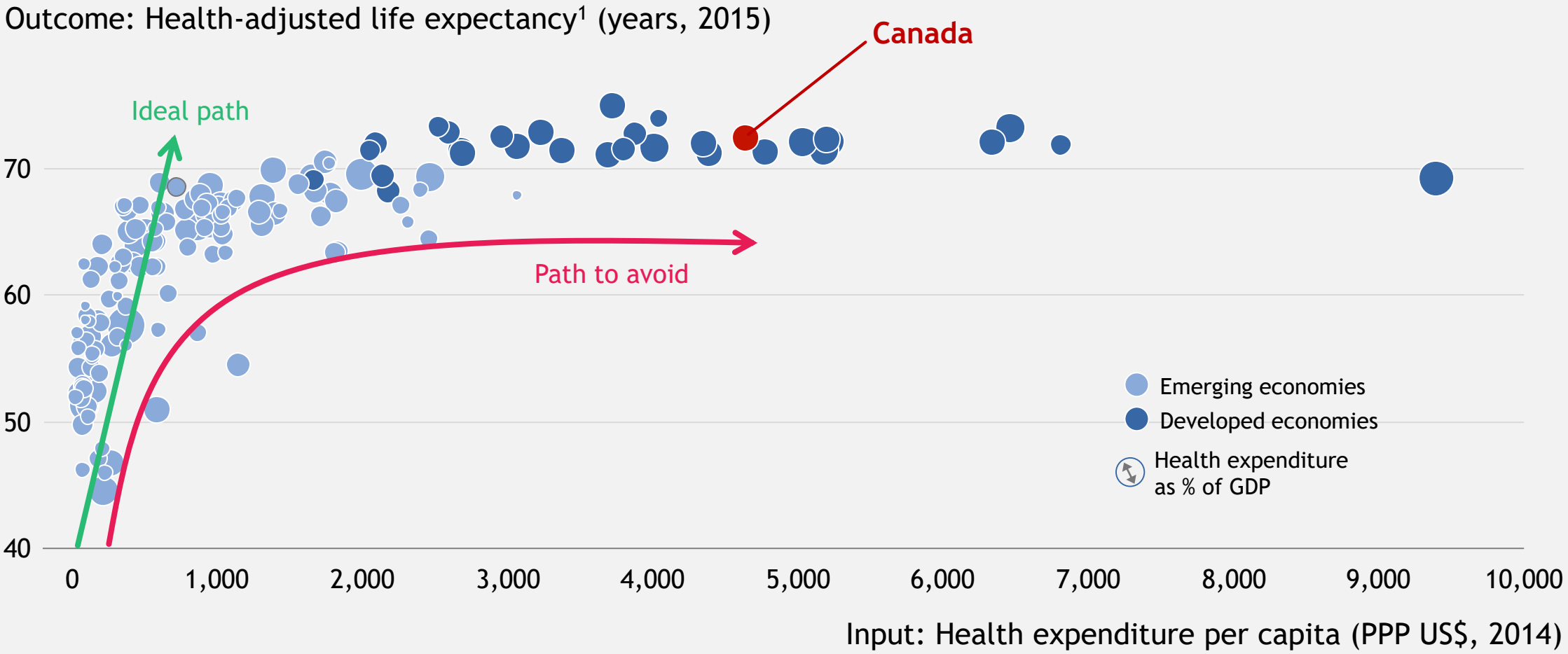
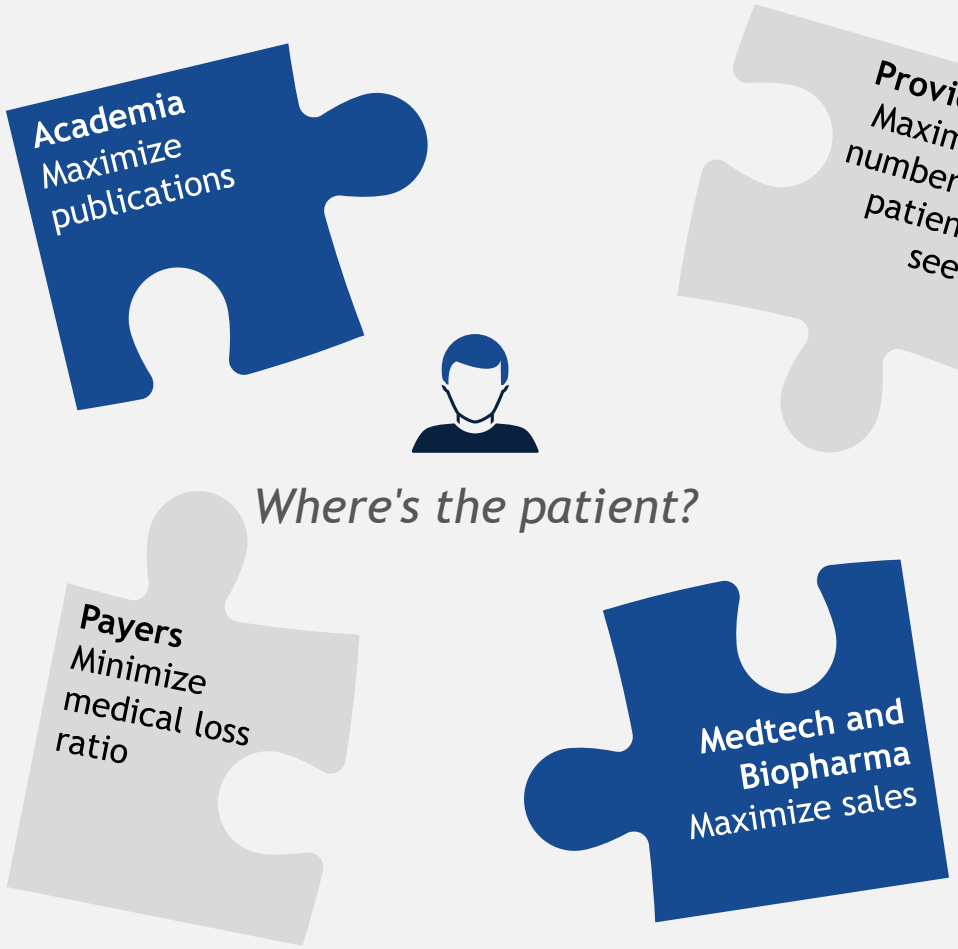
Healthcare delivery is a global challenge



1. Health-adjusted life expectancy: Estimates the number of years in full health an individual is expected to live at birth by subtracting the years of ill health (weighted according to severity) from overall life expectancy. Sources: WHO, BCG analysis

Misaligned incentives are at core of system inefficiency



Value in Healthcare

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The paradigm shift to align stakeholders on the outcomes that matter most to patients and ensure health system sustainability…

Value-based healthcare: People-centered health systems

Source: BCG analysis

The enabler transformation roadmap

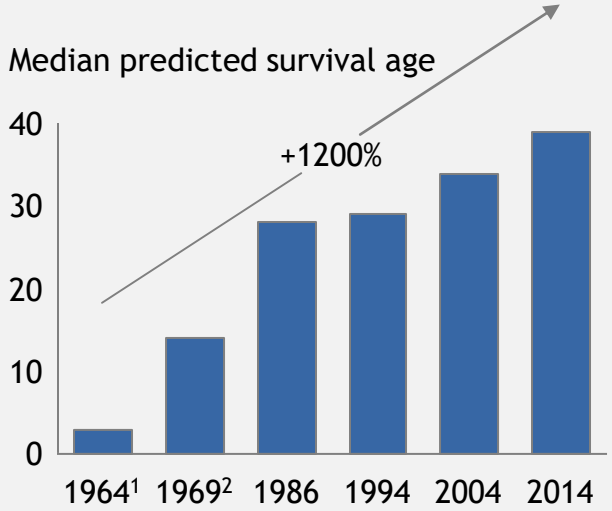
	Phase 1 Internal performance improvement	Phase 2 System learning and performance improvement	Phase 3 Transparency and value competition	Phase 4 A continuously improving VBHC system
Informatics	Data collection by individual stakeholders	Standardized measurement of value	Interoperable IT systems with risk-adjusted outcomes	Increased patient data collection and ownership
Benchmarking, research & tools	Comparisons within organizations only	Anonymized bench-marking among organizations	Competition based on public reporting; data available for research	Decision support tools and new clinical guidelines
Payments	Experimentation with new models	Shift away from fee-for-service	Quality improvement efforts with bundled payments & capitation	Value-based payments, optimized by patient group
Delivery organization	Increasing clinician engagement and ownership of value	Coordinated care across care chain	Quality improvement programs	Reorganization around population segments

