Canadian Partnership for Tomorrow Project

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Vision

To create and maintain a large, high-quality ‘population laboratory’ (Potter, 2005) that will support novel, cutting edge Canadian and international trans-disciplinary health and chronic

To create and maintain a large, high-quality ‘population

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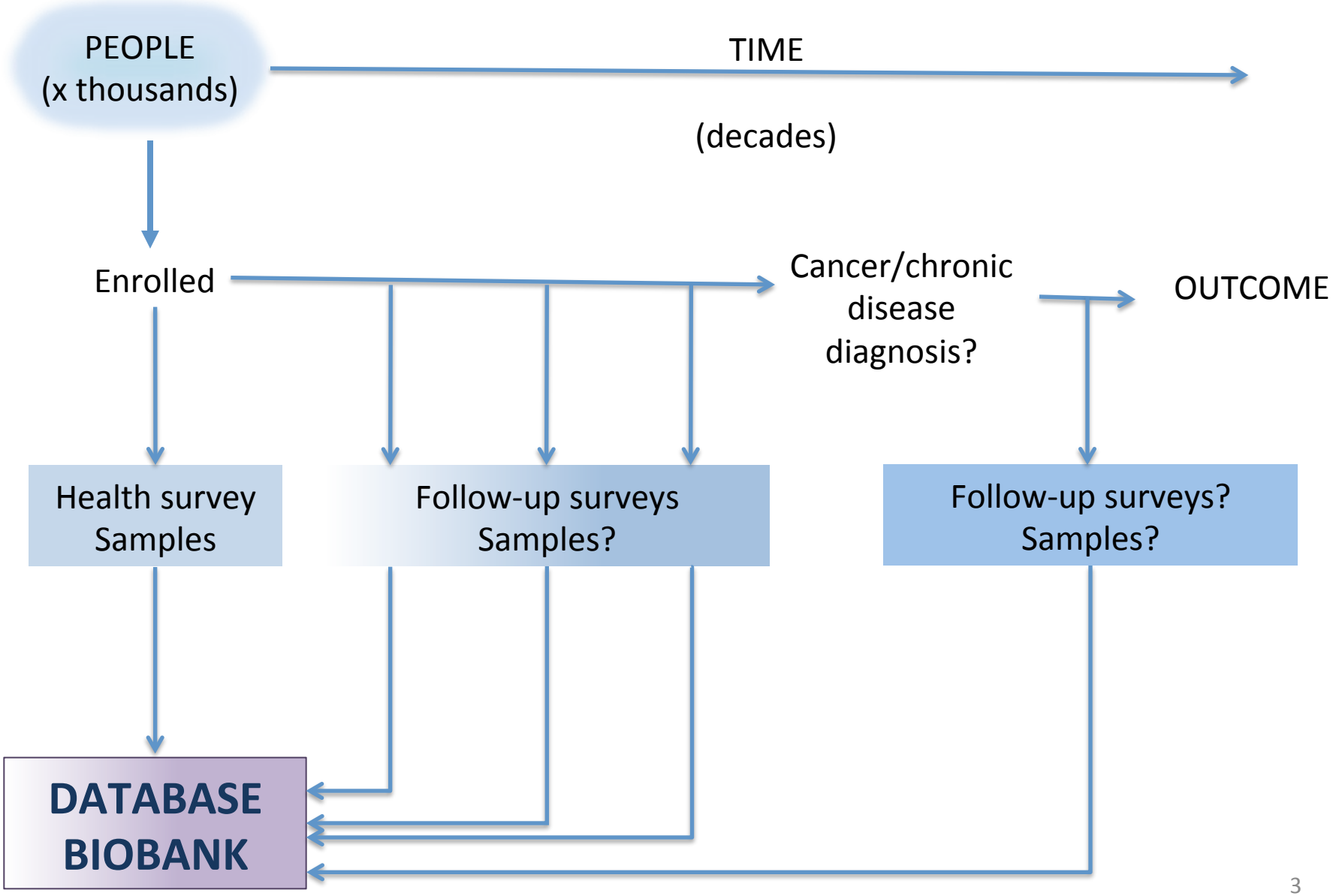
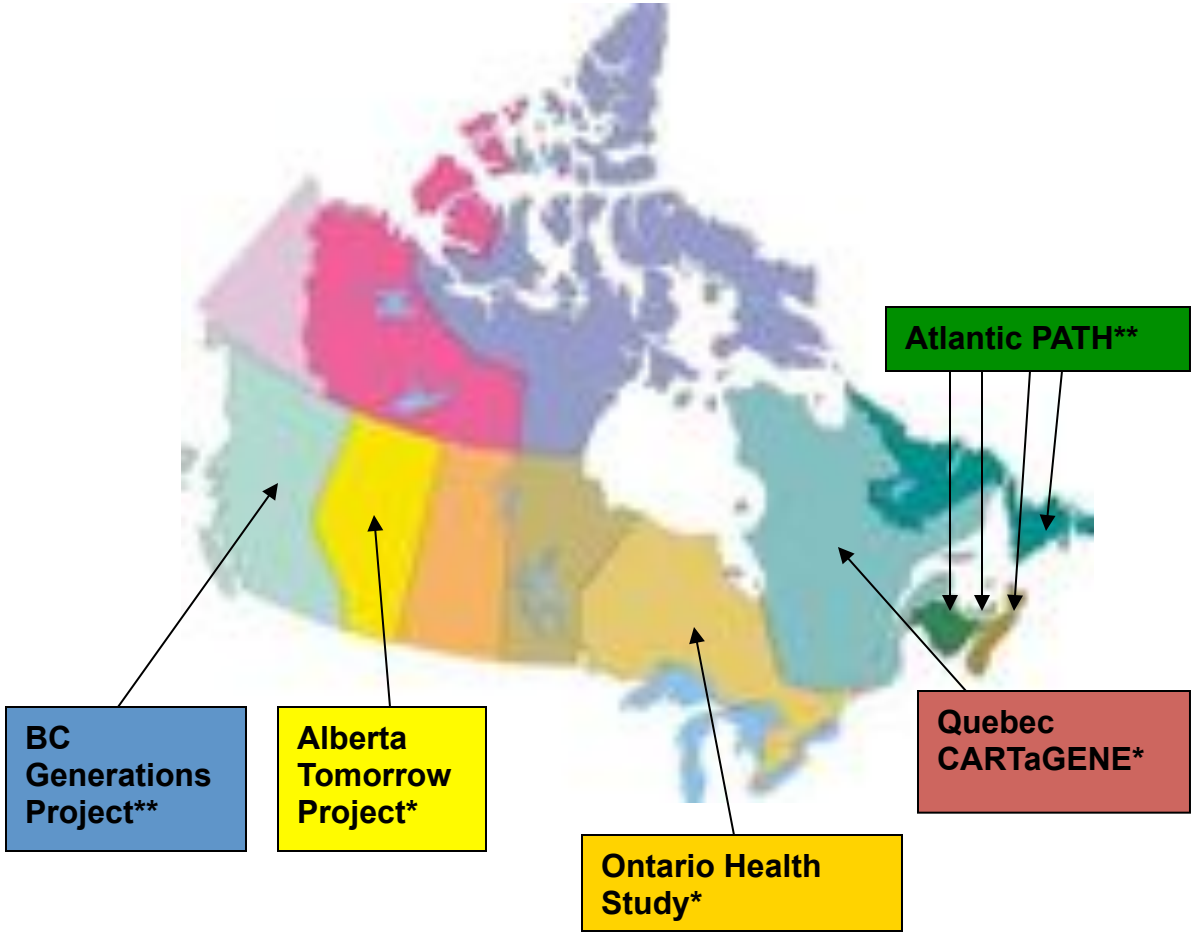
The 'population laboratory' concept



