Provincial Council for Maternal and Child Health

building a brighter future

Final Report of the
Maternal-Newborn Advisory Committee's
RETRO-TRANSFER IMPLEMENTATION WORK GROUP

December 16, 2013

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EXECUTIVE SUMMARY

Transferring women in preterm labour or their newborns out of region or out of country for care because tertiary centres are unable to accommodate them is a source of great frustration to families, providers and policy makers alike. Preterm infants born in centres not resourced (human or equipment) to care for them can result in worse outcomes for the infants with increased costs to the families, health sector and social services sector over the short and long term. In order to keep tertiary beds and bassinets open for the pregnant women and newborns who require this level of care, it is imperative that infants who no longer require tertiary care be transferred promptly to Level II centres closer to home. Ensuring access to the appropriate level of care for pregnant women and their infants makes sense from both an optimal care and an economic perspective.

The Ontario MOHLTC has invested in 49 new, staffed and operational bassinets in the province since 2008. This includes 10 Level III and 39 Level II beds. These additional beds have been important to facilitate the retro-transfer of infants to centres closer to home once they no longer need Level III care. In addition, more beds have been added through capital projects.

In June 2008 the Maternal-Newborn Advisory Committee (M-NAC) was convened by the Provincial Council for Children's Health (now PCMCH) and the MOHLTC to address system issues related to maternal-newborn care in Ontario. M-NAC has initiated a number of work groups to address system issues that affect access to tertiary services including: fetal fibronectin testing; remote screening for retinopathy of prematurity; infection prevention and control policies for maternal-newborn units; neonatal abstinence syndrome, access to maternal-newborn services; standardized maternal and newborn levels of care; delinking maternal and neonatal bed capacity, piloting an electronic retro-transfer tool; and transport services for mothers, newborns and children, including retro-transfer.

The Access to Care Work Group recommended that practices related to retro-transfer be addressed with the goal of streamlining the process, improving consistency of practice and removing barriers to the system. The overarching goal is to provide the right care in the right place at the right time and by the right provider. Access to Level III care for mothers and newborns relies on timely transportation to tertiary centres with the capacity to provide the highest levels of care. This capacity is reduced when the tertiary centres are not able to affect timely retro-transfers. As the demand for specialized maternal and newborn services in Ontario increases, additional pressure is placed on the already stressed maternal and newborn care system. In 2011, the Retro-transfer Work Group made recommendations to improve the timeliness and efficiency of the retro-transfer system in Ontario. Subsequently, in 2012, the Retro-transfer Implementation Work Group was formed to implement these recommendations. The objectives of the workgroup were:

1. To implement a process to facilitate retro-transfers in a consistent and timely manner.

2. To implement a process to educate and communicate with providers so they, in turn, can educate and communicate with patients and families. The education should inform both staff and families that transfer and retro-transfer are a part of a regionalized system of perinatal care.

3. To implement a process to ensure that standards of care, including recommended guidelines for screening and assessment of premature infants, are not delayed or missed because of a transfer to another centre.

4. To implement a means of measuring the "health" of the retro-transfer process, that is: the right care in the right place at the right time and by the right provider.

The following report details the implementation plan.

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BACKGROUND AND CURRENT STATE

Demand for maternal-newborn services is expected to increase. This growing demand places increasing pressure on the already stressed specialized maternal and newborn care system. Perinatal high risk care must be understood as a continuing and integrated process across different institutions.

In June 2008 the Maternal-Newborn Advisory Committee (M-NAC) was convened by the Provincial Council for Children's Health (now PCMCH) and the MOHLTC to address system issues related to maternal-newborn care in Ontario. M-NAC has initiated a number of work groups to address system issues that affect access to tertiary services including: fetal fibronectin testing; remote screening for retinopathy of prematurity; infection prevention and control policies for maternal-newborn units; neonatal abstinence syndrome, access to maternal-newborn services; standardized maternal and newborn levels of care; delinking maternal and neonatal bed capacity, piloting an electronic retro-transfer tool; and transport services for mothers, newborns and children, including retro-transfer.

The recommendations of the Neonatal Abstinence Syndrome (NAS) Work Group in particular, may have a direct effect on retro-transfer capacity. The (NAS) Work Group made recommendations to address the unique needs associated with this population of infants who generally have a long length of stay, often in Level II nurseries. The number of infants in Ontario with a diagnosis of NAS[1] increased 408.3% between 2003-2004 and 2012-2013. Not only is this population on the rise in Ontario, but the average length of stay for infants with a diagnosis of NAS has increased from 12 days in 2003-2004 to 13.7 days in 2012-2013. These infants occupy 32 beds/day in the province. The goal of the recommendations is to reduce the incidence and impact of NAS through the implementation of prevention strategies, the assessment of risk and the optimization and standardization of both maternal and neonatal treatment. Decreasing the incidence of NAS will have a direct impact on access to both level II and III maternal and neonatal beds across the Province.