Note: VBHC= value-based healthcare
Source: BCG analysis

US: Cystic Fibrosis registry improved patient outcomes

- Standardized reporting enabled better patient/provider dialogue
- Tailored registry tools for QI efforts/research to speed up drug launch
- Remuneration based on complete & accurate data reporting
- Large QI program helps parties to share best practices in network

Increase in patient survival and ability to lead full, healthy lives



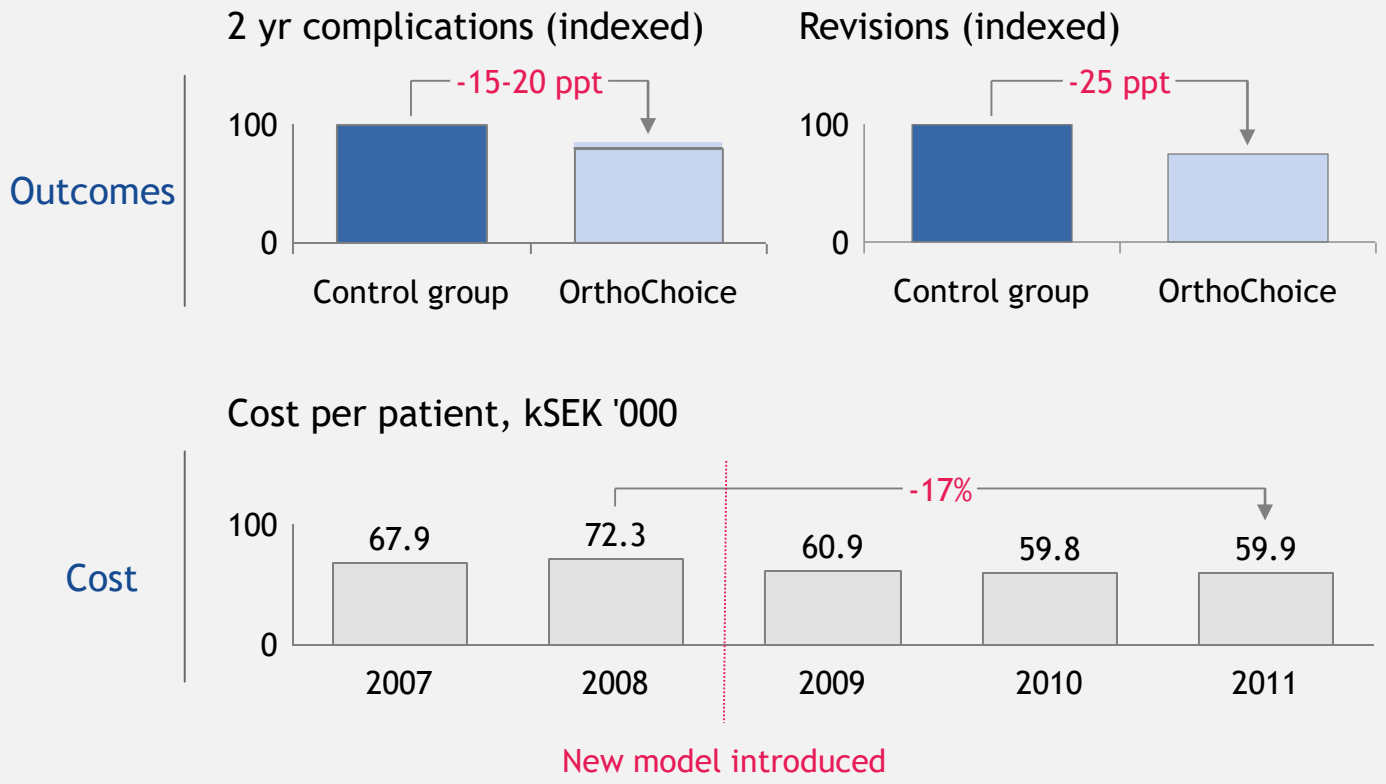
Note: QI = quality improvement
1. Bell Curve, Gawande 2. Journal of pediatrics 1993, Changing Epidemiology of Cystic Fibrosis, FitzSimmons
Source: Cystic Fibrosis annual report 2014

Sweden: Rapidly moving to a value-based health system

Model design

- Gov't invested €165B to improve coverage & use of >100 registries
- Annual national comparison of hospitals on outcomes and costs
- Value-based pricing of drugs since 2002; rollout of bundled payments
- Surgeries shifted toward specialty hospitals

Improved outcomes and lower costs for hip and knee surgeries



Note: Unpublished data
1. Control group: Patients enrolled in SLL standard payment scheme. All groups matched and controlled for age, multiple socio-economic factors and co-morbidity. All data statistically significant. Source: SLL, BCG analysis

Netherlands: Santeon is a cooperative of 7 hospitals

- Combined >13% of national hospital care
- EUR 2.6B in revenues
- 26,600 employees
- 1,580 physicians

Source: Collaborating for Value: The Santeon Hospitals in the Netherlands, ICHOM (2017)

Two key elements to Santeon's value-based approach

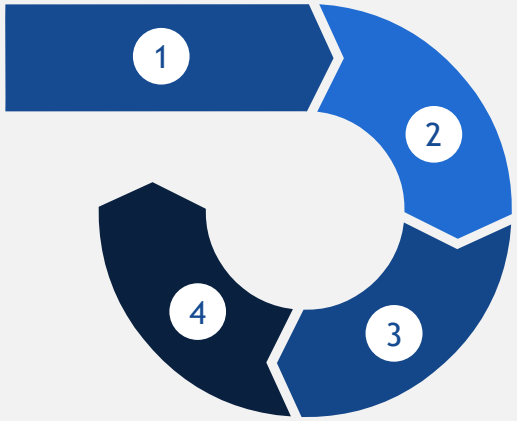
Care for outcomes

Developed condition-specific outcome indicators, starting with lung and prostate cancer

Analytics teams worked with doctors to survey six years of data. Key observations included:

- More expensive tests not always better
- Concentrated care delivery delivered better outcomes
- Predictive tools improved clinician outcomes and patient choice

Care for improvement: Continuous improvement cycles

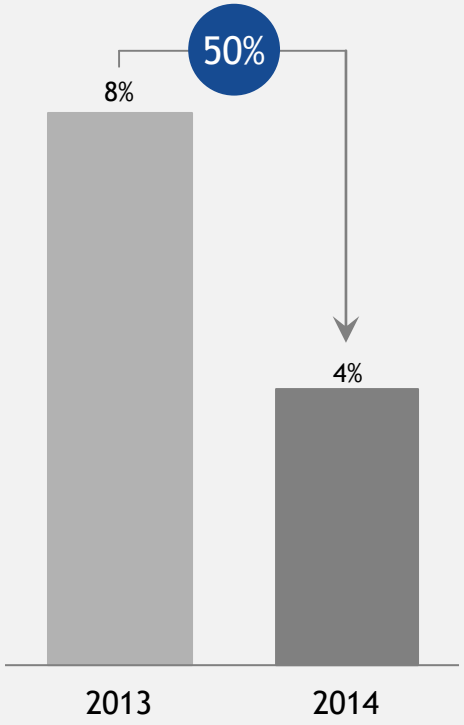


1. Develop scorecard
2. Conduct data collection and analysis
3. Identify improvement opportunities
4. Implement improvement plan

