

# Data Collection Process for the Health Component (2008) of the Québec Longitudinal Study of Child Development (QLSCD)

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Data Collection: Challenges, Achievements and New Directions  
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# Outline

1. Description of QLSCD
2. The Health Component of QLSCD
3. Steps in the collection process
4. Collecting data for the Health Component



# Part 1

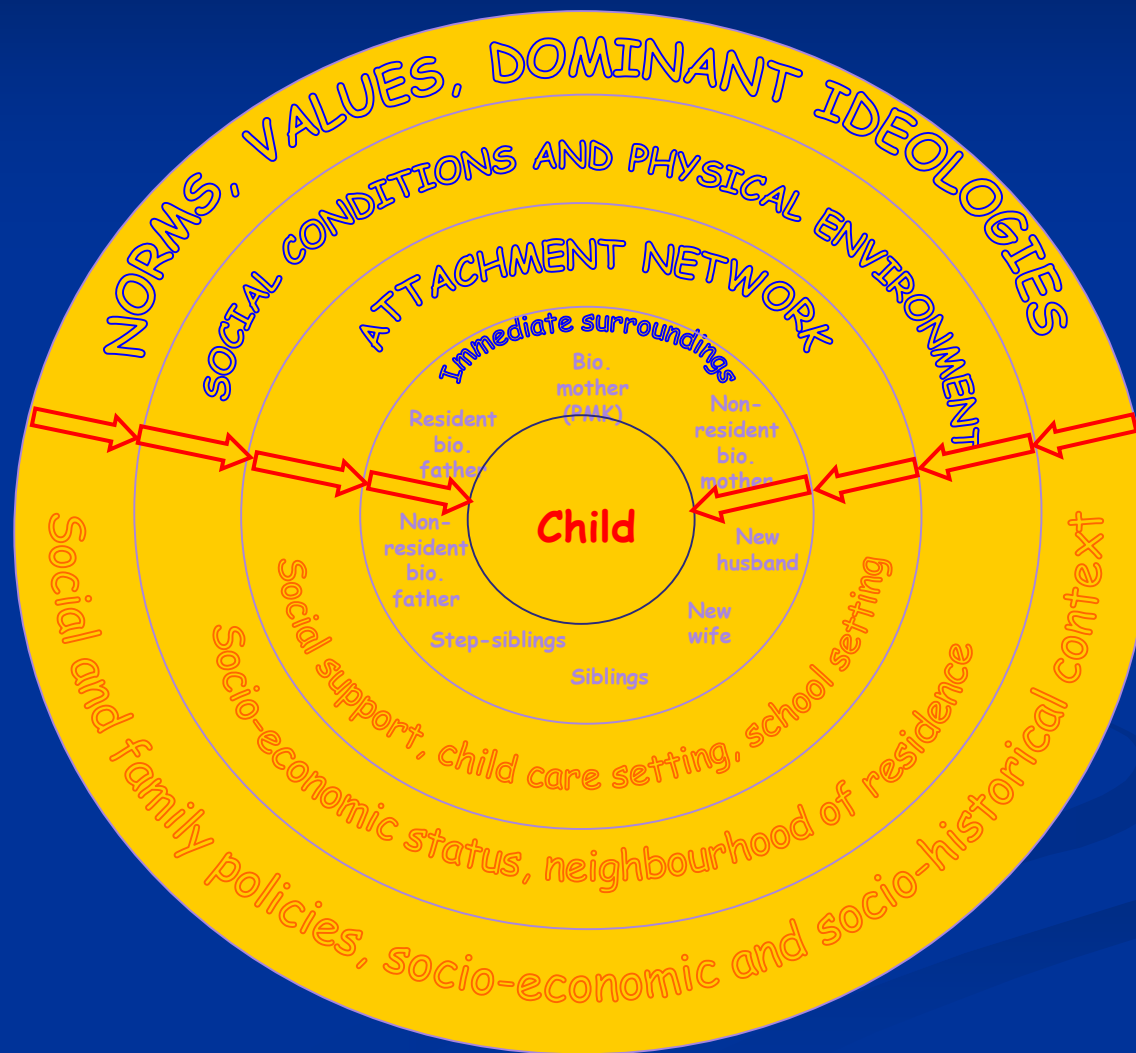
## Description of QLSCD

- Québec Longitudinal Study of Child Development
  - QLSCD's objectives
  - A bio-psychosocial approach
  - The samples
  - Collection programs
  - Phase 2 of the collection process (2003-2010)

# QLSCD's Objectives

- Identify the factors that, when present in early childhood, contribute to the social adaptation and academic achievement of children in Quebec
- Gain a clearer understanding of the role played by selected government programs (child care services, parental leave, health promotion, etc.) and guide the development of future programs