The Access to Care Work Group recommended that practices related to retro-transfer be addressed with the goal of streamlining the process, improving consistency of practice and removing barriers to the system. The overarching goal is to provide the right care in the right place at the right time and by the right provider. Access to Level III care for mothers and newborns relies on timely transportation to tertiary centres with the capacity to provide the highest levels of care. This capacity is reduced when the tertiary centres are not able to affect timely retro-transfers. As the demand for specialized maternal and newborn services in Ontario increases, additional pressure is placed on the already stressed maternal and newborn care system. In 2011, the Retro-transfer Work Group made recommendations to improve

[1] Canadian Institute for Health Information

the timeliness and efficiency of the retro-transfer system in Ontario. Subsequently, in 2012, the Retro-transfer Implementation Work Group was formed to implement these recommendations.

In addition, the PCMCH established the Maternal-Child Transport Advisory Committee in November 2012 to implement the recommendations of the PCMCH Transport Work Group for a coordinated system of transport, including retro-transfer, for pregnant women, newborns and children in Ontario. The work of this advisory group is ongoing at the time of this report.

The Retro-transfer Work Group undertook a small pilot test of CritiCall's electronic repatriation tool among GTA hospitals for neonatal retro-transfers in 2011. The pilot involved The Hospital for Sick Children NICU (Level III) and five Level II Neonatal Units. Results indicated that the tool had the potential to improve the communication process, organization and timeliness of retro-transfers and, as a result, recommended that an expanded pilot be conducted with a larger number of hospitals. As a result of this pilot, enhancements were made to the repatriation tool in response to feedback received.

In spite of the many initiatives undertaken by PCMCH to improve practice, address barriers and streamline processes, there remain delays in repatriating neonates from Level III to Level II units. For example, in the Greater Toronto Area (GTA), there were 1,176 Level III bed days occupied by babies awaiting transfer to Level II beds in 2011-2012 **(Table 1).**

Total # days that babies occupied Level III beds awaiting transfer to Level II beds in the GTA in 2011-2012

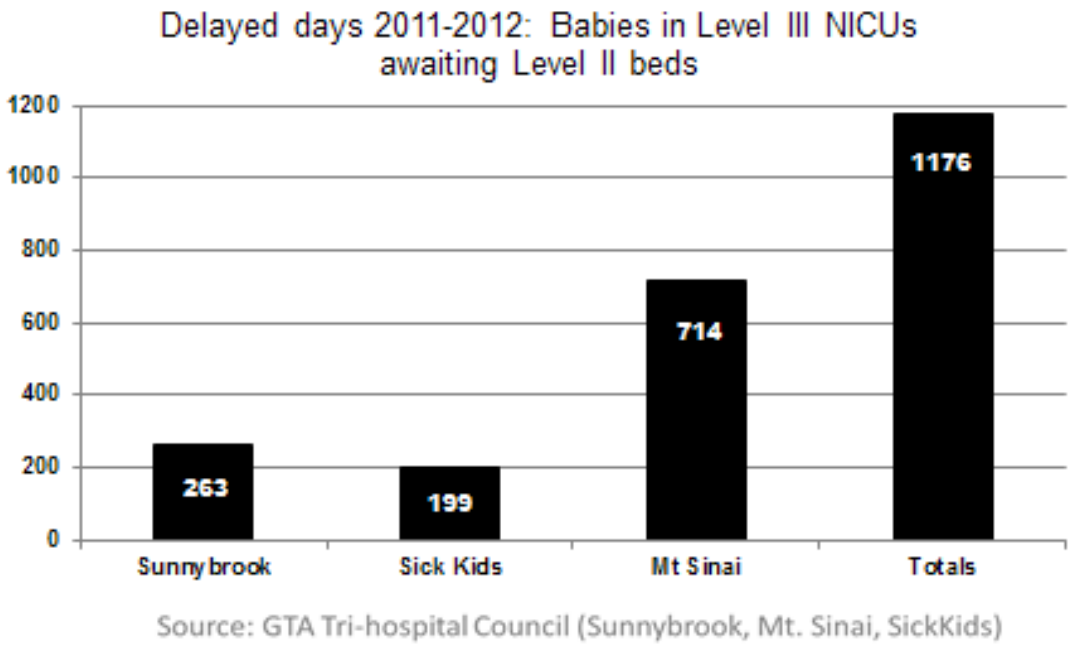

Table 1: Total number of days that babies occupied Level III beds awaiting transfer to Level II beds in the Greater Toronto Area in 2011-2012. Source: GTA Tri-hospital Council

PURPOSE

The Retro-transfer Implementation Work Group was initiated to plan for the implementation of the recommendations of the Retro-transfer Work Group. The recommendations are intended to help ensure that pregnant women and neonates are able to receive care as close to home as possible in a centre that is able to meet their care needs.