Adapted from Potter, 2005

The Canadian Partnership for Tomorrow Project (CPT Project)



Support from the Canadian Partnership Against Cancer Corporation facilitated collaboration between existing (*) and planned regional cohorts (**)

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Overall aims of the CPT Project

- As a collective entity, enroll a minimum of 250,000 participants aged 35-69y into a long-term prospective cohort
- Collect venous blood samples from a minimum of 180,000 participants
- Create repositories of 'core' CPT Project data and biological samples
- Develop and implement policies, procedures and infrastructure that will support fair, transparent and efficient access to the core repositories for approved researchers
- **Research based on the CPT Project platform should increase knowledge that has the potential to improve health**

Types of research that will be enabled by the CPT Project

- Epidemiological research
  - Descriptive
  - Health inequalities
  - Analytical
  - Environmental
  - Genetic
- Health services research
- Translational research

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CPT Project Timeline

- Feb 2008 - release of funding from Canadian Partnership Against Cancer Corporation (CPACC)
- March-December 2008
  - agreement on 'core' CPT Project consent elements
  - creation of 'core' CPT Project variables, and general operating procedures for biological samples and physical measures
  - development of physical and human resources infrastructure in all five regions to support participant recruitment, and collection/processing/ storage of data and biological samples
  - development of detailed SOPs in all regions
  - ethical approval sought and obtained in all regions
- Spring 2009 – all regions had started enrollment

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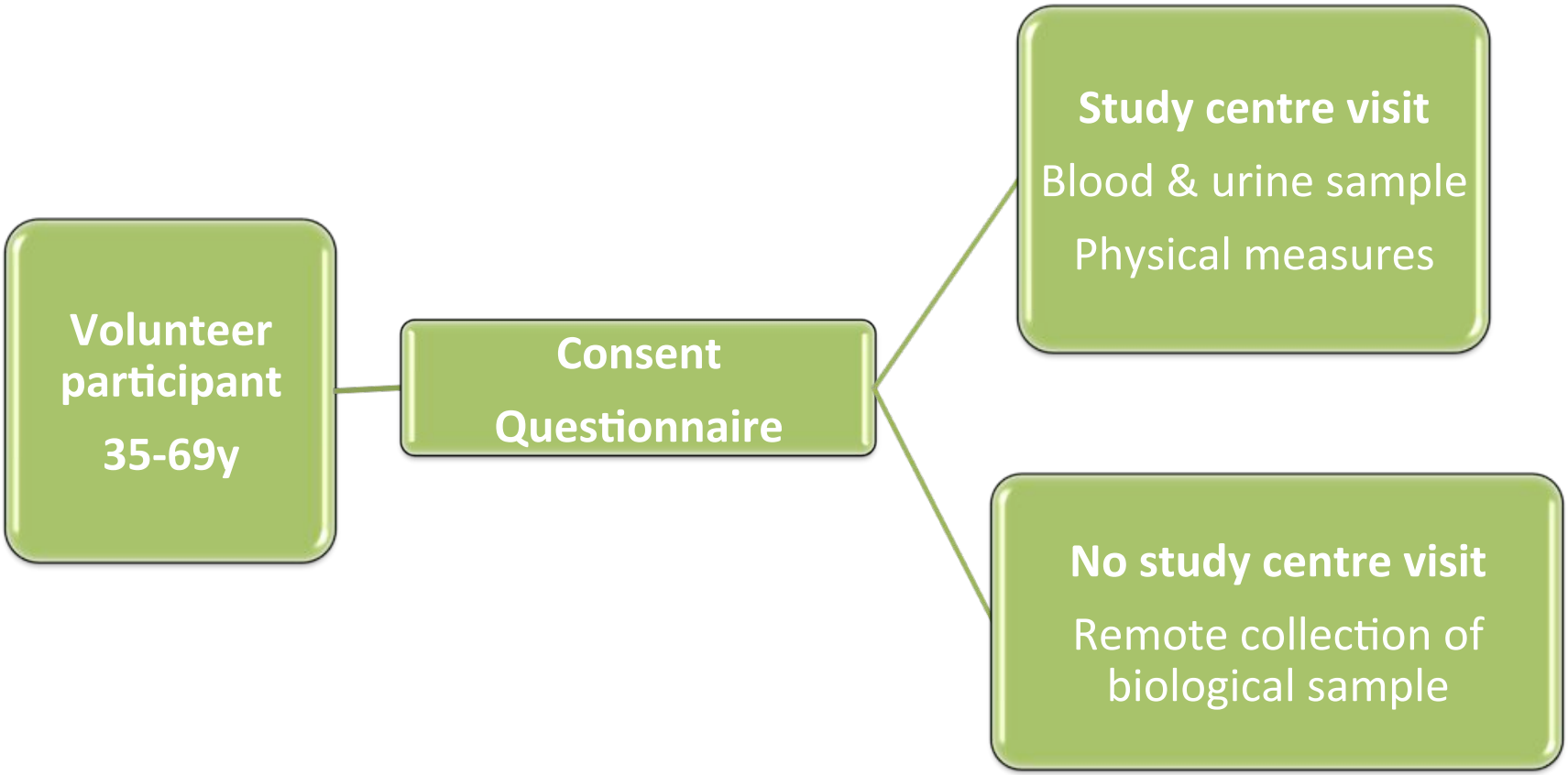
CPT Project protocol



