

## Background

The Newborn Metabolic Screening (NMS) Program Quality Management Framework (QMF) was created within the NMS Program Initiative. The Initiative was established in 2010 by Alberta Health Services' (AHS) in response to a directive from Alberta Health and Wellness (AHW) to meet the 2010 NMS Policy Document standards. The NMS Program Initiative is planned until 2015 with four phases: action planning, implementation, maintenance and evaluation.

In the summer of 2010, over 140 stakeholders contributed to the *Newborn Metabolic Screening Initiative: Action Plan Report* with the purpose of improving NMS Program service delivery, coordinating the program within AHS and meeting the Policy Document standards.

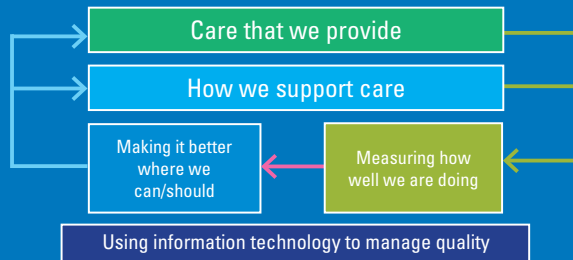
The Action Plan Report proposed a two part AHS operational model for the NMS Program which was approved at the start of implementation in late 2010.

Part one of the operational model is a governance structure which provides organizational oversight, operational integration, and program and project coordination. The second component of the operational model is the NMS Program QMF.

## Purpose

The purpose of the NMS Program QMF is to provide a coordinated infrastructure that **maximizes population-based screening opportunities, minimizes potential errors and reduces the risks.**

The NMS Program QMF ensures that newborn metabolic screening pathway **services are supported, program performance is managed, and program quality is improved.**



**Alberta's NMS Program**  
Every Infant, Every Time



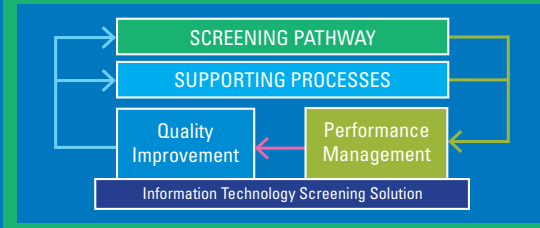
*Timely and effective screening allows for early diagnosis and treatment of screened conditions.*

The Newborn Metabolic Screening (NMS) Program is a population-based screening program offered to all infants born and registered in Alberta.

The program goal is that all infants have an initial screen reported on or before the 10th day of age.

(Alberta Health and Wellness, 2010 NMS Policy Document)

## Screening Quality Management Framework



## Screening Pathway

The NMS Program QMF utilizes quality management processes and structures to support, manage and improve the Newborn Metabolic Screening Pathway to ensure that

- All infants born in Alberta are **registered** with a unique lifetime identifier within 24 hours of birth
- All newborn screening samples are of high quality (98% or greater) and **collected** within 24–72 hours of birth
- All newborn screening samples are **transported** to the NMS lab within 72 hours of collection
- All newborn screening samples are **analyzed** in a high quality accredited NMS lab (NMS Lab, Genetic Lab Services, University of Alberta Hospital) and **reported** to the Electronic Health Record (NetCare) and providers within 96 hours of receipt in the NMS lab
- All newborn screening results are **followed-up** to ensure all infants born and registered in Alberta are screened, repeat samples are collected when needed, and clinical assessments and diagnostic testing are completed in a timely manner for all positive (abnormal results)



## Supporting Processes

The NMS QMF supports AHS staff and care providers along the Newborn Metabolic Screening Pathway to provide quality screening services through the following centralized processes

- Clinical Policy (policy, procedures, standards and guidelines)
- Staff Education
- Parent Information
- Provider Information (physicians and midwives)
- Communication
- Knowledge Exchange
- Patient Safety
- Business Continuity
- Program Planning and Capacity
- Partnerships

## Performance Management

The NMS Program QMF uses a performance management approach to measure program performance along the screening pathway along with the utilization of supporting processes. Reporting on program performance and operational activities includes

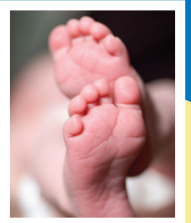
- Timeliness of registration, collection, transportation, reporting, repeat collections
- Sample quality (adequacy)
- Requisition errors
- Alert notifications (sample, requisition and identity errors) trends and activities
- Mass communication, knowledge exchange and information/education resources
- Clinical policy, business continuity, lab capacity planning, patient safety activities
- Evaluation of program components and activities

## Quality Improvement

The NMS Program QMF utilizes systematic techniques (e.g., Alberta Improvement Way) to improve how the NMS Program provides and supports quality screening services within a population-based screening program. Areas targeted for improvement are identified and monitored through performance management.

## Screening Solution

The NMS Program QMF is supported by an information technology screening solution that currently includes a web-based notification, tracking and reporting application that links registration source data with lab information system data. A future NMS solution within an integrated enterprise-class screening solution is in initial planning.



## Alberta's Newborn Metabolic Screening Program

In Alberta, the Newborn Metabolic Screening (NMS) Program screens for 17 treatable conditions (14 metabolic conditions, 2 endocrine conditions and cystic fibrosis).

Some treatable conditions develop early in life. Providing timely screening identifies infants with the screened conditions quickly so early treatment can begin to protect healthy growth and development. Screening is the only way to tell if an infant who may appear healthy soon after birth has a treatable condition.

The purpose of the NMS Program is to provide timely and effective screening to all infants born in Alberta. Early screening can make the difference between healthy development and lifelong health problems. The NMS Program helps find treatable conditions early so treatment can begin in time to prevent health problems, improve infant health and save lives.

The Alberta NMS Program is delivered by Alberta Health Services (AHS) in partnership with Alberta Health (AH), Health Canada—First Nations and Inuit Health Branch, Alberta Region (FNIHB), providers and parents/guardians.