The first tasks of the Work Group were to review the recommendations of the Retro-transfer Work Group. These were reviewed in the context of the current state, including barriers to retro-transfer, communication with patients and families and the process of identifying infants ready for retro-transfer. Although the Retro-transfer Work Group identified transport processes which impact retro-transfer, PCMCH has established the Maternal-Child Transport Advisory Committee to address these specific recommendations. As such, transport-related recommendations were not addressed by the Retro-transfer Implementation Work Group.

The Terms of Reference for the Retro-transfer Implementation Work Group can be found in **Appendix I**.

WORK PROCESS

The Work Group was informed about the prior provincial retro-transfer deliberations by the Access to Care Work Group, Retro-transfer Work Group and the Transport Work Group. The current state of retro-transfers in Ontario was reviewed, including data from the GTA Tri-hospital Council (Sunnybrook, Mt. Sinai and SickKids level III NICUs), which provided the total number of days that babies occupied Level III beds awaiting transfer to Level II beds in the GTA in 2011-2012 **(Table 1)**.

In addition to reviewing data, work group members provided overviews of the processes used at their respective hospitals. This included discussion about capacity issues, challenges of providing retinopathy of prematurity screening, staffing models, daily bed meetings, discharge planning tools, communication with families, and the impact of NAS on bed utilization. As a result of coming together, members gained a broader perspective of the challenges faced in every level of neonatal care across the province. This new perspective enhanced the ability of the Work Group to develop realistic resources to improve retro-transfer processes for all levels of maternal and neonatal care.

There was a great deal of discussion about the use of the terms Neonatal Intensive Care Unit (NICU) versus Special Care Nursery (SCN) for Level II and III NICUs. Parents are easily confused by the use of mixed terminology. Since BORN uses NICU to refer to all Level II and III units in Ontario, this term was adopted for the purpose of this report.

Detailed discussion about the recommendations of the Retro-transfer Work Group prompted members to divide themselves into subgroups to address recommendations 1, 2 and 3. These recommendations were brought back to the larger group for review and refinement. Recommendation 4 was addressed by the full work group, in consultation with CritiCall.

An expanded pilot of CritiCall's Repatriation Tool Pilot was undertaken by 19 GTA hospital sites.

Work Group members shared materials in use or under development at their respective hospitals. With permission, these materials were adapted for provincial application.

As with all PCMCH Work Groups the geography and diversity of the province and of the care providers were represented in the membership. Members represented Level II and III care, including a representative from the PCMCH Maternal-child Transport Advisory Committee. The membership list for the Retro-transfer Implementation Work Group can be found in **Appendix II**.

Work Group Objectives

1. To implement a process to facilitate retro-transfers in a consistent and timely manner.
2. To implement a process to educate and communicate with providers so they, in turn, can educate and communicate with patients and families. The education should inform both staff and families that transfer and retro-transfer are a part of a regionalized system of perinatal care.
3. To implement a process to ensure that standards of care, including recommended guidelines for screening and assessment of premature infants, are not delayed or missed because of a transfer to another centre.
4. To implement a means of measuring the "health" of the retro-transfer process, that is: the right care in the right place at the right time and by the right provider.

RECOMMENDATIONS

Recommendation 1: Discharge Planning

1. **To implement processes to facilitate retro-transfers in a consistent and timely manner. These include:**
   a. **Implementation of a traffic light system to increase attention to discharge planning in all NICUs/SCNs.**
   b. **Implementation of an expanded pilot test of the electronic CritiCall repatriation tool.**
   c. **Development of a web accessible inventory of services available for professional reference by all sites in order to support rapid identification of site specific services.**

The Retro-transfer Work Group recommended the use of a traffic light system to facilitate discharge planning however several members of the Retro-transfer Implementation Work Group have tried this system within their units with mixed results. In addition, a literature search revealed that there is very little published about this type of discharge planning tool. The opinion of the experts among the Work Group was not to implement a traffic light system.

A great deal of discussion between the subgroup and the full work group led to the recommendation that the PCMCH Standardized Neonatal Levels of Care (2011) be incorporated into discharge planning criteria. The levels of care were designed to ensure a minimum level of service, outlining criteria for each level of care, including retro-transfer. The Work Group felt it would be beneficial to elaborate on

aspects of neonatal care that indicate readiness for retro-transfer as well as selection of the most suitable level of care to meet the needs of the infant upon retro-transfer. A chart was developed that lists minimal criteria for Level II care according to the following parameters **(Appendix III)**:

- Age and weight
- Cardio-respiratory
- Growing
- Nutrition
- Access (venous and arterial)
- Treatment, tests and procedures

The expectation is that the additional detail provided will guide readiness for retro-transfer as well as selection of the appropriate NICU for the baby to be retro-transferred to. Although these criteria represent the minimal level of care provided at each level of care, some hospitals may exceed the minimal expectations for their designated level of care. In this case, the Level II hospital should communicate to the tertiary centres they work with regarding treatments and therapies they provide that exceed the minimal criteria for their designated level.