# A Bio-psychosocial Approach



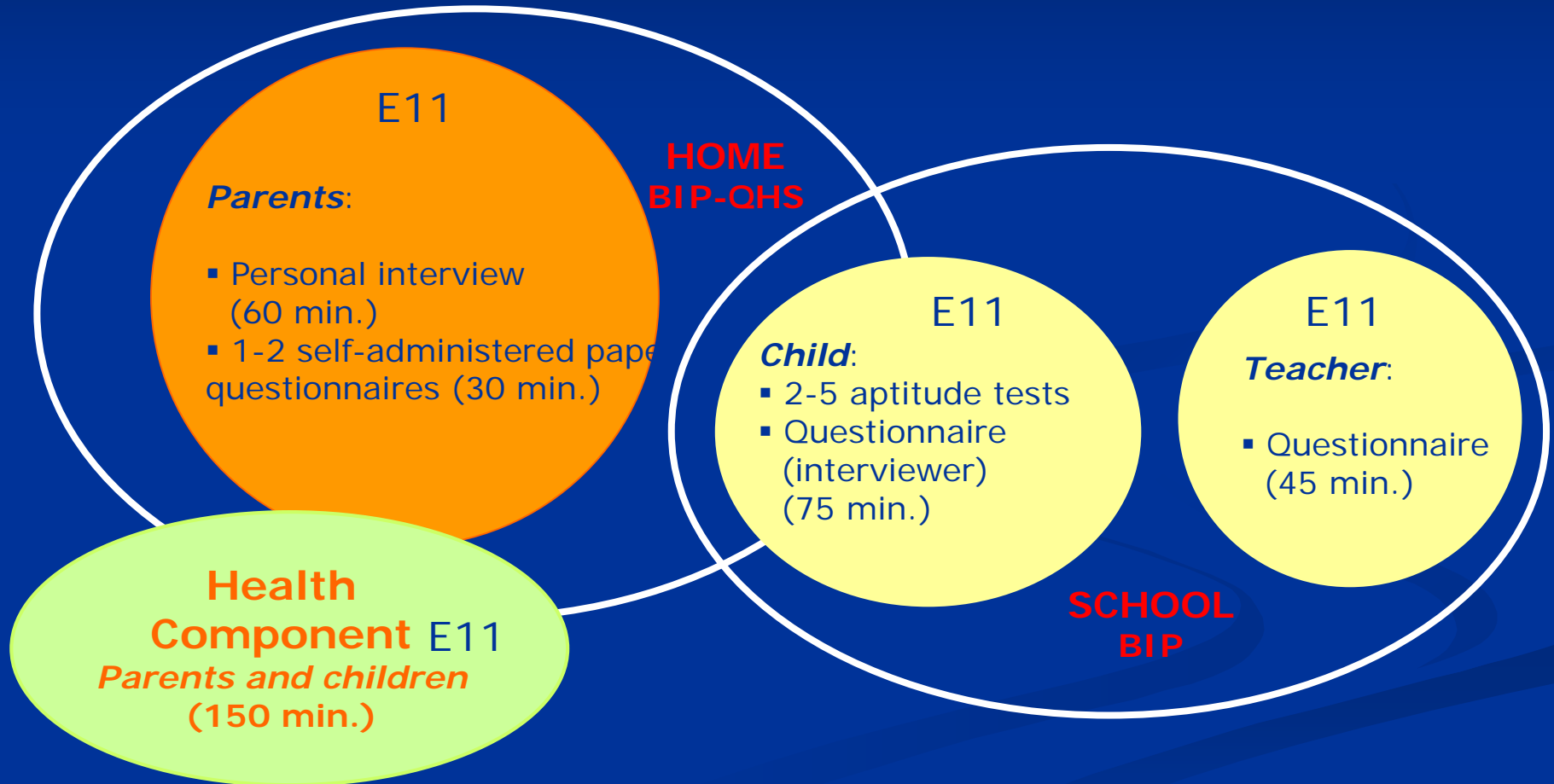
# The Samples

- Pre-test: “In 2001 ... I was 5 years old”
  - Initial N in Pre-test 1 (1996) = 572 families (Montréal and Québec City)
  - 449 at GRIP-UdeM and **123 at ISQ (95 contacted for Pre-test 11)**
- Core survey: “I am, I’ll be”
  - Representative sample of all children (single births, except extremely premature) born to women living in Quebec in 1997-1998 (excluding health regions 10, 17 and 18)
  - Initial sample (1998) = 2,120 families
  - Sample size after 2006 collection = 1,531 (1,974 contacted)

# Collection Programs

Year	Pre-tests	Regular surveys	Special surveys
1996	P1 (5 months)		
1997	P2 (17 months)		
1998	P3 (29 months)	E1 (5 months)	
1999	P4 (41 months)	E2 (17 months)	
2000		E3 (29 months)	
2001	P6 (5 years)	E4 (41 months)	
2002	P7 (6 years)	E5 (4 years)	NUTRITION
2003		E6 (5 years)	CHILD CARE SERVICES
2004	P9 (8 years)	E7 (6 years)	PSYCHOMOTILITY
