

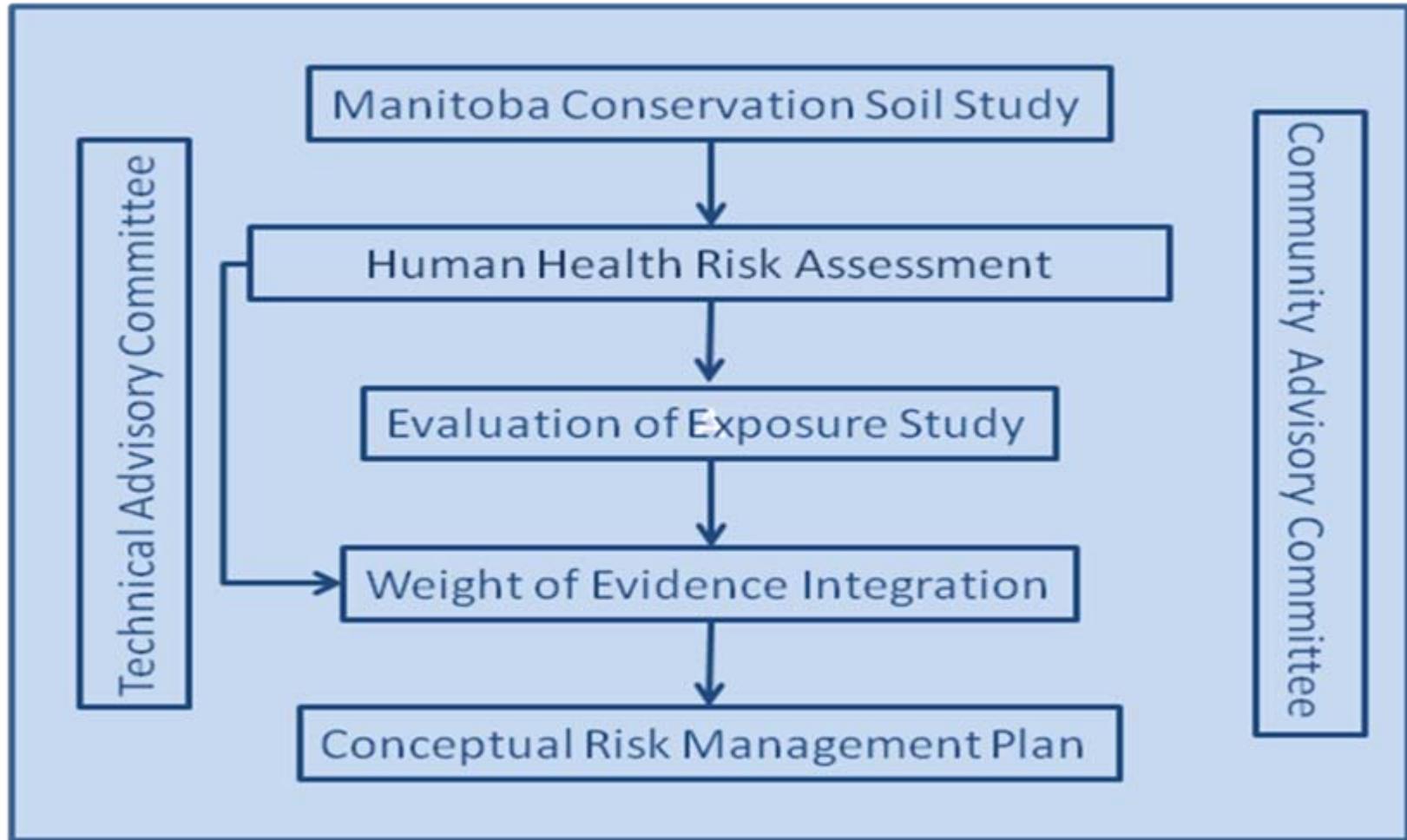


## **Flin Flon Soils Study: Follow-up**

- **Overview of how we arrived at this stage (if required)**
  - **Status of blood lead follow-up blood lead exposure study**
- **CAC Input**

***Community Advisory Committee Meeting, Thursday, September 20, 2012***

# The Flin Flon Soils Study



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# Re-cap of 2009 exposure study activities

- Through September and October 2009 the study team conducted interviews with 251 households.
- Data collected from 447 individuals.
- 379 urine samples, 202 blood sample
- Urine analyzed for arsenic (inorganic, and total) and inorganic mercury.
- Blood was analyzed for lead.
  