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Core CPT Project questionnaire themes

- Individual disease history
- Use of medication
- Cancer screening history
- Women's reproductive health
- Family disease history
- Tobacco use
- Alcohol use
- Short form iPAQ/short fruit&veg screener
- Demographics
- Anthropometrics – height, weight & circumferences

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Core CPT Project physical measures

- Height (standing and sitting)
- Weight
- Waist circumference
- Hip circumference
- Grip strength
- Body composition (% body fat)
- Blood pressure
- Resting heart rate

- AND 'interpretive' variables

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Core CPT Project biological samples

- Venous blood – non-fasting (≥34ml)
  - Multiple aliquots of plasma, serum, buffy coat and red cells

- Urine – spot sample

- All samples processed and stored within 24 hours of collection
- Pre-collection condition of all participants assessed
- Multiple variables associated with collection, processing and storage recorded

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Status (9th June 2012)

	Qx and consent	Physical measures	Venous blood
BC Generations Project	23,667	14,448	14,531
AB Tomorrow Project	22,145	13,001	12,797
Ontario Health Study	133,072	7,721	8,013
CARTaGENE	20,004	20,000	19,989
Atlantic PATH	23,734	11,140	11,140
CPT Project total	**222,622**	**66,310**	**66,470**

All regions are continuing to enroll participants in 2012-13.

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Has a doctor ever told you that you had…?

	AB	BC	Atlantic	OHS	CaG	CPT Project
	% of qx entered	% of qx entered	% of qx entered	% of qx entered	% of qx entered	% of qx entered
Cancer	5.0	14.3	12.2	9.6	8.1	**9.5**
Diabetes	6.5	4.7	6.6	7.2	7.5	**7.0**
Hypertension	24.7	17.7	25.1	23.6	24.8	**23.8**
Stroke	1.0	0.5	1.0	1.0	1.6	**1.1**
Myocardial infarction	2.0	1.1	1.8	2.0	2.8	**2.0**
Arthritis	28.0	20.5	26.4	23.0	20.6	**23.4**
Asthma	11.2	10.2	11.2	12.4	12.9	**12.1**
Chronic hepatitis	0.5	0.9	0.4	0.3	1.1	**0.7**
Multiple sclerosis	0.8	0.5	0.7	0.6	0.3	**0.6**

Proportions of questionnaires entered by March 2012

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Measured BMI

Measured body mass index (m-BMI)

	AB	BC	Atlantic	OHS	CaG	CPT Project
	% of qx with m-BMI	% of qx with m-BMI	% of qx with m-BMI	% of qx with m-BMI	% of qx with m-BMI	**% of qx with m-BMI**
Underweight (<18.5)	0.9	1.5	0.6	0.4	0.9	**0.9**
Normal (18.5 to <25)	36.9	47.0	32.1	31.5	34.8	**36.5**
Overweight (25 to <30)	37.3	33.9	38.0	41.9	37.9	**37.6**
Obese (≥30)	24.9	17.7	29.3	26.1	26.4	**25.0**
Total	100.0	100.0	100.0	100.0	100.0	**100.0**

Proportions shown for study centre visit data entered by March 2012

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Projected participant numbers by 31st March 2013

	Qx and consent	Physical measures	Venous blood
BC Generations Project	30,000	14,917	15,000
AB Tomorrow Project	40,000	20,000	20,000
Ontario Health Study	140,915	12,176	28,000
CARTaGENE	30,000	20,000	19,989
Atlantic PATH	33,500	12,500	12,500
CPT Project total	**274,415**	**79,573**	**95,489**

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By March 2017
(1)

- > 280,000 participants
- Blood samples from 180,000 participants)
- ≥34ml of venous blood (non-fasting) aliquoted into multiple fractions of plasma, serum, buffy coat, red cells

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By March 2017
(2)

1. Create harmonized data repository for the CPT Project
2. Maintain existing regional biorepositories and plan for development of CPT Project biorepository
3. Perform regular linkage with administrative databases

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By March 2017
(3) CVD enrichment

- Many CPT Project core variables, measures and stored blood fractions are already relevant to cardiovascular research

- Participants have consented to linkage with administrative health databases – will also facilitate cardiovascular research

- Regional Scientific Directors will work collaboratively with PIs from the cardiovascular research community who wish to apply for separate funding from CPACC to enrich the CPT Project with additional variables relevant to CVD

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