The Work Group also made several recommendations to the Standardized Maternal and Neonatal Level of Care Work Group to enhance the neonatal criteria **(Appendix IV)** for additional clarity and consistency. These recommendations were reviewed by the Chair of the Level of Care Work Group and the neonatal criteria were revised.

The Standardized Maternal and Neonatal Levels of Care are equivalent to an inventory of services therefore this objective was considered to be met.

CritiCall Repatriation Tool[2]

The recommendations of several work groups has identified the need to address the retro-transfer process so that infants who no longer require Level III or Level IIc care, could move to a lower level of care in an NICU closer to home, thus freeing up capacity for infants in need of Level III or IIc care.

Although CritiCall is not involved in facilitating individual retro-transfers it is able to provide the technical infrastructure to support this electronic tool through the Provincial Hospital Resource System (PHRS). The PHRS provides an electronic platform to communicate retro-transfer requests and generate data about the retro-transfer process. CritiCall provides this electronic communication tool and hosts it on the CritiCall information technology platform. The tool is web based and does not use CritiCall operators.

CritiCall developed the Repatriation Tool with stakeholder input in 2006. Since this time it has been tested in several regions for repatriation of adults in addition to a small pilot by the Retro-transfer Work Group in 2010-2011 with the neonatal population in the GTA. As a result of user feedback,

[2] CritiCall identifies the form as a 'repatriation tool' which is a term used for any movement of patients to centres closer to home. In the maternal-newborn world the term repatriation refers to moving to the same level of care closer to home and retro-transfer refers to moving patients to lower levels of care closer to home. As the form does not change based on either type of movement, and as groups other than maternal-newborn will also use this form, the name of the form will not be changed to reflect the maternal-newborn application of the tool.

enhancements were made to the tool and it is now being tested by several groups across the province, including this Work Group.

The Repatriation Tool is intended to streamline and simplify communication that is currently taking place between sending and receiving hospitals, often via multiple calls, in order to arrange repatriation of a patient to a lower level of care. It can be used to facilitate retro-transfers from Level III and Level IIc units, ensuring an infant is receiving care at the level that best meets their needs.

The Repatriation Tool, if implemented province wide for the maternal-newborn system, has the potential to generate valuable data about the health of the maternal-newborn retro-transfer system (**Appendix XII**). If the repatriation tool improves the communication processes for retro-transfers and the timeliness of retro-transfers, then tertiary beds will be freed up and CritiCall's ability to identify a tertiary site for pregnant women and infants will be more efficient and effective.

Work Group members enthusiastically and unanimously supported the participation of a large group of GTA Level II and III NICUs to pilot the enhanced Repatriation Tool. All GTA NICUs were invited to join the pilot. 19 units agreed to participate. This represents 3 Level III, 10 Level IIc and 6 Level IIb NICUs. The list of participating hospitals can be found in **Appendix V**.

The pilot hospitals viewed participation in testing the retro-transfer tool as an opportunity to work together on the processes and communication strategies to facilitate retro-transfer. Physician-to-physician communication is still required however many of the current telephone calls to notify of potential, impending or urgent retro-transfers can be eliminated or significantly reduced through use of the tool. Aligned processes are identified as an enabler of timely, appropriate retro-transfers. The benefits of the tool are maximized when participating NICUs develop and align their internal discharge planning and communication processes and coordinate their work flow to integrate timely and efficient retro-transfers into their daily operations. The pilot will enable the collection and reporting of data that will be vital to further improvements of the retro-transfer process. *See Metrics, page 10.*

The pilot was scheduled for a ten week period from April 22, 2013 until June 28, 2013. However, as the end of the pilot neared, participating hospitals requested to continue using the repatriation tool. They acknowledged the time and effort invested in implementing the tool was significant and all sites, except one, chose to continue using the tool in order to continue to streamline the retro-transfer process. The hospital that did not continue using the tool had received very few repatriation requests during the 10 weeks and prefers to wait until province wide implementation begins. All pilot hospitals participated in a written evaluation of the pilot.

Recommendation 2: Communication & Education

2. **To implement a process to educate and communicate with providers so they, in turn, can educate and communicate with patients and families. The education should inform both staff and families that transfer and retro-transfer are a part of a regionalized system of perinatal care and promote the right care in the right place at the right time by the right provider.**

a. **Identify stakeholders who require education.**
b. **Develop written and electronic communication tools to meet the needs of healthcare providers, patients and families.**
c. **Develop education strategies to support the communication of the retro-transfer process and availability of resources for families.**
d. **Measure the impact of the education strategy by utilizing a focus group of women who have experienced transfer of either themselves or their newborn.**

Education and communication are essential components of the retro-transfer process. Health care providers play a critical role in preparing babies and their families for retro-transfer and have an opportunity to positively influence the family reaction to the retro-transfer of a baby to a lower level of care. The Work Group developed standardized resources to ensure consistent information and language is used when communicating about neonatal retro-transfer **(Appendix V, VI, VII, VIII)**.