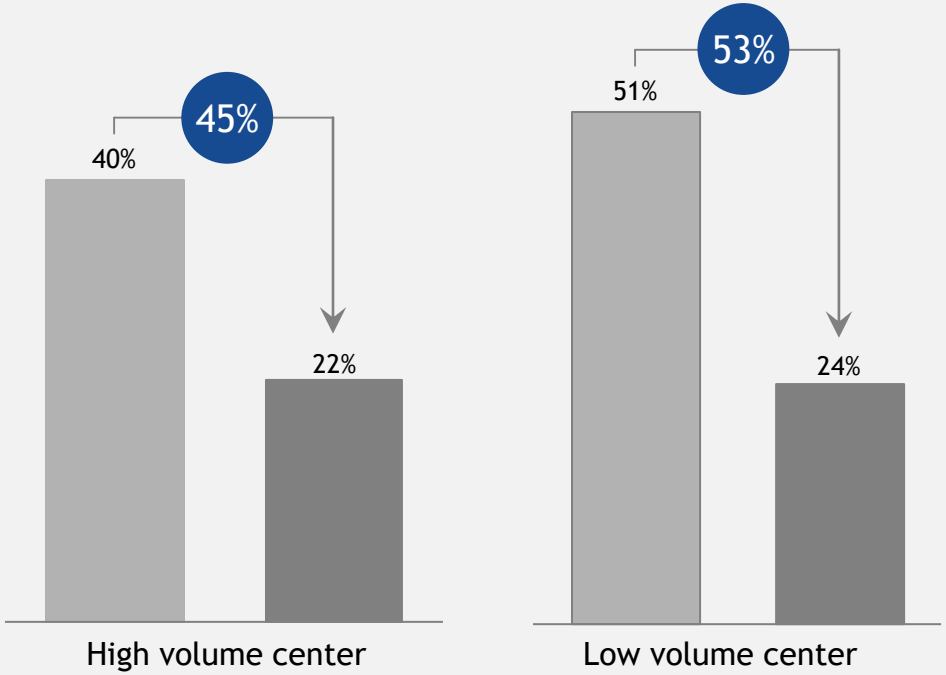
Source: Collaborating for Value: The Santeon Hospitals in the Netherlands, ICHOM (2017)

Significant improvements in individual doctor results

Decrease in prostatectomy complications



Decrease in positive surgical margin rate



$1500 saving per procedure

Source: Collaborating for Value: The Santeon Hospitals in the Netherlands, ICHOM (2017)

“One hospital cannot improve quality alone. A single hospital can set up improvement programs but will need to compare its performance with others to understand where it can improve and which procedures deliver the best outcomes…”

Leonique Niessen, Former Santeon Director

Value-based healthcare is a global movement: ICHOM is a global non-profit that defines outcomes standards

Founded in 2012 by Harvard Business School Professor Michael Porter, the Boston Consulting Group, and Karolinka Institutet

INSTITUTE FOR STRATEGY AND COMPETITIVENESS

BCG
THE BOSTON CONSULTING GROUP

KAROLINSKA INSTITUTET ANNO 1810
Karolinska Institutet

International focus with involvement of multiple countries around the world

Open source and peer reviewed standard sets

23 Sets covering 53% of the global disease burden

Endorsed by the OECD to map key disease areas

Independent, non-profit

ICHOM has widespread support of health community

STRATEGIC PARTNERS

PLATINUM

GOLD

SILVER

BRONZE

COFOUNDERS

SUPPORTERS

ICHOM's standard sets developed by global clinical experts and patients

Principles of standard sets

1. Outcomes are defined around the medical condition, not the specialty or the procedure
2. Patients are directly involved in defining sets
3. The standard set is a “minimum set” focused on outcomes that matter most to patients
4. A “minimum set” of initial conditions/risk factors is included to facilitate meaningful comparison
5. PROMs include functional status, symptom burden and health-related quality of life
6. Time points and sources of data collection are clearly defined to ensure comparability of results

Rigorous development process

Diverse teams collaborate in working groups

- Internationally-recognized clinical and registry leaders from top institutions
- Patients with “real-world” experience

Working groups identify a comprehensive set of potential outcomes that matter to patients

- Proposed outcomes are prioritized to minimize capture requirements

Each set developed over ~12 months

Example: Diabetes standard set

2017 → April 2018

Outcome domains & definitions → PROMs → Case-mix domains & definitions → Standard set publication and launch

Literature review of outcomes, definitions and risk factors

Patient input to working groups

Diabetes standard set being developed by global experts

26

Working Group members led by 2 co-chairs

19

Countries represented

5

Patients across 4 continents

>10

Expert profiles e.g. primary care, public health, biostatistics

International representation in diabetes working group

Massimo Massi-Benedetti
Co-chair

- President and Scientific Director of Hub for International Health research
- Co-director of the WHO Collaborating Centre for Improvement of Diabetes Care
- Former IDF Vice-president

Fabrizio Carinci
Co-chair

- International Expert on Health Information for Policy
- Principal Epidemiologist, National Observatory of Patient Safety
- Adjunct Professor, University of Bologna

Maria Santana—O'Brien Institute for Public Health
Katherine Barnard—Boumemouth University, University of Southampton, BHR
Andrew Pumerantz—Western Diabetes Institute, Western University of Health Sciences
William Polonsky—Behavioral Diabetes Institute, University of California
Mark Peyrot—Loyola University Maryland
Anne Peters—USC Clinical Diabetes Program
Andreas Schmitt—Diabetes Center Mergentheim
Joao Raposo—APDP, Nova Medical School Lisbon
Sergio Hernandez-Jimenez—Instituto Nacional de Ciencia Medicas y Nutricion
Cristina Garcia Ulloa—Instituto Nacional de Ciencia Medicas y Nutricion
Jean Claude Mbanya—University of Yaounde

Daniel Barthelmes—University of Zurich, University of Sydney
Jelka Zaletel—National Institute of Public Health Slovenia, University Medical Centre
Jana Klavs—University Medical Centre Ljubljana
Massimo Massi-Benedetti—Hub for International Health Research
Fabrizio Carinci—University of Bologna, AGENAS
Ronit Calderon-Margalit—The Hebrew University of Jerusalem
Anil Bhansali—Postgraduate Institute of Medical Education and Research
Wee Hwee Lin—National University of Singapore
Naomi Levitt—University of Cape Town
Soren Eik Skovlund—Aalborg University and Aalborg University Hospital
Jihan Dennaoui—National Health Insurance Company Daman
Saf Naqvi—Imperial College London Diabetes Centre, Abu Dhabi

Standard set for T2DM will cover variety of outcomes

Illustrative

Health status

Glycemic control

Micro/macro vascular complications

Patient reported outcome measures (PROMs) assessing psychosocial health

Co-morbidities that influence outcomes e.g. obesity, cardiovascular disease

Short term treatment complications

Hypoglycemia

Hyperosmolar hyperglycemic states

Sustainability of health

Functional level after complications development

Ability to self-manage

Value in Healthcare project takes systemic approach to value-based healthcare (VBHC)

Year 1: Defining the foundation for VBHC systems

Year 2: Mobilizing cooperation for system transformation

Launches today

Year 3: Scaling & accelerating system transformation

Support new and ongoing pilots:

- Atlanta
- Ontario
- Singapore +/- China

Establish value-based health systems network

Convene stakeholders on informatics standardization

Atlanta heart failure pilot: Stakeholders across city improving life for heart failure patients

Atlanta can be a pioneer of health system transformation with a bold vision

To create a continuously improving value-based healthcare system that positions Atlanta as a national leader in heart failure patient survival rate by 2022 while significantly improving quality of life and reducing the average cost per patient

Atlanta pilot has convened ~40 organizations

Providers

EMORY HEALTHCARE
Grady
AMERICAN COLLEGE of CARDIOLOGY
KAISER PERMANENTE
Home Instead SENIOR CARE
WELLSTAR
welltower
NORTHSIDE HOSPITAL
Piedmont HEALTHCARE
Intermountain Healthcare

Payers

BlueCross BlueShield of Georgia
Humana
KAISER PERMANENTE
CMS CENTERS FOR MEDICARE & MEDICAID SERVICES
CENTENE Corporation
UnitedHealth Group

Government

DPH Georgia Department of Public Health
ARC ATLANTA REGIONAL COMMISSION
DeKalb County GEORGIA
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION
FULTON COUNTY
CMS CENTERS FOR MEDICARE & MEDICAID SERVICES
ARCHI

Patient groups

American Heart Association. life is why

Pharma

NOVARTIS

Medtech/digital

GEORGIA HEALTH INFORMATION NETWORK
Medtronic Alleviating Pain · Restoring Health · Extending Life
MYIA
HealthTap
UPS
QUALCOMM LIFE
omada
BCG Digital Ventures

