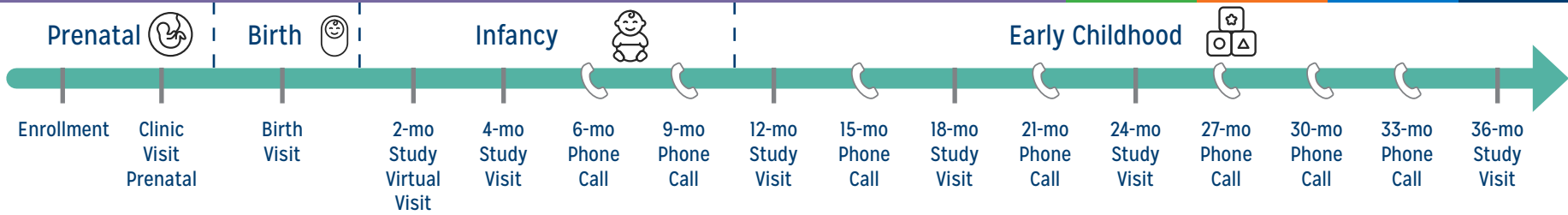




# Canoe Study Timeline

## Childhood Allergy and the Neonatal Environment



### Data and Sample Collection

#### Surveys



Surveys completed at enrollment, each study visit and each phone call or online.

#### Surveys



#### Prenatal

Blood, Urine, Stool, Hair, Toenail Clippings, Skin Swab



#### Birth

Placenta, Cord Blood



#### 2 Months

Breast Milk, 1-time collection

#### Additional Components



#### 2, 12 & 36 Months

In-home dust collection kits

### Child Sample Collection



#### Birth

Nasal Swab, Skin Swab, TEWL, Merconium (first stool)



#### 2 Months

Nasal Filter Paper, Stool



#### 4 Months

Nasal Collection, Urine, Skin Swab, Stool, Toenail Clipping, TEWL



#### 12 Months

Nasal Collection, Stool, Blood, Skin Swab, TEWL



#### 24 Months

Nasal Collection, Urine, Stool, Blood, Skin Swab, TEWL



#### 36 Months

Nasal Collection, Skin Swab, TEWL



## Improving Maternal-Child Health Through Research

# What do we learn from the data we collect?



### **Survey and Phone Calls**

Maternal: Prenatal;  
Child: Infancy through Early Childhood  
Individual information that is important for assessing health and study outcomes



### **Placenta and Cord Blood**

Maternal: Birth  
The placenta plays a major role in pregnancy outcomes and can help us understand future health of mother and child.



### **Blood**

Maternal: Birth; Child: Early Childhood  
*Mother's blood* collected close to the time of birth is examined for nutritional factors during pregnancy.  
*Child's blood* will help determine allergic responses and provide other markers of health. Blood from the mother and child will also provide a DNA sample for genetic research.



### **Breast Milk**

Maternal: Child's Infancy  
This sample will allow us to measure the combinations of proteins, fats, vitamins, and carbohydrates found in breast milk.



### **Transepidermal Water Loss (TEWL) Test**

Child: Infancy through Early Childhood  
Using a specialized instrument, we will measure the child's skin moisture and hydration.



### **Nasal, Skin Swab and Stool Combination**

Maternal: Prenatal  
Child: Birth (meconium) through Early Childhood  
The measurement of healthy bacteria that are naturally in/on the body is called the microbiome. These samples allow us to sample the microbiome and measure substances the body produces in response to the environment.



### **Urine Collection**

Maternal: Prenatal  
Child: Infancy through Early Childhood  
The measurement of naturally produced substances in urine will help us learn how to predict health. These are known as "biomarkers".



### **Hair and Toenail Clippings**

Maternal: Prenatal  
Child: Infancy through Early Childhood  
These samples allow us to measure chemicals and other substances stored in hair and toenails that tell us about exposures over a long period of time.



### **Wipe Kit/Home Dust Collection**

Child's Home: Infancy through Early Childhood  
Indoor particle sampling looks for normal substances found in the home. These particles are naturally occurring, present in all homes, and can impact our health.