2005		E8 (7 years)	
<b>2006</b>	P10 (10 years)	E9 (8 years)	PSYCHOMOTILITY
<b>2007</b>	<b>P11 (10-11 years) + HEALTH</b>		
2008	P12-13 (12 years)	E11 (10 years)	<b>HEALTH</b>
2009	P14 (13 years)		
2010		E13 (12 years)	

# Collection for the 2008 Cycle (E11)





# Part 2

## The Health Component of QLSCD

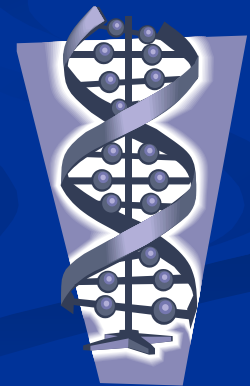
- Prime movers
- Overview of health data collection
- 2008 collection period
- Collection instruments
- Results of the Pre-test

# Prime Movers of the Health Component

- Université de Montréal
  - Interdisciplinary Health Research Group (GRIS)
    - L. Séguin, MD, MPH; G. Paradis, MD, MSc; M. Lambert, MD
  - Research Unit on Children's Psychosocial Maladjustment (GRIP)
    - R. E. Tremblay, PhD; M. Boivin, PhD
- Funding
  - CIHR (*Canadian Institutes of Health Research*)
  - FRSQ (*Fonds de la recherche en santé du Québec*)
- Project manager: Institut de la Statistique du Québec (ISQ)