Academic/foundations

EMORY HEALTHCARE
Robert Wood Johnson Foundation
MOREHOUSE SCHOOL OF MEDICINE
ALLIANT QUALITY

To be the national leader in heart failure survival requires transformative solutions

Informatics	Implement a standard set of heart failure outcomes measures including selected PROMs
Benchmarking, research & tools	The Georgia Health Information Network (GaHIN) will benchmark heart failure outcomes
Payments	Shift reimbursement towards bundles or capitation tied to outcomes
Delivery organization	Atlanta Regional Commission will establish a catalog of evidence-based interventions
Core intervention example	Evaluate Coleman Care Transition Intervention[1] for care in-home after discharge

Note: PROMs = patient-reported outcomes measures

1. Coleman Care Transition Intervention involves home visit from a Coach within 3 days of discharge focused on: a) Medication reconciliation/review b) Symptom management/red flags c) Scheduling follow-up visit with primary care physical d) use of personal health record to document medications and issues to discuss with physician, phone follow-up over next 30 days

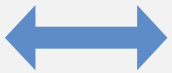
In Canada, diabetes is a large burden for health systems

Outcomes

Canada is in **bottom 1/3 of OECD countries** for age-adjusted diabetes prevalence

3.5 million people estimated to have diabetes in Canada, with prevalence expected to increase ~40% by 2025

Canadians with Type 2 diabetes (T2DM) are **~3x more likely to be hospitalized for CVD[1], and face a reduced life expectancy of 5 to 15 years**



>2-fold variation exists in compliance to guidelines for T2DM across Canada (e.g. % of people receiving all 4 recommended screening tests)

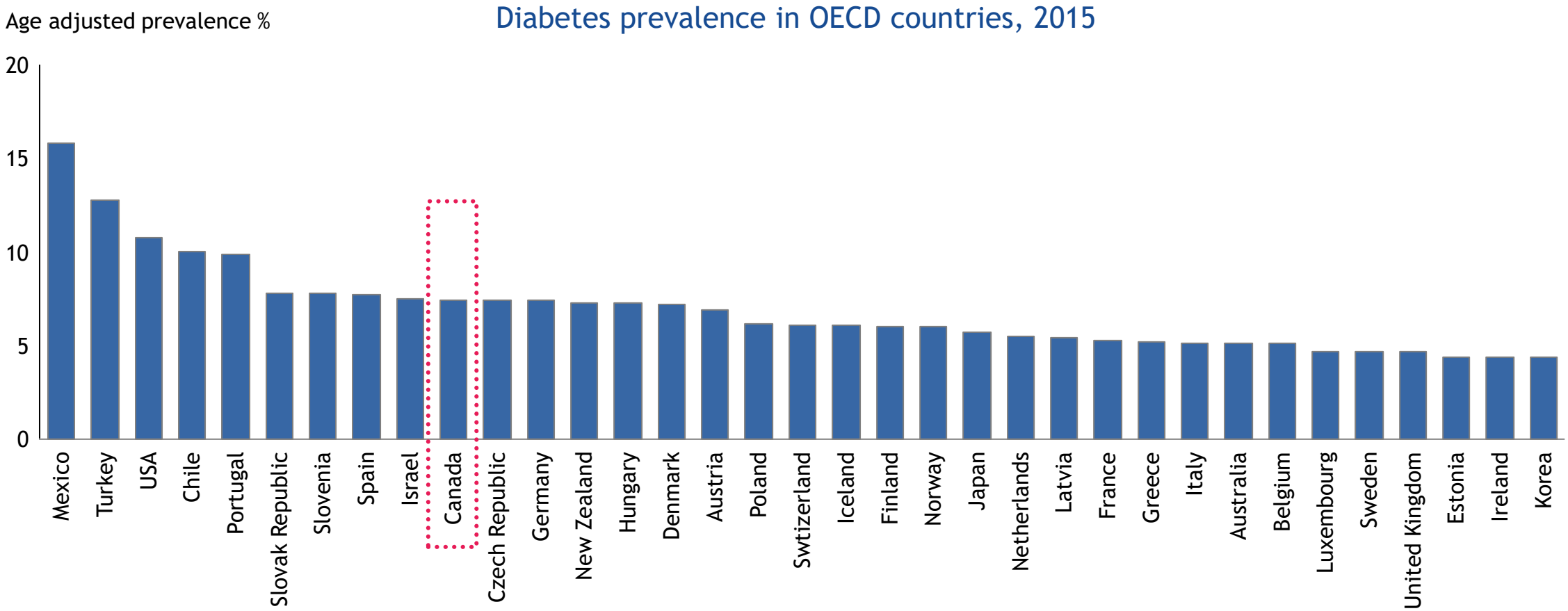
Costs

~$3 billion direct healthcare costs for diabetes each year

~$9.2 billion indirect costs[2] from lost productivity and early mortality

1. CVD: cardiovascular disease; 2. Both the methodologies for measuring indirect costs and reported results themselves vary greatly between publications. Figures in this presentation are from the Canadian Diabetes Cost Model due to its widespread usage and the variable evidence quality in other studies.
Source: Canadian Diabetes Association – Report on Diabetes (2015); OECD (2017) Update on Diabetes; Canadian Diabetes Association - Diabetes: Canada at the Tipping Point (2011)

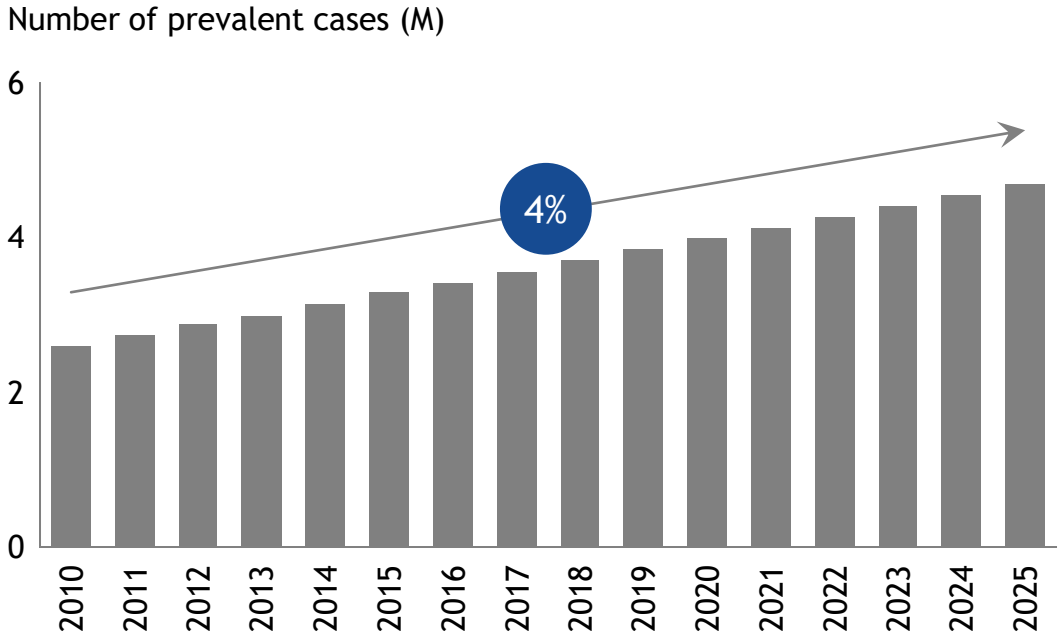
Canada is in the bottom 1/3 of the OECD for diabetes prevalence



