



Early health. Lifelong health.
Début en santé. Longue vie en santé.

BORN Ontario: Best Possible Beginnings for Lifelong Health

**NSO Diagnostic Evaluation Report Form (DERF)
31 October 2012**

Contents

- BORN re-cap
- Review of current NSO processes
- Introduction to BORN DERF encounter
- Introduction to BORN DERF Status Report
- Other

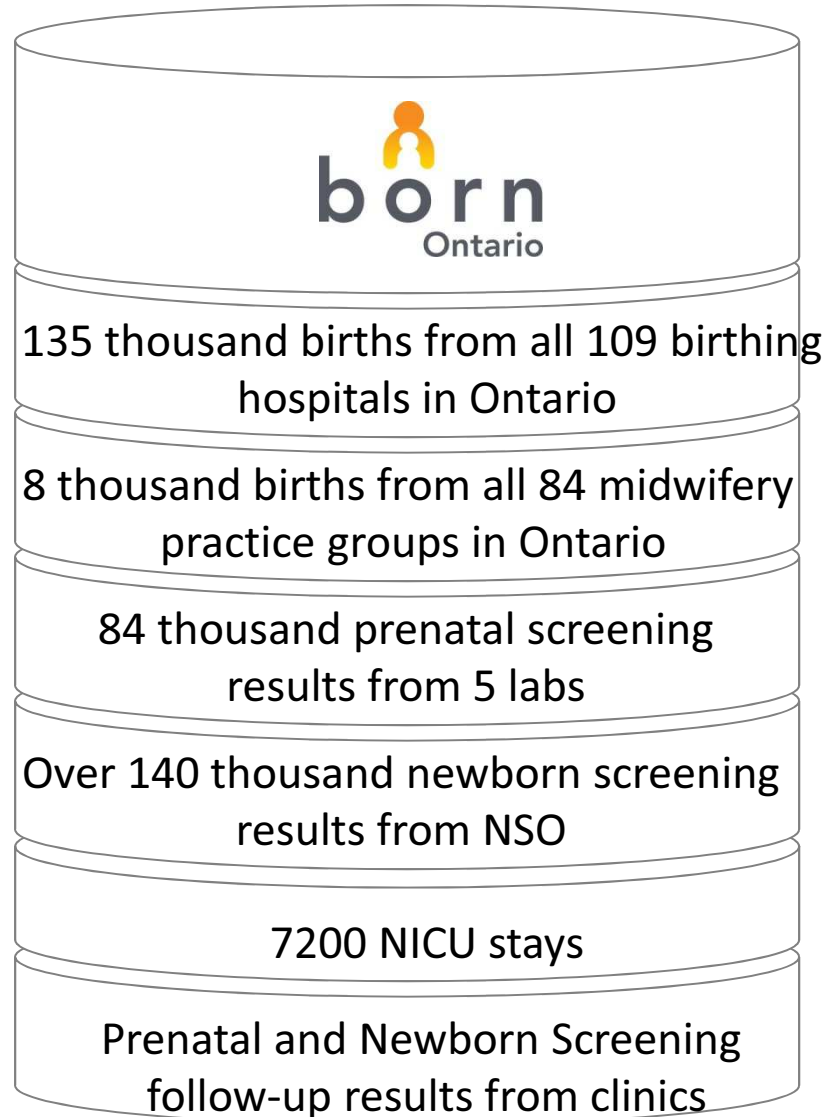
About BORN

Funded by the MOHLTC in 2009 to:

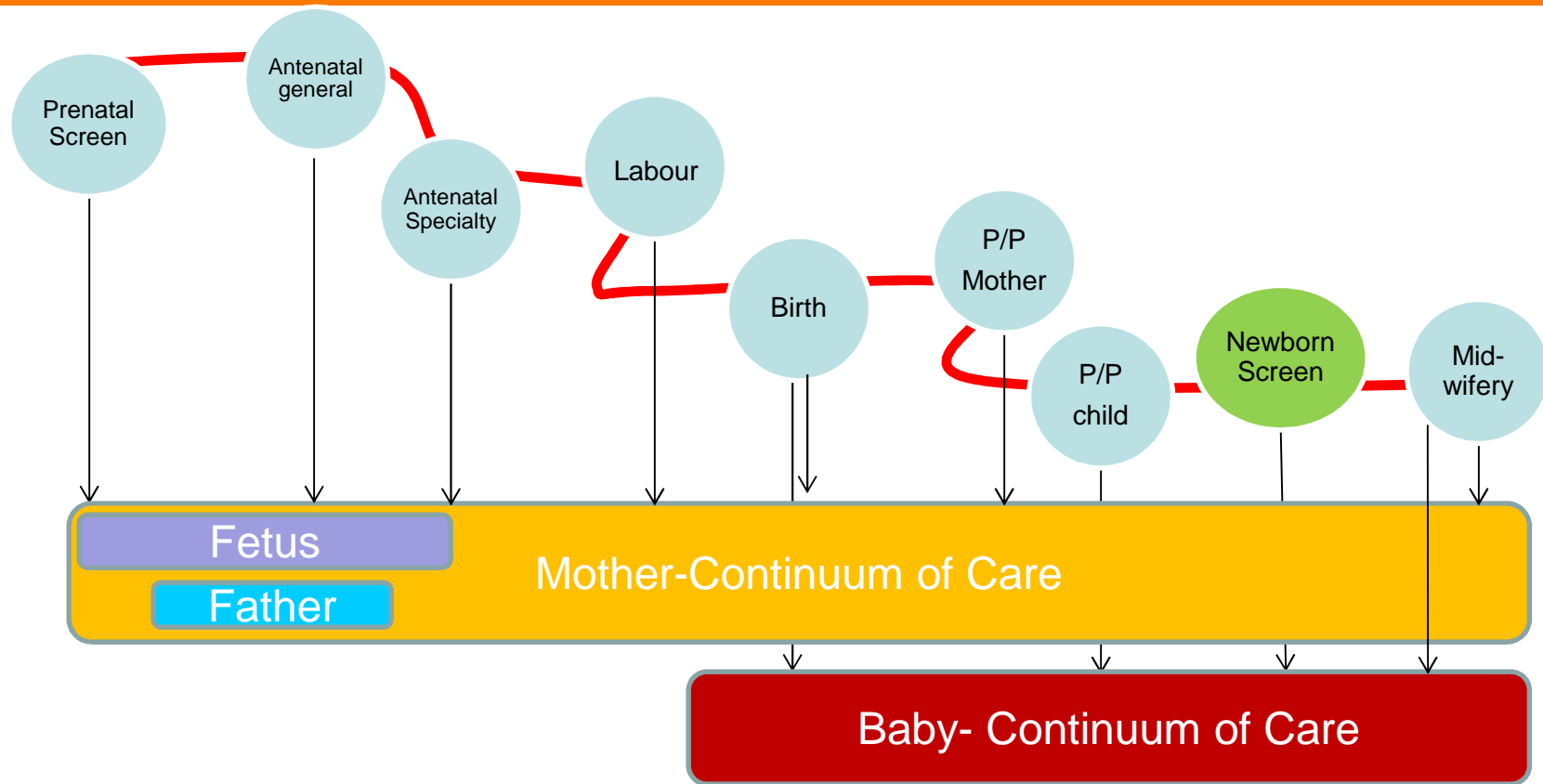
- Integrate five founding partner organizations with different data collection systems, but serving similar populations:
 - Prenatal screening
 - Pregnancy, labour, birth and early newborn care (normal and complex) (hospital and midwifery)
 - Newborn screening
- Attain registry status under PHIPA
- Facilitate and improve maternal child care
- Drive quality measures and quality improvement
- Inform the health care system
- Contribute to science and knowledge
- Be the *‘authoritative source of maternal child information for Ontario’*