These resources were adapted from materials currently in use within Ontario hospitals. Members consulted with their teams as well as with parents and families to ensure the materials produced will be effective. All such materials will be available for download from the PCMCH website. Webinars have provided a mechanism to inform health care providers across the Province about these new resources.

The parent information materials have been reviewed to ensure they provide readability consistent with grade 7-8 reading levels.

These materials have been developed in English. Hospitals may translate them as required to meet the needs of their community. They are as follows:

1) **The parent letter for Level III and IIc NICUs are titled:**

   "Information about Transferring from a Level III NICU to a Level II Hospital"

   and

   "Information about Transferring from a Level IIC NICU to Another Hospital"

The objective of the letter is to initiate a conversation about the baby being cared for at the most appropriate level of care and as close to home as possible long before the need to repatriate arrives. It will help clinicians initiate conversation and inform families early on about the retro-transfer system. This letter will be provided by Level III & IIc NICUs shortly after admission to parents of a baby that will likely be a candidate for retro-transfer in the future.

2) **Parent brochure: "Retro-transfer Information"**

This brochure begins to prepare families for retro-transfer. This brochure replaces hospital-specific brochures currently in use at many Level III NICUs. It is a double sided, folded brochure available for download from the PCMCH website. It can also be downloaded as a 4 page document suitable for posting on a website.

This brochure provides information about the levels of neonatal care in Ontario, answers common questions parents ask, and lists key topics parents will want to learn about in preparation for transfer to the new hospital.

Parents who have access to the internet may be able to research information about the new hospital independently. Other parents may benefit from assistance from the health care team to obtain this information prior to the retro-transfer.

3) Guide to assist hospitals to develop a nursery information brochure/webpage for parents

Level II hospitals are encouraged to make nursery information readily available to parents on admission and prior to repatriation. Although many hospitals already provide this information, there are many others that do not. The Work Group identified that hospitals that have not yet developed these materials would appreciate suggestions about recommended content. Ideally this material should be available on the Level II hospital website, however it can also be provided in brochure format on admission. This guide is available for download from the PCMCH website.

Recommendation 3: Provincial Transport Forms

3. To implement a process to ensure that standards of care, including recommended guidelines for screening and assessment of premature infants, are not delayed or missed because of a transfer to another centre.

a. Implement use of provincial transport forms for maternal and neonatal transfer and retro-transfer that are mandatory and included in the medical record.

The Retro-transfer Work Group identified the importance of clear and comprehensive communication between physicians and charge nurses at the sending and receiving hospitals. Discharge summaries are narrative and therefore each is unique and the order of information as well as the content may vary by discharging physician. Also, the Discharge Summary is not always complete at the time of retro-transfer, therefore creating a potential gap in information critical to the treatment plan. As a result, the need for standardized provincial transport forms for maternal and neonatal transfers was identified.

The Work Group reviewed forms already in use or under development. Members unanimously agreed to adopt the neonatal transport form under development by Mount Sinai Hospital, with permission. Revisions were made to meet provincial needs. Members consulted their maternal and neonatal teams and the forms were finalized based on this feedback.

The standardized provincial transport forms **(Appendix IX, X)** should be used for all maternal and neonatal retro-transfers in Ontario. In addition, the Maternal Transfer Record should be used for acute maternal transfers, although it does not replace emergency services (EMS) documentation forms. The referring hospital should complete the form with all relevant information up to the point that the patient's care is assumed by the transport team/EMS.

The following transport forms have been developed:

1. **Provincial Maternal Transfer Record**

This one page document should replace existing regional transfer forms so that a provincial standard can be achieved. Two copies of the completed form are required. The original is for the admitting hospital and the copy is for the discharging (referring) hospital.

2. **Provincial Neonatal Retro-transfer Record**

This two page document should replace existing regional retro-transfer forms so that a provincial standard can be achieved. Two copies of the completed form are required. The original is for the admitting hospital and the copy is for the discharging (referring) hospital.

A retro-transfer should not be delayed because the Discharge Summary is not yet complete. Since the Provincial Neonatal Retro-transfer Record is very detailed, the retro-transfer should proceed and the Discharge Summary should be sent within 24 hours.

This form is for neonatal retro-transfers only. Acute transfers should utilize a transport team documentation form, EMR or the Child Health Network's Acute Neonatal Transfer Record (2004).