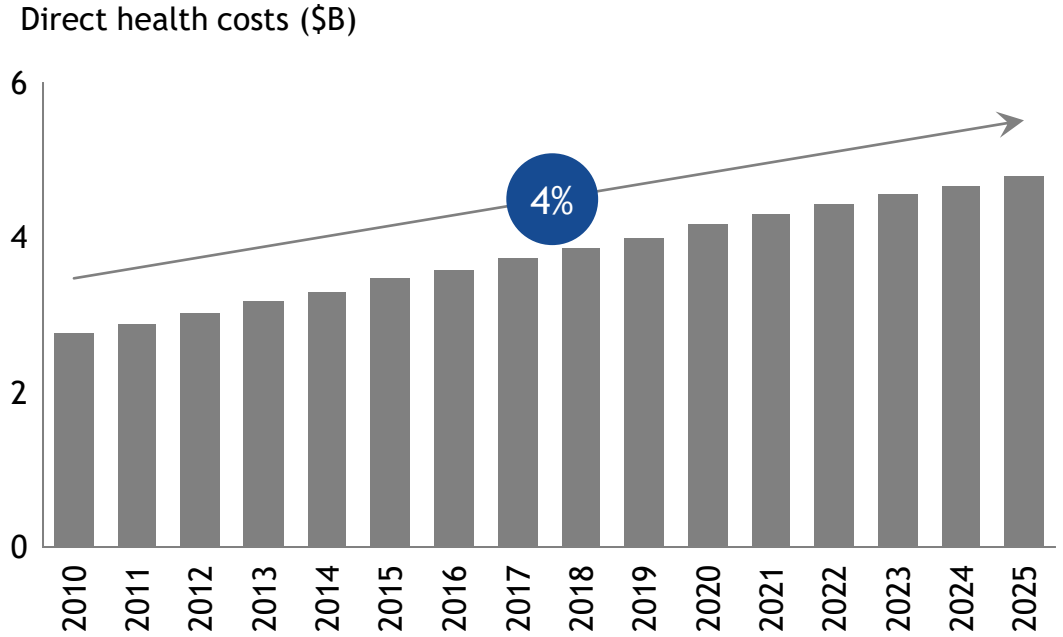
Note: age-adjusted comparative estimates are generated to compare countries with different population age structures. These are calculated by applying the country's age-specific diabetes prevalence estimates to each age-group and standardizing the country's population age structure to the average global age structure.
Source: Diabetes Atlas: Seventh Edition, International Diabetes Federation (2015), Brussels, www.idf.org/diabetesatlas/previouseditions.

Diabetes prevalence and healthcare expenditure will continue to rise

Diabetes prevalence in Canada 2010-2025



Direct health costs of diabetes in Canada 2010-2025



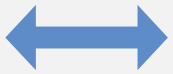
Source: Canadian Diabetes Cost Model (2015)

In Ontario, diabetes is also a significant challenge

Outcomes

1 in 10 adult deaths in Ontario related to T2DM complications

4.6 million people or 30% of population classified diabetic or pre-diabetic in Ontario in 2016, expected to increase to **5.9 million by 2026**



Only 34% of Ontarian T2DM patients received all four recommended screening tests, lower than the national average

Costs

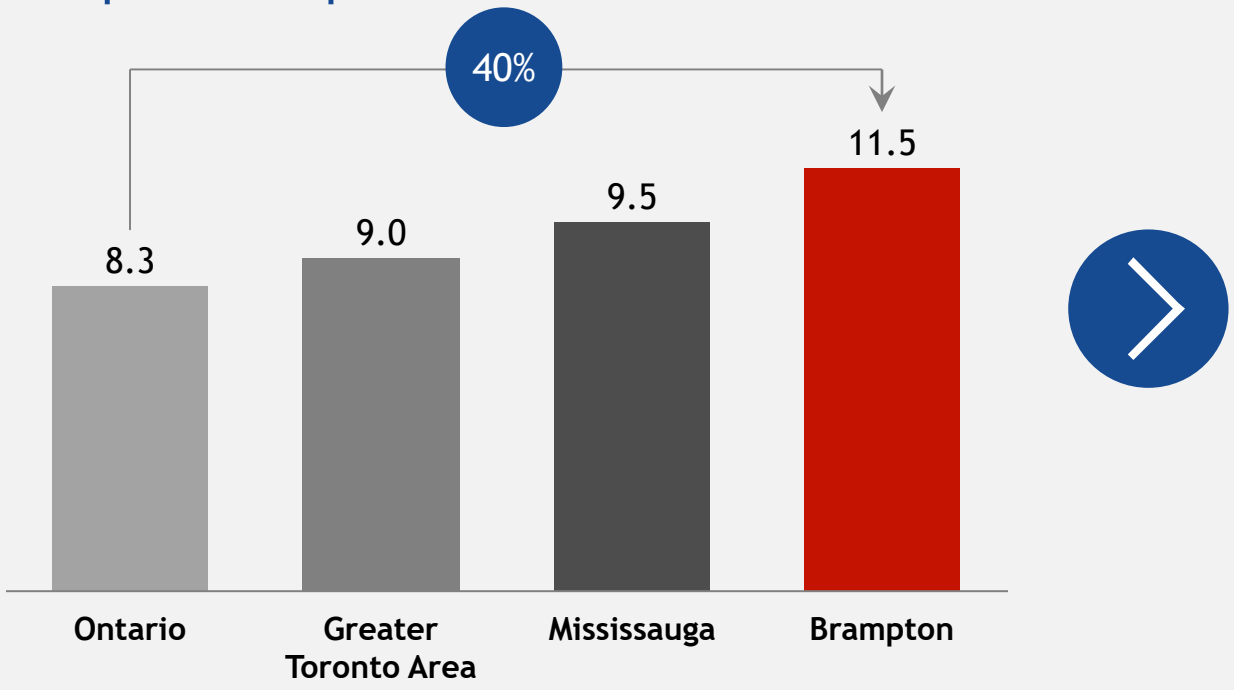
$1.5 billion in direct health costs

$3.8 billion in indirect costs[1] from lost productivity and early mortality

1.Both the methodologies for measuring indirect costs and reported results themselves vary greatly between publications. Figures in this presentation are from the Canadian Diabetes Cost Model due to its widespread usage and unclear evidence quality in other studies.
Source: Canadian Diabetes Association – 2015 Report on Diabetes; The Cost of Diabetes in Ontario, Canadian Diabetes Association; Public Health Agency of Canada. (2011). Diabetes in Canada: Facts and figures from a public health perspective; Canadian Institute for Health Information. (2013). Compromised wounds in Canada; Ontario Ministry of Finance: Ontario Fact Sheet 2017.

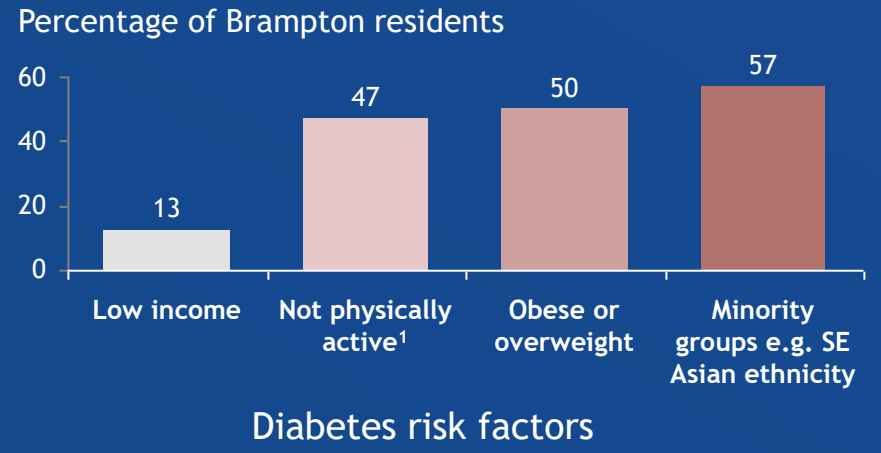
Within Ontario, diabetes prevalence varies

In 2013, ~40% higher diabetes prevalence in Brampton compared to rest of Ontario



1. Compared to Ontario benchmarks for adult activity
Source: Peel Public Health - Diabetes Atlas for the Region of Peel 2013; Peel Data Centre – Income Earnings & Housing Bulletin 2011; Canadian Diabetes Association – 2016 Report on Diabetes in Ontario