BORN is an Information System



The Continuum



Data Dictionary



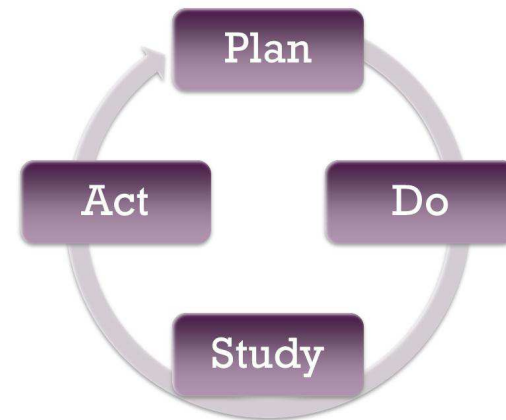
www.BORNOntario.ca/data-dictionary

Our Quality Trajectory

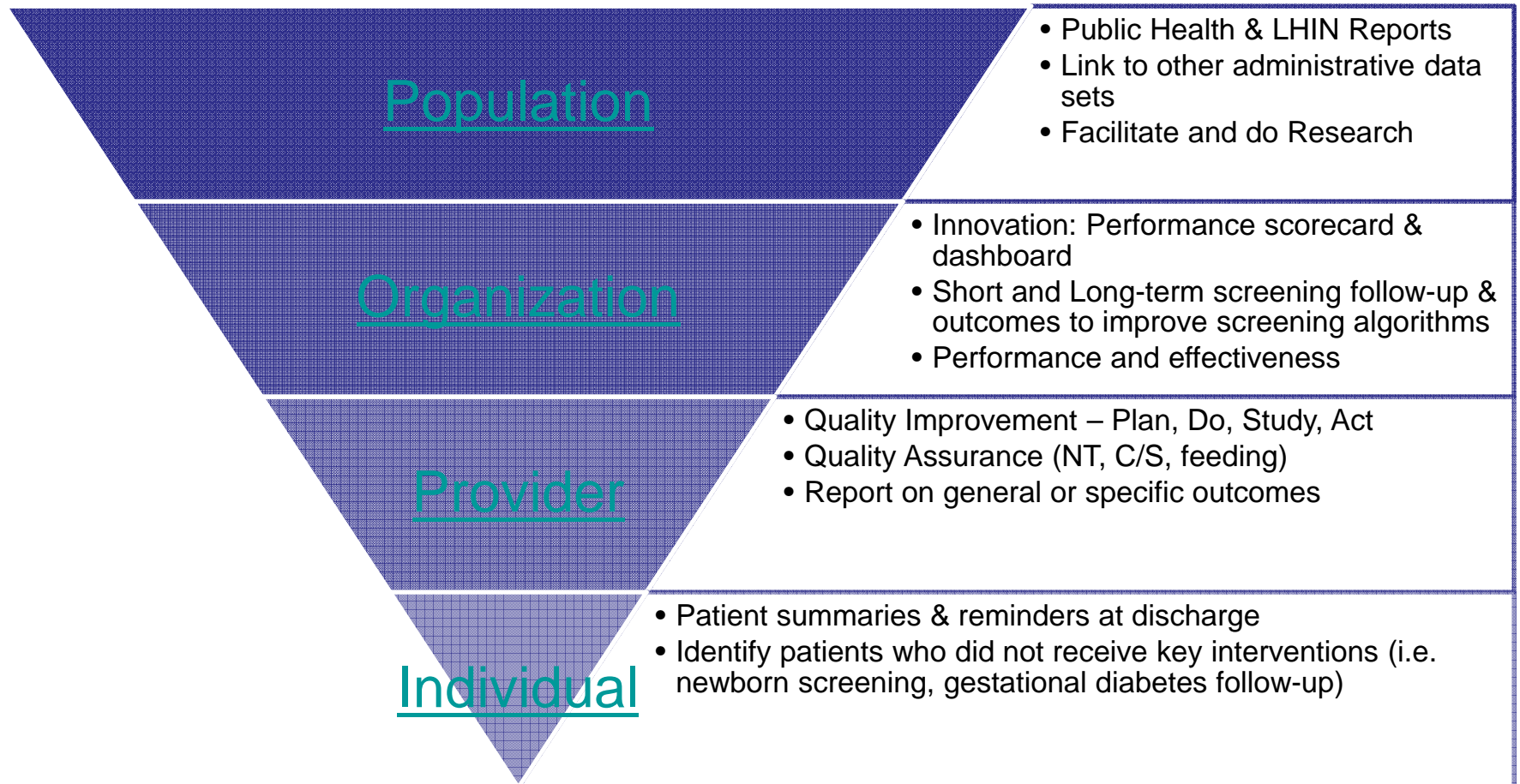


To:

- KNOW what you do well
- LEARN what you could do better
- CHANGE what needs improvement
- MONITOR your progress



BORN: Innovation in Action



Deployment Timeline

- January 2012** BORN “go-live”
All NSO screens uploaded
- April 2012** 109 birthing hospitals online, all births in Ontario captured (roll-out began in January)
- October 2012** All prenatal screening records uploaded (back to April 2012)
- Other** PSO follow-up, Antenatal Specialty encounters developed and deployed, other areas in development.

Current NSO Process

- Screen positive Infant
 - Refer to Regional Treatment Centre (RTC)
- Feedback and follow-up
 - Currently a fax/mail paper-based process
 - Retrieval Confirmation Form
 - Diagnostic Evaluation Report Form (DERF)

Retrieval Confirmation: current

- Retrieval Confirmation Form
 - Faxed to RTC weekly
 - Completed and faxed back to NSO
 - Re-fax following week if not confirmed

DERF: current

- DERF included in faxed referral package
- Returned to NSO when complete
- Tracking and follow-up of outstanding DERFs
 - Ad-hoc
 - Some RTC-specific processes
 - No mechanism for RTC self-tracking

BORN

- NSO Screens
 - All records since January 2012 are in BORN