Implementation considerations:

1) Forms approval
    - Hospitals will need to seek approval within their organization to add these forms to the patient medical record.
    - The forms are designed with the PCMCH logo and a hospital logo is not required. Feedback from members indicated that forms approval is much easier with a provincial form therefore accelerating the approval process.
2) Printing
    - The forms are designed to be printed on paper with a carbon copy or alternatively they can be photocopied upon arrival at the receiving hospital. The copy will be retained by the sending hospital for inclusion in the patient medical record.
    - The forms may be incorporated into a hospital electronic medical record however it will need to be printed on paper for documentation during transit. A photocopy can be obtained upon arrival for inclusion in the medical record by the sending hospital.
3) Ownership

    The responsibility for completing the transfer forms lies with the referring hospital.
    - Retro-transfers: The forms should be completed entirely.
    - Acute maternal transfers carried out by referring hospital staff: the forms should be completed entirely.
    - Acute maternal transfers carried out by paramedics: The forms should be completed up until the care of the patient is taken over by the paramedics.

4) Distribution

- Original: admitting hospital
- Copy: discharging (referring) hospital

Recommendation 4: Metrics

4. To implement a means of measuring the "health" of the retro-transfer process, that is: the right care in the right place at the right time and by the right provider.

Source:

- **CritiCall Repatriation tool**
- **BORN**

Accountability:

- **Maternal-Newborn Advisory Committee (M-NAC) will review data on a quarterly basis**

The Work Group identified 11 indicators to measure the health of the retro-transfer process. Data produced by BORN is already being monitored by M-NAC. The CritiCall Repatriation tool has the potential to provide a wealth of information about retro-transfers, including volume of requests, acceptance times, and reasons for delays, to name a few. The indicators include:

1. Volume of completed repatriation requests.
2. Median number of hours a patient spends waiting for retro-transfer.
3. The rate of successful repatriation by median acceptance time in hours.
4. Reasons for non-acceptance of request for repatriation.
5. Reasons for deferral of acceptance of request for repatriation.
6. % of time that a unit is restricted, closed or open by month.
7. Average monthly % occupancy by level of care reported by individual hospitals and LHIN.
8. Readmission rate to higher level of care within 48 hours after retro-transfer.
9. Number of inborn nursery admissions ≥ 37 weeks to Level II nurseries.
10. Number of infants ≤ 32 weeks born outside Level III centres.
11. Volume of infants with NAS (Neonatal Abstinence Syndrome) occupying level II or III beds and length of stay, report by LHIN.

Appendix XI includes a detailed description of the metrics.

CONCLUSION

Timely and efficient retro-transfers from Level III and IIc centres will facilitate access to Level III and IIc beds, allowing for timely admissions and transfers of high risk women and neonates. The availability of standardized communication, education and documentation tools has the potential to streamline the retro-transfer system. The CritiCall Repatriation Tool is a promising mechanism to streamline retro-transfer communication on-line, facilitating retro-transfers in a consistent and timely manner. It will also enable the reporting of data to monitor bed utilization and patient flow across the province.

The Work Group developed a number of written and electronic communication tools to meet the needs of healthcare providers, patients and families. These tools will improve consistency of practice from one institution to another as well as communicate to providers and families that access to tertiary care occurs within a regionalized system that is maintained through both transfers and retro-transfers.

Even though these recommendations support a provincial retro-transfer system, there are some portions of the province, for example northwestern Ontario, that also work with tertiary centres in neighbouring provinces. Under these circumstances, processes may require modification by stakeholders in order to meet the unique needs of these regions.

The opportunity to collect and monitor metrics that reflect the health of the retro-transfer system is essential in order to remove barriers within the system, creating a stimulus to continue enhancing it for the future.

Provincial Council for Maternal and Child Health
Maternal-Newborn Advisory Committee

Retro-Transfer Implementation Work Group
Terms of Reference

Background / Context

Building a brighter future for children begins by ensuring a good start to life with access to appropriate levels of care for mothers and newborns in Ontario. We require an integrated and coordinated provincial system of maternal and neonatal services capable of delivering timely, equitable, accessible, high quality, evidence-based, family-centred care in an efficient and effective manner.

The Issue

In June, 2008 the Maternal-Newborn Advisory Committee (M-NAC) was convened by the Provincial Council for Children's Health (now PCMCH) and the MOHLTC to address system issues related to maternal-newborn care in Ontario. M-NAC has initiated several work groups to address a number of system issues that affect access to tertiary services including: fetal fibronectin testing; remote screening for retinopathy of prematurity; infection prevention and control policies for maternal-newborn units; access to maternal-newborn services; transport services for mothers, newborns and children, including retro-transfer.

The Access to Care Work Group recommended that practices related to retro-transfer be addressed with the goal of streamlining the process, improving consistency of practice and removing barriers to the system. The overarching goal is right care in the right place at the right time and by the right provider. Access to Level III care for mothers and newborns relies on timely transportation to tertiary centres with the capacity to provide the highest levels of care. This capacity is reduced when the tertiary centres are not able to affect timely retro-transfers. As the demand for specialized maternal and newborn services in Ontario increases, additional pressure is placed on the already stressed maternal and newborn care system.

Work Group Purpose:

The Retro-transfer Implementation Work Group will review and plan for the implementation of the recommendations of the Retro-transfer Work Group.