Brampton population has significant diabetes risk factors



T2DM complications compound its disease burden

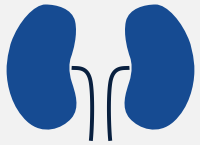
Retinopathy risk

Diabetic retinopathy leading cause of blindness in Canada

500,000 Canadians affected

Cardiovascular disease

11,000 diabetes-related heart attack admissions to Ontario hospitals every year



Nephropathy

T2DM is primary cause of end-stage renal disease in Canada

~9000 new cases in Ontario yearly

Lower limb injury

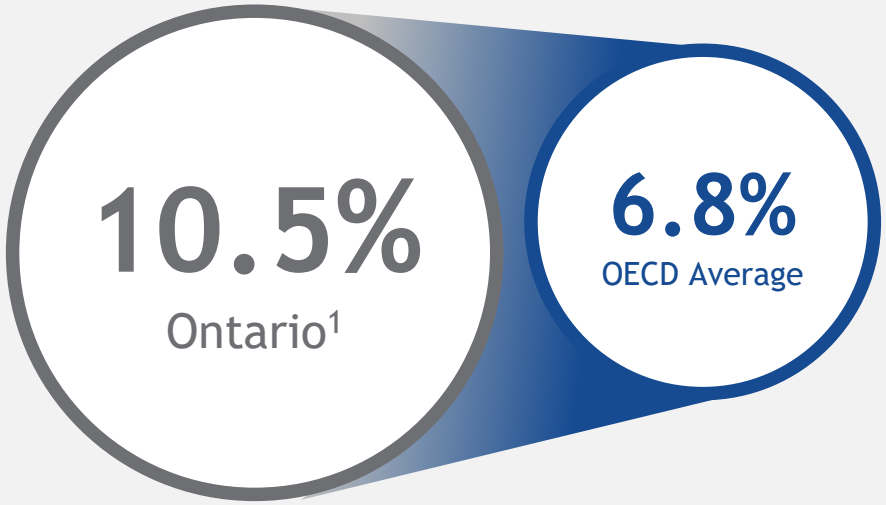
>33% of lower limb amputations in Canada due to diabetic foot wounds and chronic ulcers

~2000 diabetic amputations in Canada every year

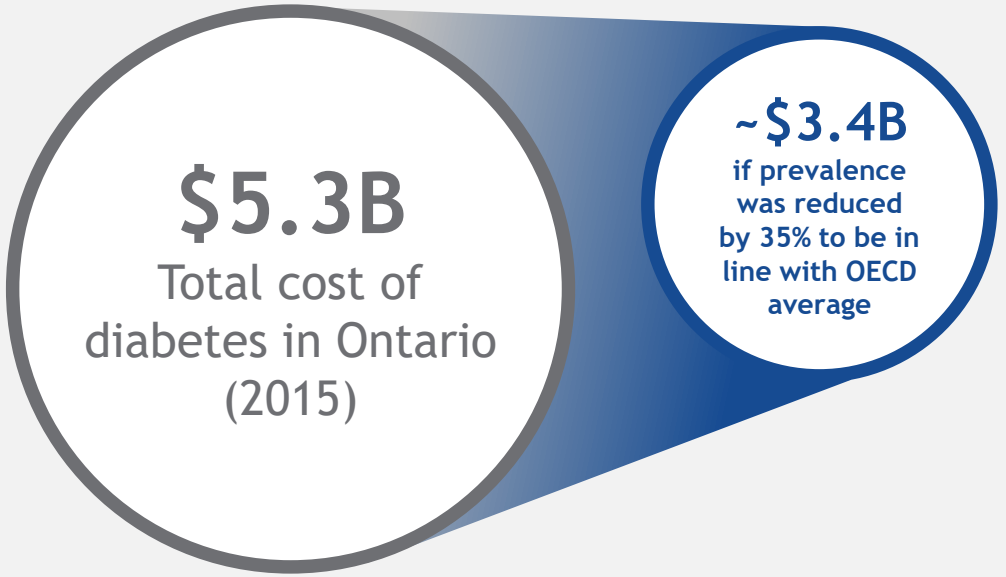
Source: Diabetes Charter for Canada: Canadian Diabetes Association (2016); Canadian Organ Replacement Register Annual Report: Treatment of End-Stage Organ Failure in Canada, 2000 to 2009. 2011. Canadian Institute for Health Information, Compromised wounds in Canada (2013).

Significant positive societal impact possible

If Ontario at OECD average, diabetes prevalence would reduce 550K…



…resulting in ~$1.9B in direct and indirect cost savings per year



1. Ontario prevalence is not adjusted for age. Last known age adjusted prevalence was 8.8% in 2005, published in the Lancet. See 'Trends in diabetes prevalence, incidence, and mortality in Ontario, Canada 1995–2005: a population-based study'.
Source: The Cost of Diabetes in Ontario, Canadian Institute for Health Information (2013); Diabetes Atlas: Seventh Edition, International Diabetes Federation (2015), Brussels, www.idf.org/diabetesatlas/previouseditions.

Enablers key to improve outcomes, reduce costs

From the status quo…

Siloed patient data locked in EMRs

Hospital benchmarking based mostly on process metrics; disconnected pilots and proof of concept studies

Predominant fee-for-service model with some experimentation with bundled payments

Stakeholders optimizing their role in the value chain

To a bold vision…

Integrated person-centered health informatics, while still protecting integrity of patient data

Continuous improvement based on outcomes benchmarking: updated clinical guidelines and decision-support tools reflecting best practices

Payments models that incentivize transparent and improved outcomes, optimized by patient group

Integrated care that incentivizes cooperation between clinical care providers

Note: EMR= electronic medical record
Sources: World Economic Forum Report: Value in Healthcare: Laying the Foundation for Health System Transformation, expert interviews, BCG analysis

Ontario Pilot Vision Statement

"To create a continuously improving value-based healthcare system that reduces the prevalence and rate of complications of Type 2 diabetes by 2021 while significantly improving quality of life and reducing average cost per patient"

Focus on four Local Health Integration Networks

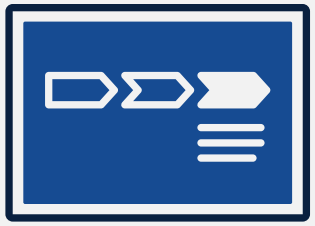
- Toronto Central
- Central West
- Mississauga Halton
- North West

Pilot will comprise two phases

Design and Roadmap Phase

Build consensus on priorities and develop customized roadmap towards a value-based health system for T2DM patients

Requires approximately 6 months



Implementation Phase

Implement short and long term initiatives in order to improve health outcomes and lower costs

3-year time horizon

Diverse roles and responsibilities

Steering Committee

Central decision making body

Review and refine working group recommendations

Champion VBHC

4 in-person workshops

Working Group

Provide local subject matter expertise

Drive content development

Ensure roadmaps are pragmatic and tailored to each stakeholder

1-2 hours per week

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD

BCG
THE BOSTON CONSULTING GROUP

WEF/BCG core team

Manage overall process

Provide thought leadership and research support

Share best practices across pilot initiatives

Full-time support

VBHC = value-based healthcare

Multi-sectoral approach is key

Government

Ontario
Ministry of Health & Long Term Care

Health Quality Ontario

Ontario
Local Health Integration Network

- Toronto Central
- Mississauga Halton
- Central West
- North West

Providers

LMC DIABETES & ENDOCRINOLOGY

Sunnybrook
HEALTH SCIENCES CENTRE

St. Michael's

William Osler Health System

SINAI
Sinai Health System

WCHRI
WOMEN'S COLLEGE RESEARCH INSTITUTE

Saint Elizabeth
Well beyond health care

Home Instead
SENIOR CARE
To us, it's personal.