- Screen positive records
 - Allow the creation of a DERF
- Provides RTC capacity to track own DERFs
- Will provide RTC-specific statistics
- Provincial level real-time data

BORN Access

GETTING STARTED

How to access BORN

- Access via web portal:
<https://my.bornontario.ca>
 - Ready wherever and whenever you are
- Users:
 - L&D, MFM, Fertility, Midwifery, Screening laboratory, Follow-up encounter users (genetic counsellors, nurses, physicians), etc...
 - *User ID and passwords available through your local administrator / superuser*

Landing Page

Newborn Screening Centre, Children's Hospital of Eastern Ontario / Shelley Dougan

born Ontario

Patient Search • NSO DERF Search • Reporting • Administration • My Profile • Help • Sign Out •

BORN UAT Portal

Patient Search

OHIP #:

or

ID #:

or

Family Name

Given Name

Date of Birth

Advanced Search

Quick Links

- Patient Search
- NSO DERF Search
- Reporting
- Administration
- My Profile
- Help
- Select Organization
- Sign Out

Welcome Shelley Dougan

Patient Records

Created date from: Created date to: Status:

Record Type	DERF Type	OHIP #	Patient Name	Date of Birth	Status	Created	Created By	Last Updated
NSO DERF	CAH	6675476359	<u>AAAX ANX.</u> <u>KTCYHDIDVRJH</u>	12 Jan 2012	Submitted	17 Oct 2012	Shelley Dougan	26 Oct 2012

Page size: 10 1 items in 1 pages

Announcements

No records to display.