Objectives:

The Retro-transfer Implementation Work Group recommendations address the following objectives:

1. To implement processes to facilitate retro-transfers in a consistent and timely manner. These include:
    a. Implement a traffic light system to increase attention to discharge planning in all NICUs/SCNs.
    b. Participate in an expanded pilot test of the electronic CritiCall repatriation tool.
    c. Develop a web accessible inventory of services available for professional reference by all sites in order to support rapid identification of site specific services.

2. To implement a process to educate and communicate with providers so they, in turn, can educate and communicate with patients and families. The education should inform both staff and families that transfer and retro-transfer are a part of a regionalized system of perinatal care and promote right care in the right place at the right time by the right provider.
    a. Identify stakeholders who require education.
    b. Develop written and electronic communication tools to meet the needs of healthcare providers, patients and families.
    c. Develop education strategies to support the communication of retro-transfer process and availability of resources for families.
    d. Measure impact of education strategy by utilizing a focus group of women who have experienced transfer of either themselves or their newborn.

3. To implement a process to ensure that standards of care including recommended guidelines for screening and assessment of premature infants are not delayed or missed because of a transfer to another centre.
    a. Implement use of provincial transport forms for maternal and neonatal transfer and retro-transfer that are mandatory and included in the medical record.

4. To implement a means of measuring the "health" of the retro-transfer process, that is: the right care in the right place at the right time and by the right provider.
    a. Implement metrics for evaluation of the retro-transfer system which are listed in the Retro-transfer Work Group Report.

Membership

Clinicians and administrators representing all LHIN's in Ontario including:

Level III
Level II C
Level II B

CritiCall representation as required

Reporting Relationship

The Retro-transfer Implementation Work Group will report to the PCMCH Maternal-Newborn Advisory Committee. **Frequency of Meetings**

To be determined

Timeframe

September 2012 to February 2013

Decision-Making Process

Members share accountability for decisions. There should be open and direct communication based on honesty, respect and transparency, to ensure that all perspectives are heard. Decisions should be evidence or most-promising practice-based. Decisions will be made by consensus whenever possible.

Appendix II – Retro-Transfer Implementation Work Group Membership

Retro-transfer Implementation Work Group Membership

LHIN	Name	Position	Hospital
1	Lucia St. Aubin	Program Manager, NICU, Maternal Newborn, OB, NICU & Maternal Fetal Medicine Clinics	Windsor Regional Hospital
2	Bev Jackson	Coordinator, NICU	London Health Sciences Centre
3	Lynne Julius, Co-Chair	Interim VP Clinical Services and Chief Nurse Executive	Grand River Hospital
4	Lisa Skradski	APN/Neonatal Network Lead	McMaster Children's Hospital
5	Diane DeRuyte	Clinical Educator, NICU	William Osler Health System
6	Nancy Frank	Manager, Special Care Nursery	Credit Valley Hospital
7	Karen Kinnear, Co-Chair	Executive Director, Labatt Family Heart Centre & Critical Care Services	Hospital for Sick Children
7	Audra Jesso	Senior Manager, NICU	Hospital for Sick Children
7	Kyong-Soon Lee	Neonatologist	Hospital for Sick Children Member of Maternal-Newborn Transport Advisory Committee
7	Marion De Land	Patient Care Manager, NICU	Sunnybrook Health Sciences Centre
7	Salena Mohammed	Nursing Unit Administrator NICU, Level 2, Neonatal Follow-up	Mount Sinai Hospital
7	Catherine Bishop	Clinical Nurse Educator, NICU	St. Michael's Hospital
7	Kelley Lee	Neonatal Educator	St. Joseph's Health Centre, Toronto
8	Cathie Badeau	Program Director MNB, Child & Teen, Genetics	North York General
8	Beverley Philp	Program Director, Women's and Children's Health Program	Humber River Regional
9	Maureen Cuddy	Manager, Women's and Children's Healthcare Program	Lakeridge Health
11	Barb Foote	Clinical Coordinator, NICU/Special Care Nursery	The Ottawa Hospital
12	Gwen Tjart	Resource Nurse, NICU	Royal Victoria Hospital
13	Kim Warren	Administrative Director Family & Child Program	Health Sciences North
14	Christina Purdon	Manager, Paediatrics and NICU	Thunder Bay Regional Health Sciences Centre
	Marilyn Booth	Executive Director	PCMCH
	Ruth Turner	Senior Project Manager	PCMCH

Appendix III – Neonatal Retro-Transfer Minimal Criteria for Level II Care

Download at www.pcmch.on.ca

Neonatal Retro-transfer Minimal Criteria for Level II Care

The following criteria represent the minimal level of care provided at each level. *These criteria will guide decision making for the selection of the appropriate hospital for neonatal retro-transfers.*
*Please note that some hospitals **may exceed** the minimal expectations for their designated level of care.*