SIOUX LOOKOUT
Meno Ya Win
HEALTH CENTRE

Patient advocacy groups

DIABETES CANADA

Diabetes Action Canada

Academia / research

UNIVERSITY OF TORONTO
FACULTY OF MEDICINE

Banting & Best Diabetes Centre
UNIVERSITY OF TORONTO

UNIVERSITY OF TORONTO
DALLA LANA SCHOOL OF PUBLIC HEALTH

ICES
Data
Discovery
Better Health

CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

Private sector

Medtronic

QUALCOMM LIFE
a Qualcomm company

HENRY SCHEIN

BD

MaRS

novo nordisk

omada

SANOFI

MEDELLA HEALTH

Agenda

Topic	Presenter	Time
Welcome address	Joshua Tepper, President and CEO, Health Quality Ontario	9.00 – 9.10am
The patient's perspective	Charlene Lavergne	9.10 – 9.20am
Introduction to the World Economic Forum	Vanessa Candeias, Head of Global Health and Healthcare System Initiative	9.20 – 9.30am
Value-based healthcare and pilot approach	Mathieu Lamiaux, Senior Partner and Managing Director, BCG	9.30 – 9.55am
Opportunity for Q & A		9.55 – 10.05am
Building off current successes • Informatics: Diabetes Action Canada • Informatics: ICES • Informatics: LMC Registry	Prof. Catharine Whiteside, Executive Director A/Prof. Baiju Shah, Scientist and Endocrinologist Priya Narula, Endocrine Physician Assistant	10.05 – 10.30am
Break		10.30 – 10.45am
Building off current successes • Benchmarking: HQO • Payments: Ontario MOHLTC • Delivery organization: Diabetes Canada	Dr. Joshua Tepper, President and CEO Fredrika Scarth, Director, HQO Liaison & Program Development Russell Williams, Vice President, Government Relations and Public Policy	10.45 – 11.10am
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For discussion: What is the VBHC system maturity for T2DM patients?

Small group discussion

30 min

Break into 4 groups based on each of the enablers of the ViHC framework

- Groups have been assigned
- Discuss key questions & align on the current state of play in Ontario

Group readout

15min

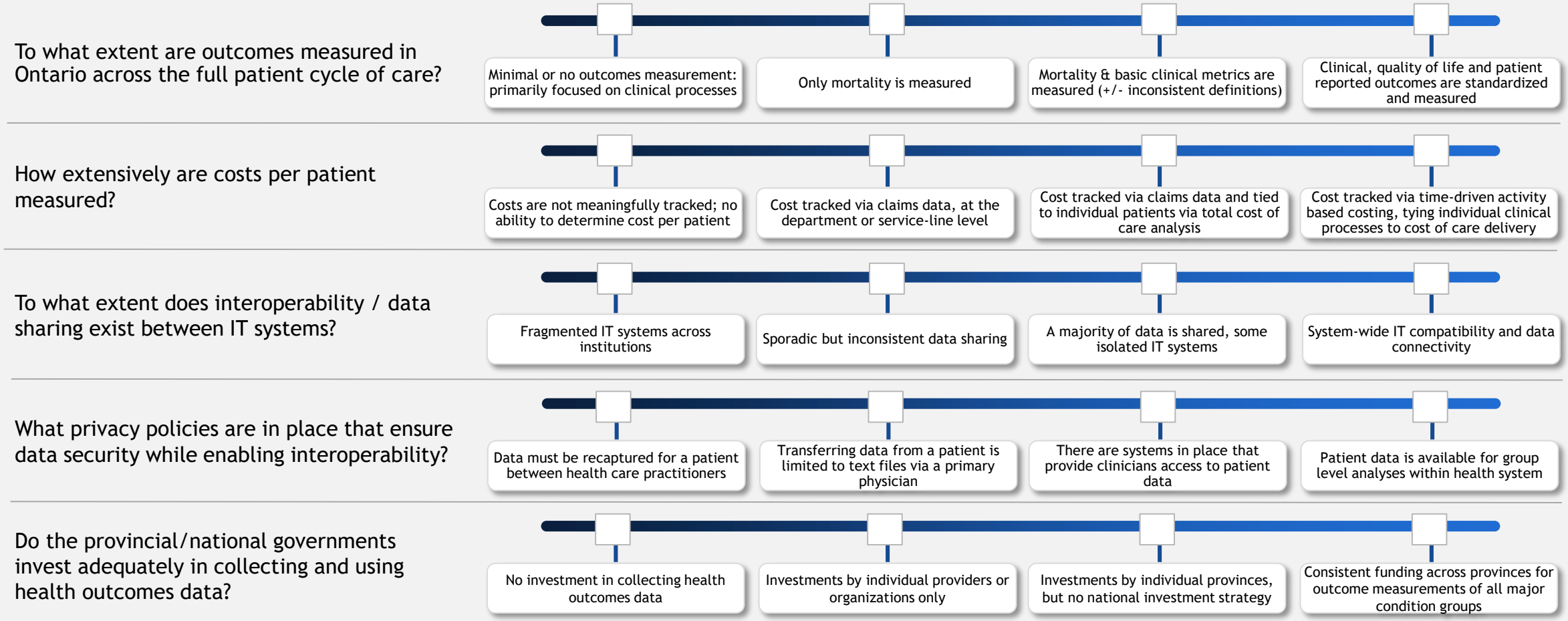
We will then discuss each enabler as a group

- One person per group will share findings with focus on 3-4 key messages

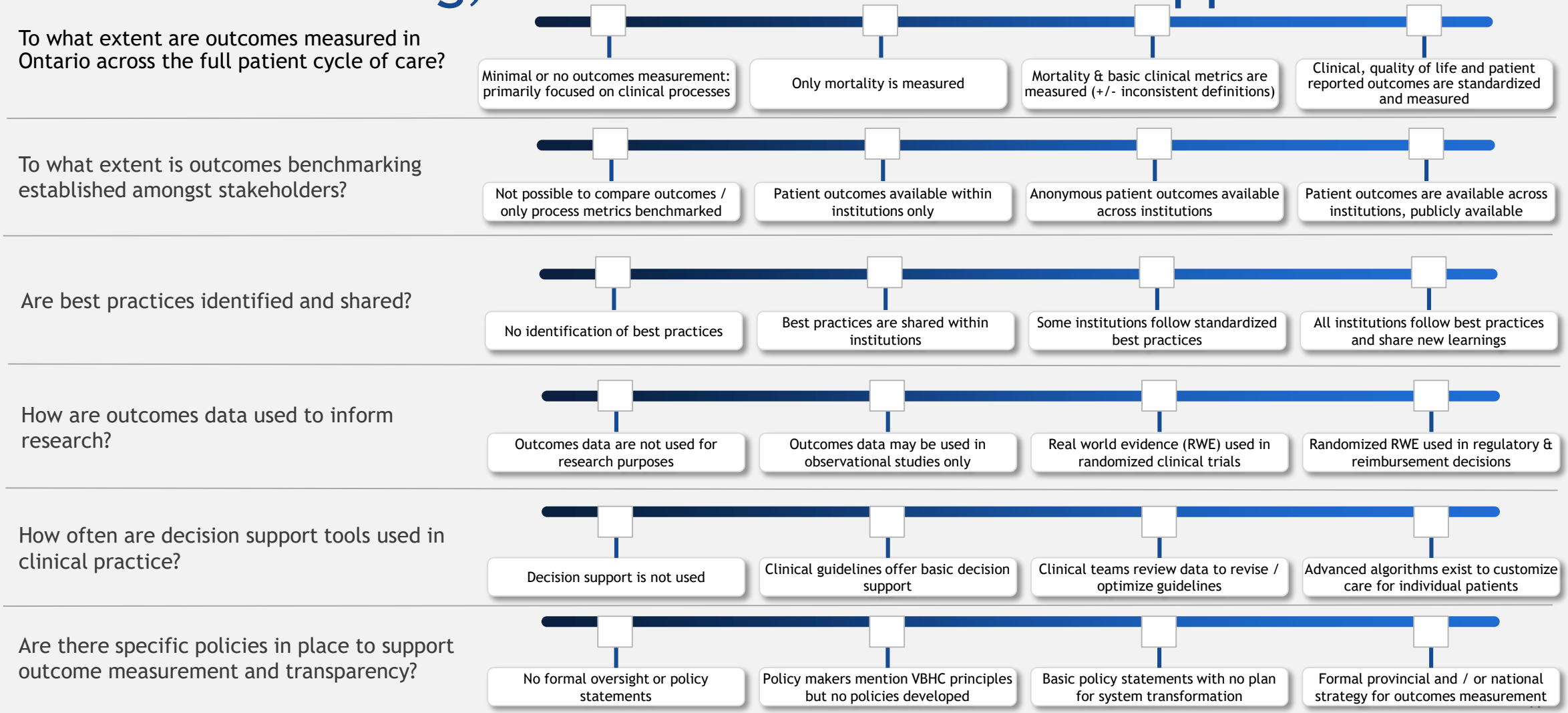
At this time you can break into your sub-groups