# Overview of Health Data Collection

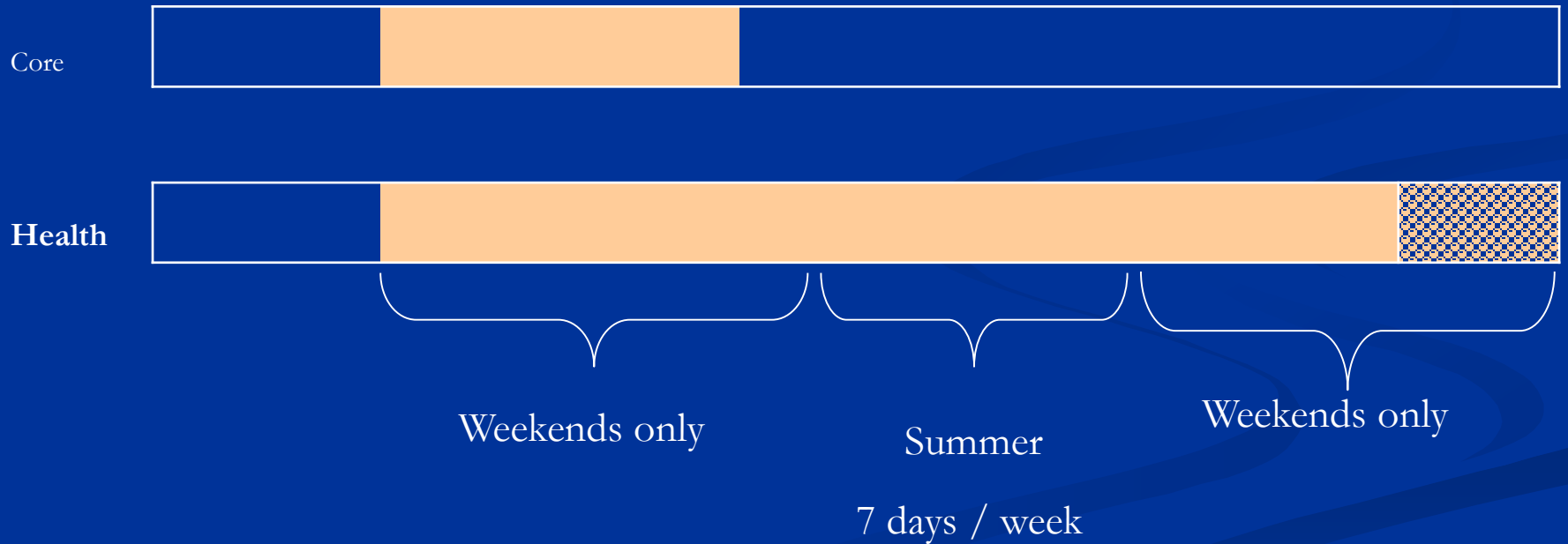
- Research focuses
  - Poverty, stress and cardiovascular disease (CVD) (GRIS)
  - DNA and behaviour (GRIP)
  - Environmental health (GRIS and GRIP)
- Home visit
- All regions of Quebec
- Families contacted = 1,974
- March – December 2008



# 2008 Collection Period

January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
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## Component



# Collection Instruments

- Self-administered questionnaire for the parent (20 minutes)
- Child questionnaire administered by the nurse (20 minutes)
- Self-assessment of sexual maturity (Tanner) (5 minutes)
- Measurement of changes in heart rhythm (Holter) (continuous)
- Anthropometric measurements of child (20 minutes)
- Blood sample from fasting child (10 minutes)
- Measurement of child's blood pressure while seated (10 minutes)
- Saliva collection for DNA preparation if necessary (5 minutes)
- Saliva collection for cortisol measurement (4 X 2 minutes)

# Results of the Pre-test

- May – August 2007
- 53 families seen; blood samples taken from 39 of them

	<i>n</i>	%
No. of families contacted in all	96	
No. of families seen for Core Component (asked to take part in Health Component)	63	(63/96) 65%
No. of families who agreed to do Health Component	55	(55/63) 87%
<b>No. of families who completed Health Component</b>	<b>53</b>	(53/63) 84%
Blood sample agreed to	46	(46/55) 84%
Blood sample taken	39	(39/53) 74%
Saliva ( <i>Oragene</i> ) taken for DNA (if blood not taken)	14	(14/53) 26%