Page size: 10 0 items in 1 pages

Trusted sites | Protected Mode: Off

NSO DERF ENCOUNTER

NSO BORN Encounter

- How to find a DERF in BORN:
 - Determination ID: The unique number assigned by NSO to each screen positive **result**.
 - Can also search using OHIP, or last/first names with DOB

NEWBORN SCREENING ONTARIO
DÉPISTAGE DES NOUVEAU-NÉS DE L'ONTARIO

Children's Hospital of Eastern Ontario
401 Smyth, Ottawa Ont. K1H 8L1
(613)738-3222

DOE, BABY BOY A

Health Card Number: 1234567890
ONSL Accession Number: 201201010000
Mother's Name: Doe, Jane
Phone #: 613-555-0000
Address: 123 Main St
Ottawa, ON
K1K 1K1

Submitting HCP: Dr. Doctor
Submitter Unique Number: 12-321
Submitting Facility: Anywhere Hospital

D.O.B.: 2012-01-01 12:00
D.O.C.: 2012-01-02 12:01
Date Received: 2012-01-03
Date of Report: 2012-10-16

Gender: Male
Feed Type: Breast
Transfusion: N
Gestational Age: 40+2
Birth Weight: 3500g

Determination ID (BORN DERF Entry): 12345

Analyte	Result (uM)	Critical Cutoff	Reference Interval Age < 7days	Reference Interval Age > 7days
Citrulline	75	70	8-26	9-44
Arginine	45		3-28	2-51

NSO DERF Search

BORN Ontario

Better Outcomes Registry & Network / jarita lee

Batch Upload • Queue Management • Linking and Matching • NSO DERF Search • Patient Search • Reporting • Administration • My Profile • Help • Sign Out •

BORN UAT Portal > Patient Search > NSO Screen Positive DERF Search

Quick Links

- Batch Upload
- Queue Management
- Linking and Matching
- Patient Search
- NSO DERF Search
- Reporting
- Administration
- My Profile
- Niday Conversion Utility
- Help
- Select Organization
- Sign Out

NSO Screen Positive DERF Search

Please search by a Determination ID:

Determination ID:

BORN NSO DERF Encounter

born Ontario Better Outcomes Registry & Network / jarita lee

Batch Upload • Queue Management • Linking and Matching • NSO DERF Search • Patient Search • Reporting • Administration • My Profile • Help • Sign Out •

BORN UAT Portal > Patient Search > NSO DERF

Anna Castillo

Name: **Anna Castillo** Birth Order: **A** Determination ID: **80001** Accession #: **888654321** OHIP #: **1342312319**
 DOB: **20-Oct-2010** Baby's Sex: **F** Postal Code: **M1R 2N1** Province: **Ontario**

NSO Diagnostic Evaluation Report Form

Patient Information | Retrieval Confirmation | Retrieval & Clinical Status

Diagnostic Evaluation | Definitive Diagnosis & Family History | Retrieval Centre Details | Summary

Birth Weight: 2215 gms Gestational Age at Birth: 40 weeks 0 days
 Date newborn screening results referred out: NSO Referring Physician:

Currently Entering DERF For:	Screening Results
Congenital Adrenal Hyperplasia (CAH)	CAH (N17P) : 34.0 cm

Left sidebar menu items: Birth & Postpartum (Birth Child, Postpartum Child), BORN, 20 Oct 2010, Newborn Screening (Newborn Screening Ontario (NSO) - NSO Lab, 29 Jun 2011; NSO DERF - BORN, 16 Feb 2012 (CAH); NSO SDRF), NICU/SCN

Retrieval Confirmation: BORN

The screenshot displays the BORN Ontario web application interface. At the top left is the BORN Ontario logo. The top right corner shows the text "Better Outcomes Registry & Network / jarita lee". A navigation menu includes links for "Batch Upload", "Queue Management", "Linking and Matching", "NSO DERF Search", "Patient Search", "Reporting", "Administration", "My Profile", "Help", and "Sign Out". Below the navigation is a breadcrumb trail: "BORN UAT Portal > Patient Search > NSO DERF".