Informatics	Benchmarking, research, and tools	Payments	Delivery organization
Jonathan Lim Project Leader, BCG	**Mathieu Lamiaux** Senior Partner and Managing Director, BCG	**Vanessa Candeias** Head, Global Health & Healthcare, WEF	**Andrew Smith** Consultant, BCG
Baiju Shah Researcher, Sunnybrook Research Institute	**Bruce Perkins** Director of Research, Sinai Centre for Diabetes	**Alexis Wise** Health Advisor, MaRS Discovery District	**Anne-Sophie Viard** Federal Affairs Manager, Novo Nordisk
Brian Hilberdink President, Novo Nordisk Canada	**Eva Baginksa** Assosciate Director, Becton Dickinson	**Asger Jacobson** Head, Market Access & Public Affairs, Novo Nordisk	**Bryna Rabishaw** Vice President, Sinai Health Systems
Catharine Whiteside Executive Director, Diabetes Action Canada	**Michael Glogauer** Researcher, University of Toronto	**Cynthia Castro Sweet** Director Medical Affairs, Omada Health	**Jason Vanderheyden** Director, Market Access & Gvt Affairs, Medtronic
Dean Osmond Sioux Lookout Meno Ya Win Health Centre	**Jocelyn Charles** Physician Advisor, Toronto Central LHIN	**Gabriel Seidman** Consultant, BCG	**Jonathon Cini** Community Lead, N. America, WEF
Fredrika Scarth Director and HQO Liaison, MOHLTC	**Joshua Tepper** President & CEO, Health Quality Ontario	**Geneviève Lavertu** Senior Director, Medtronic	**Jonathan Fetros** Director, Diabetes Care Program, St Michael's
Gillian Booth Endocrinologist, St Michael's	**Laura Kokocinski** CEO, NW Ontario LHIN	**Gerard Meuchner** VP, Henry Schein	**Kevin Davidson** Health System Specialist, Central West LHIN
Harry Ghandi Founder & CEO, Medella Health	**Liane Fernandes** VP Regional Programs, Miss. Halton LHIN	**Jane Yao** University of Toronto School of Public Health	**Lori Sutton** Diabetes Outreach Facilitator, Toronto Central LHIN
Lillian Mortensen VP, Becton Dickinson	**Lucia Vanta** University of Toronto School of Public Health	**Megan Skinner** Clinical Education Specialist, Becton Dickinson	**Martin Bohl** Economic Development Manager, Brampton
Matthew Morgan VP Clinical, Toronto Central LHIN	**Malcolm Moffat** Executive VP Programs, Sunnybrook Hospital	**Nicole Nitti** Primary Care, Toronto Central LHIN	**Martine Carbonneau** Associate Director, NovoNordisk
Melissa Farrell Assistant Deputy Minister, MOHLTC	**Neil Fraser** President, Medtronic Canada	**Nida Shahid** University of Toronto School of Public Health	**Priya Narula** Physician Assistant, LMC
Naheed Jivraj University of Toronto School of Public Health	**Robyn Tamblyn** Scientific Director, CIHR	**Susan Swartzack** Director, Clinical Program, Miss. Halton LHIN	**Rhonda Cockerill** University of Toronto School of Public Health
Thiv Paramsothy University of Toronto School of Public Health	**Ronald Heslegrave** Chief of Research, William Osler Health	**Ruth Pichora** Director of VBHC and Reimbursement, Medtronic	**Seema Negpal** Senior Leader Public Policy, Diabetes Canada
Zayna Khayat Future Strategist, St Elizabeth	**Russell Williams** VP Gvt Relations & Public Policy, Diabetes Canada	**William Charnetski** Chief Health Innovation Stategist, Gvt of Ontario	**Tony Jin** University of Toronto School of Public Health

For T2DM patients in Ontario, what is the current maturity of health informatics?



For T2DM patients in Ontario, what is current maturity of benchmarking, research and decision support?



For T2DM patients in Ontario, are payment models linked to value?

To what extent are outcomes measured in Ontario across the full patient cycle of care?	Minimal or no outcomes measurement: primarily focused on clinical processes	Only mortality is measured	Mortality & basic clinical metrics are measured (+/- inconsistent definitions)	Clinical, quality of life and patient reported outcomes are standardized and measured
Are provider payments based on outcomes?	Provider payments based on fee for service only	Providers are experimenting with new payment models	Payments provide penalties or rewards based on outcomes performance	Bundled payments and capitation models have replaced traditional models
Are supplier (e.g. pharma, medtech) payments based on outcomes?	No collaboration with suppliers to tie payments to outcomes	Experimenting with risk-sharing agreements between payers and suppliers	Value-based contracts between payers and suppliers are common place	Providers / suppliers are partnering and are jointly held accountable for outcomes
What are the barriers to moving towards value based payments in Ontario?	Lack of adequate incentives to facilitate change	Stakeholder aversion to sharing risk	Lack of data required to design and price models	Policy and regulatory barriers
Does public policy enable value-based payment models?	Policy framework only permits fee-for-service model	Regulatory room for value-based pilots and trials	Policy is flexible and allows for value-based payment systems	Policy actively encourages value-based payment systems

For T2DM patients in Ontario, how do delivery organizations optimize outcomes?

How much provider collaboration exists across the care chain for diabetes patients?	Minimal to no collaboration across care chain	Hospitals using care managers	Strong collaboration between primary care and hospitals	Strong collaboration across system - primary care, hospital, allied health, community supports
To what extent are social and behavioral interventions included in care delivery?	No integration of social and behavioral interventions in health care delivery	Providers are creating customized roles for inclusion of social/behavioral interventions	Providers are beginning to implement social and behavioral partnerships	Partnerships w/ non-traditional players (e.g. community groups) for social / behavioral interventions
To what extent do partnerships exist with pharma, medtech, and digital health partners to go "beyond the pill or device"?	No current partnerships between providers and industry	Partnerships exist to capture outcomes	Partnerships exist to deliver services and manage care	Partnerships exist to design and deliver decision support technology
How is prevention and treatment coordinated in the health system?	No overarching alignment in approach	Individual treatment providers introducing preventative approaches	Prevention efforts aligned with treatment in most cases, but no overarching policy	Government mandated coordination of prevention efforts in all treatment centers
Do policies promote multi-sectoral collaboration to advance value?	Collaboration prohibited by policy	Collaboration is only permitted for certain patient groups	Regulation allows multi-sectoral collaboration	Stakeholders encouraged to take joint ownership of patients across the care cycle

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The path to "Diagnosis" Steerco…

Working group actions

Next Steerco

Complete formal maturity assessment	Document best practices	Identify barriers	Diagnosis readout
Perform deep dive on maturity assessment for 4 key enablers Identify areas of strengths and areas for development in Ontario	**Find local case studies highlighting best practices on each enabler** Discover key learnings to apply in pilot	**Uncover barriers likely to be faced in implementation** Find gap between norms in Ontario and best In class	**Present key areas of strength and development** **Share case studies on best practices** **Align on key barriers**

Introducing day-to-day team members

Emmanuel Akpakwu

Practice Lead, Value in Health Care, World Economic Forum

M.Eng Computer Science (Artificial Intelligence), M.Sc Finance, MBA/M.Phil in Technology Policy

6 years in Healthcare Investment Banking at J.P. Morgan

Associate Director, Corporate Strategy at Merck Pharmaceuticals

Dr. Gabriel Seidman

The Boston Consulting Group, NYC

Doctorate of Public Health from Harvard School of Public Health with focus on global health systems

Case experience in global health, international development, and biopharma

Published multiple articles in peer-reviewed journals

Dr. Andrew Smith

The Boston Consulting Group, Toronto

PhD in Molecular Genetics, MBA, BSc in Molecular Genetics and Biology (Hons)

Case experience in biopharma, market access, R&D

Previously worked as a researcher, publishing articles in Genome Research, Nature Chemical Biology, and Nature Biotechnology

Immediate next steps

Poll to be sent to Working Group to agree times for weekly calls

Weekly offline contributions to be sent out this PM, due Friday 23 Feb. 12 noon

First Working Group call during week of 26 February

Following 3 SteerCo dates to be confirmed within next week