# Part 3

## Steps in the Collection Process

- Step 1: Recruiting participants
- Step 2: Making appointments
- Step 3: Visiting the family
- Step 4: Forwarding samples and data

# Step 1: Recruiting Participants

1. ISQ



Core Component

2. ISQ



Through  
administrative  
data from MELS

3. BIP



4. BIP



Health data collection

5. BIP



Verbal consent





# Step 2:

## Making Appointments

- Calls to make appointments (BIP)
- BIP informs the nursing company (QHS) of the appointments
- QHS assigns appointments to available nurses
- The nurses confirm the appointment with the family two days in advance (reminder that the child must be fasting)



# Step 3:

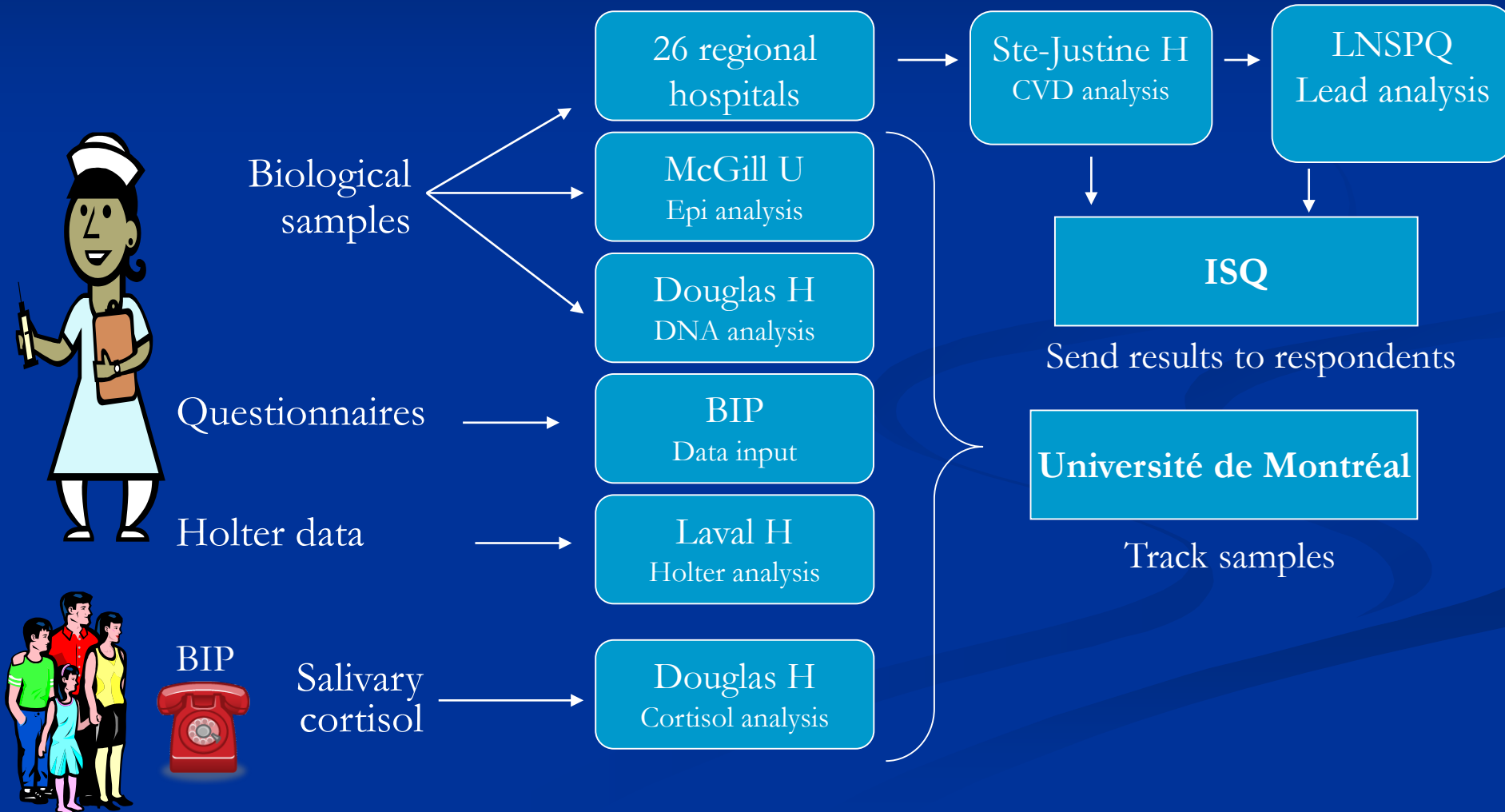
## Visiting the Family (2.5 hours)