- Environmental data was NOT collected concurrently for each participating residence; it was collected during other phases of the Flin Flon Soils Study

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# Potential Health Risks (Lead)

- None of the blood lead levels measured in the Flin Flon area are associated with symptomatic clinical effects.
- Considering the available literature, the blood lead levels measured in the Flin Flon area and specifically in West Flin Flon may be associated with asymptomatic, population effects.
  - Studies indicate childhood blood lead levels above 10  $\mu\text{g}/\text{dL}$  may be linked to decreased intelligence and impaired neurobehavioral development.
- Health Canada's policy is to reduce exposure to lead wherever practical. The US CDC state that there is no known minimum threshold of harm for lead exposure.
- Participants with levels at or above 5  $\mu\text{g}/\text{dL}$  were asked to follow up individually with physician – cautionary level

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# Risk Management

- As a result of the findings of the original study, several risk management activities have occurred since 2010
  - HBMS facility/site/operations related
  - Community related
- The risk mgmt plan also included a recommendation to complete a follow-up study to assess the status of blood Lead levels in the community.

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# Follow-up Blood Lead Exposure Study Model

## Oversight Bodies

Technical Advisory Committee

Community Advisory Committee

Ethics Review

Scientific Peer Review

Independent Expert Review Panel

## Study Team

Intrinsic  
Goss Gilroy  
Habitat Health Impact Consulting

## Study Sponsor

Hudbay

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# Follow-up Study Questions

## Study Questions:

1. *What is the current level of internal exposure to lead in the child population residing in the Flin Flon Area?*
2. *Compared to the lead exposure levels measured in 2009, have levels in Flin Flon Area children increased, decreased, or remained the same in 2012?*
3. *Are the personal factors associated with children's lead exposure measured in 2009 (e.g., place of residence, age, gender) similar in 2012?*

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# 2012 Follow-up Exposure Study Field Work

- Similar to the 2009 study, except only blood Lead (mercury and arsenic not recommended for further study)
  - CAC and TAC oversight
  - Under 7 years old; less than 84 months.
  - September and October 2012 (same time of year)
- Blood clinics held in the same location
  - length of interview and environmental sampling led to this
- Environmental Sampling occurs concurrently
  - Soil, dust and water sample collection occurs at the same time as household interviews; a paint scan is also conducted
- Results will be shared with home owners

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# Field work (continued)

- Sample: stratified random sample approach based on municipal tax roll
  - Stratified by community East/West Flin Flon, Creighton, Channing
  - Also allow interested eligible households to participate. Treat separate from original sample initially to determine if differences in characteristics exist.
- Awareness raising: Combination of newspaper, radio, ad boards, posters, word-of-mouth, invitation letter.
- Recruiting: door-to-door
- **So far 55 households with 75 children have been recruited into the study.**
- **Data collection and recruiting is ongoing**

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# Reporting

- Individual Results - Individual results to the participants' parents/guardians along with general information on lead exposure and interpretation of results. If additional follow-up is needed, the team physician (Murray Lee) will call to go through the results and coordinate follow-up procedures with local doctors. Dr. Sidiqqi will handle follow up for participants with no family doctor.
- Technical Reporting - The study team will prepare a scientific technical report for the study for peer review.
- Community Reporting - A community report that translates the scientific technical report for a general population audience. This report will focus primarily on the findings from the study. The study team will present to community groups and further describe the findings.

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# Questions about the follow-up study?

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# Work plan

- Study plan drafted (completed March)
- TAC Review (completed April/May)
- Integrate CAC input to study plan (completed early June)
- Ethics Review (completed July)
- Start communications activities (June through September)
- Recruiting and field work(Started early September)
- Report individual results (November)
- Community Results (January/February)