The main content area is for a patient named Anna Castillo. Her details are: Name: Anna Castillo, Birth Order: A, Determination ID: 80001, Accession #: 888654321, OHIP #: 1342312319, DOB: 20-Oct-2010, Baby's Sex: F, Postal Code: M1R 2N1, Province: Ontario.

The "NSO Diagnostic Evaluation Report Form" is shown with several tabs: "Patient Information", "Retrieval Confirmation" (active), and "Retrieval & Clinical Status". Under "Retrieval Confirmation", there are sub-tabs: "Diagnostic Evaluation", "Definitive Diagnosis & Family History", "Retrieval Centre Details", and "Summary".

The form contains the following fields and controls:

- Infant's Primary Healthcare Provider:
- Warning: "Do not overwrite previous retrieval information. Please click the Update Retrieval Confirmation button when adding new retrieval information".
- Update Retrieval Confirmation button
- Has the infant's health care provider been informed of the positive newborn screen result?: Yes No
- Has the infant's parent/guardian been informed of the positive newborn screening result?: Yes No Unknown
- Comments:
- Date Retrieval Confirmation Form Saved:
- Buttons: Save, Proceed, Submit, Cancel

A left-hand sidebar shows a list of medical events for Anna Castillo, including "Birth & Postpartum", "Newborn Screening", "NICU/SCN", and "NICU Follow up", with specific dates and BORN identifiers.

DERF completion

NSO Diagnostic Evaluation Report Form

The image shows a navigation bar for the NSO Diagnostic Evaluation Report Form. It consists of two rows of tabs. The top row has three tabs: 'Patient Information' (highlighted in orange), 'Retrieval Confirmation', and 'Retrieval & Clinical Status'. The bottom row has four tabs: 'Diagnostic Evaluation', 'Definitive Diagnosis & Family History', 'Retrieval Centre Details', and 'Summary'.

- Validation rules throughout
- Save as-you-go
 - Enables real-time data entry

NSO DERF Encounter - Summary Screen

NSO Diagnostic Evaluation Report Form

Patient Information Retrieval Confirmation Retrieval & Clinical Status

Diagnostic Evaluation Definitive Diagnosis & Family History Retrieval Centre Details **Summary**

NSO Diagnostic Evaluation Report Form Summary

Patient Information

Birth Weight: 2215 gms
Gestational Age at Birth: 40 weeks 0 days

Currently Entering DERF For:	Screening Results
Homocystinuria	MET : 30.0 mm

Also Screening positive for:	Screening Results
Congenital Adrenal Hyperplasia (CAH)	CAH (N17P) : 34.0 cm
Generic Form	

Definitive Diagnosis

Other Definitive Diagnoses for this accession #

Definitive Diagnosis	Infant/Maternal Diagnosis	Date	Total # of affected full siblings	Other affected family members	Comments	Entered From
21-Hydroxylase Deficiency: Salt Wasting	Infant	May 17, 2012	0			Congenital Adrenal Hyperplasia (CAH)
Cobalamin A						PA/MMA

Retrieval Confirmation

Retrieval & Clinical Status

Age At Definitive Diagnosis: Year: 0 Month: 0 Day: 0

Retrieval Centre Details

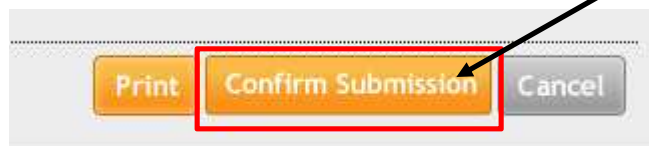
Date DERF submitted: (Date will populate when user successfully Confirms Submission of DERF)

Appended results?: No

Is further information needed from the Treatment Centre? Yes No

NSO Reviewed by:

- Provides a single-page summary of all data entered in the DERF encounter.
- Print option
- DERF is not submitted for NSO review until “Confirm Submission” is selected



Workflow management

- Parallel process (short term)
- DERF Status Report

DERF Status Report

- Tables included:

1. All Screen Positive Referrals
2. Outstanding Retrievals
3. Pending DERFs
4. All Submitted DERFs
5. DERFs with Results Appended
6. DERFs Ready for Review
7. Further Information needed from Treatment Centre
8. Review Process Complete
9. Parents decline to share information

All applicable
DERFs will appear


Only submitted
DERFs will appear

DERF Status Report

Outstanding retrievals

Infants with positive screen referral where:

- a) DERF has not yet been opened in BORN, or
- b) "Are parents aware" does not equal Y

 NSO DERF Status Report										
Outstanding retrievals (Infants with positive screen referral where: a)DERF has not yet been opened in BORN, or b) "Are parents aware" does not equal Y										
<small>Any, DERF submitted date from 01-Mar-2012 to 20-Mar-2012</small>										
<small>Screen positive categories: Amino Acidopathies; Cystic Fibrosis; Endocrinopathies; Fatty Acid Oxidation Disorders; Hemoglobinopathies; Organic Acidopathies; Other IEM</small>										
<small>Screen positive disease: 17-OHP; AA - Other; ASA, CIT; BIOT; C3 - PA, MMA, MUT; C5 - IVA; C5DC - GA1; C5OH (D); CFTR; CUD, CPT1; FA - Other; GALT; HCY; HGB;</small>										
<small>LCHAD<TFP; MCAD; MSPKU; MSUD; TSH; TYR1,2; VLCAD</small>										
Date of referral (date of risk letter)	Screen positive diseases category	Disease(s) screened positive	Infant name	Infant date of birth	Health card number	Accession # of screen positive sample	Determination ID	Mother name	RTC	Reason parents are not aware
	Hemoglobinopathies	HGB	LTSASAXH-JAXHAA, AAAX	08-Jul-2011		201107130417	27889	LTSASAXH-JAXHAA	Newborn Screening Centre, Children's	CAS involved to help locate

Reporting capabilities

- Dashboards
 - Key performance indicators(KPI)
- Standard Reports
 - Predefined reports for analysis of key information (performance, outcomes, utilization, planning)
 - Can be printed, exported and saved
- Analytical Reports
 - Customized reports for analysis of all information
 - Accessed using the analysis tool “Cubes” (Strategy Companion)

Site Actions ▾



Browse

Page

Hospital: **Alexandra Hospital** ▾Reporting Period: **Previous quarter** ▾Trend Period: **Last 4 quarters** ▾

Maternal Newborn Dashboard

	Rate	Status	Same level of care hospitals	Similar birth volume hospitals	Ontario
Proportion of newborn screening samples that are unsatisfactory for testing	5.0%		5.0%	0.0%	5.0%
Rate of episiotomy in spontaneous vaginal births	29.0%		29.0%	0.0%	29.0%
Rate of formula supplementation in term infants whose mothers intended to breastfeed	15.0%		15.0%	0.0%	15.0%
Rate of repeat cesarean section in low risk women not in labour at term with no medical or obstetrical complications done prior	38.0%		38.0%	0.0%	38.0%
Proportion of labouring women delivering at term who had Group B Streptococcus (GBS) screening at 35-37 weeks gestation	97.0%		97.0%	0.0%	97.0%
Proportion of women induced with an indication of post-dates who are less than 41 weeks gestation at delivery	5.0%		8.0%	0.0%	8.0%

Key Performance Indicator (KPI) Details

KPI: Rate of repeat cesarean section in low risk women not in labour at term with no medical or obstetrical complications done prior

Status Bands: Benchmark Status Indicator

Status Band	Value
On Target	< 10.00%
Warning	10.00% to <15.00%
Alert	15.00% or more

Summary

- NSO DERF go-live: **5 November 2012**
- Superuser training
 - November 1, 2
- Support / resources
 - Superusers / local administrators
 - GCs at NSO Office
 - BORN Website
 - BORN Screening Specialist (Shelley)
 - BORN Coordinators

Questions?



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