- Obtain written consent (20 min)
- Collection activities:
  - Apply anaesthetic cream to child
  - Attach Holter to child (10 min)
  - Take child's anthropometric measurements (20 min)
  - Collect blood sample from fasting child (10 min)
  - Give child breakfast (30 min)
  - Nurse prepares blood samples (30 min)
  - Nurse administers child questionnaire (20 min)
  - Self-assessment of sexual maturity (5 min)
  - Mother completes self-administered questionnaire for the parent (20 min)
  - Measure child's blood pressure while seated (10 min)
  - Collect saliva for DNA preparation if necessary (5 min)
- After collection activities:
  - Give out rewards and provide results
  - Week following the home visit: Mother and child collect saliva samples



Adobe Acrobat 7.0  
Document

# Step 4: Forwarding Specimens and Data



# Part 4

## Collecting the Data for the Health Component

- Difficulties in implementing the initial collection method
- Changes made in the collection method
- Preliminary results
- Participation and attrition

# Difficulties in Implementing the Initial Collection Method

- Limited availability of nurses
- Difficult to recruit more nurses (complex project, a lot of travel, etc.)
- Problems with communications between principals
- Constraint associated with availability of materials (\$)
- Time constraint

# Changes Made in the Collection Method Along the Way

- Appointments made by the nurses
- Université de Montréal played a role in recruiting nurses
- Cooperation with other regional hospitals based on nurses' area of residence
- Communications between firms kept to a minimum
- Additional materials brought in
- Collection period extended

# Preliminary Results

- Results for Health Component as of Oct. 1, 2008
- Estimate of final  $n$



	$n$	Estimated final $n$	%
No. of families contacted overall	1733		
No. of families who completed Core Component	1394		
No. of families who agreed to do Health Component	1046		1046/1733 53%
<b>No. of families who completed Health Component</b>	<b>655</b>	<b>998</b>	655/998 66%
Blood test agreed to		836	836/1046 80%
Blood test taken / Blood test agreed to		711	711/836 85%

# Participation and Attrition

- Favourable factors accounting for participation
  - “Home” laboratory
  - A subject of current interest: health
  - Return of lipid profile results
  - Financial compensation (\$40)
- Unfavourable factors accounting for attrition
  - Length of visit (2.5 hours)
  - Intrusive nature of measurements
  - Visit occurs only a short time after the Core Component
  - Families asked to participate for the last 10 years

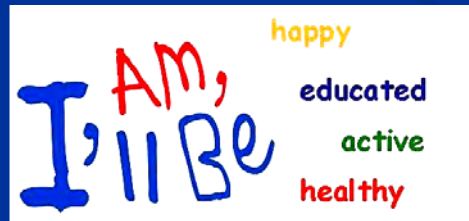


# Conclusion

- Suggestions for future collection of health data
  - Manage the nurses internally
  - Limit the number of principals involved in the process
  - Have nurses make the appointments
  - Continue giving families their results

Québec Longitudinal Study of Child Development

Thank you for your  
attention!



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