

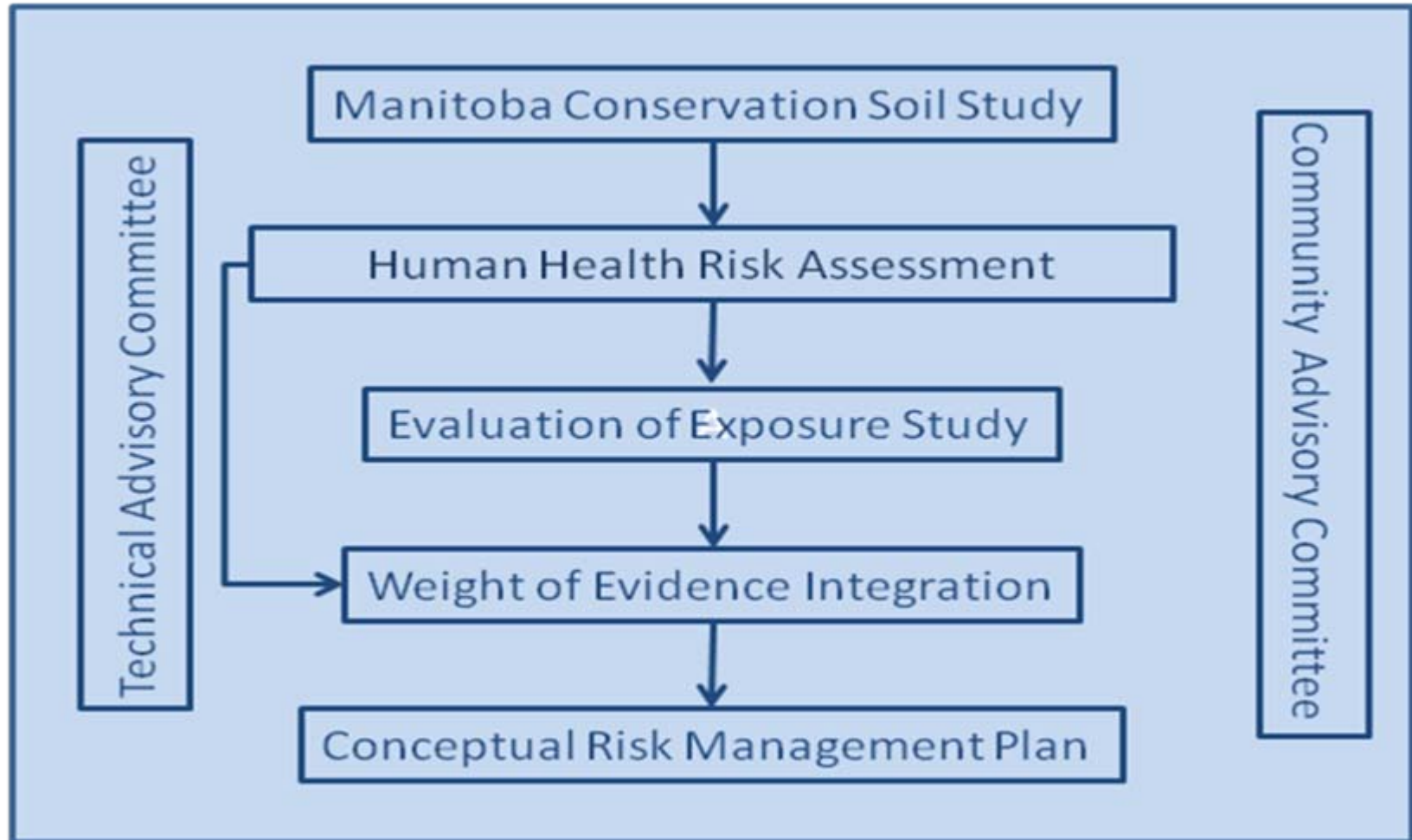


Flin Flon Soils Study: Follow-up

- **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



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

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

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.

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

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?*

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

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**

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.

Questions about the follow-up study?

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)