Categories	Level II A	Level II B	Level II C
Age & Weight	• Stable neonate • Greater than or equal to 32 weeks +0 days corrected age, and • Weight over 1500 grams	• Stable neonate • Greater than or equal to 30 weeks +0 days corrected age and • Weight over 1200 grams	Retro-transfers should be reviewed on a case-by case basis between the tertiary and receiving sites.
Cardio-Respiratory	• Oxygen therapy • No assisted ventilation • Respiratory rate stable • Apnea and bradycardia resolving • Home on low flow or oxygen and O_2 saturation monitoring	**All of Level II A plus:** • Chronic low flow with occasional apnea and bradycardia spells requiring stimulation • Respiratory support may include non-invasive ventilation for 48-72 hours, i.e. CPAP	**All of Level II B plus:** • CPAP with stable O_2 requirements, up to 1 week • Mechanical ventilation for 48-72 hours
Access	• PIV insertion and maintenance • Short term IV therapy • UVC/UAC insertion • No PICC	**All of Level II A plus:** • Long term IV therapy (>1 wk) • PICC maintenance • UVC/UAC insertion and maintenance	**All of Level II B plus:** • PICC maintenance • Access to PICC insertion
Nutrition	• Non-nutritive sucking • No TPN • Tolerating feeds • Full feeds transitioning from gavage to breast, bottle, or G-tube • Support plan of care to home with palliative care, including silastic NG-tube	**All of Level II A plus:** • TPN if tolerating >50% enteral feeds • Tolerating feeds with little or no residuals • Dietician available • Ostomy care • Support plan of care for: ▪ Continuous or pump feeds ▪ G-tube feeds	**All of Level II B plus:** • TPN • Tolerating increasing feeds with occasional large residuals
Growing	• Demonstrating progressive weight gain • Support plans for ongoing support: ostomy care, G-tube, Lactation Consultant	**All of Level II A**	**All of Level II B plus:** • PT/OT available
Treatment/Tests and Procedures 24/7/365 (except ROP screening)	• Newborn screening • Hearing screening • Safe sleep • Car seat safety • Follow up testing available/accessible • RSV	**All of Level II A plus:** • ROP screening if possible, otherwise refer out • Specialized medications, i.e. enoxaparin	**All of Level II B plus:** • ROP screening • Access to Neonatal FU

Appendix IV – Participating Hospitals in the CritiCall Neonatal Repatriation Tool Pilot for the GTA

CritiCall Neonatal Repatriation Tool Pilot for the GTA (19 sites) List of participating hospitals (LHIN #)
Halton Healthcare Services, Oakville Trafalgar Memorial Hospital site (6)
Humber River Regional Hospital (8)
Lakeridge Health (9)
Mackenzie Health Richmond Hill (8)
Markham Stouffville Hospital (8)
Mt. Sinai Hospital (7)
North York General Hospital (8)
Peterborough Regional Health Centre (9)
Rouge Valley Health System, Centenary (9)
Royal Vicotoria Regional Health Centre (12)
St. Joseph's Health Centre (7)
St. Michael's Hospital (7)
Sunnybrook Health Sciences Centre (7)
The Hospital for Sick Children (7)
Toronto East General Hospital (7)
Trillium Health Partners, Credit Valley Hospital site (6)
Trillium Health Partners, Mississauga Hospital site (6)
William Osler Health System, Brampton Civic Hospital site (5)
William Osler Health System, Etobicoke General Hospital site (5)

Appendix V - Information about Transfer from a Level III NICU to a Level II Hospital

Download at www.pcmch.on.ca

INFORMATION ABOUT TRANSFER FROM A LEVEL III NICU TO A LEVEL II HOSPITAL

The Provincial Council for Maternal and Child Health supports Ontario's maternal and child health care providers in the delivery of health care services. We strive to provide services that are timely, high quality, accessible and family-centered. Our focus is on delivery of the right care in the right place at the right time.

Discharge and transfer planning begins on admission to the Neonatal Intensive Care Unit (NICU). A Level III NICU provides care to very sick and/or premature babies. Level III NICUs must have beds available for very sick babies who need specialized medical care. We know that it is important to you to have your baby in the NICU when s/he is very ill. As your baby makes progress and gets stronger, your baby may not need the level of care provided in the current NICU. When your baby is ready, the health care team will locate a bed in a hospital that provides the best level of care for your baby. This transfer to another hospital is called a retro-transfer.

We believe that families are partners in the care of their children. As the health care team begins to plan for transfer, they will discuss the plan with you.

Transfer to a Level II NICU, sometimes called a Special Care Nursery, will have many benefits for you and your baby. It will allow you to get to know the health care team in your community hospital.

FREQUENTLY ASKED QUESTIONS:

When will my baby be transferred?

Your baby's health is the most important factor when considering a transfer. All transfer plans will be made based on your baby's condition. The health care team will consult with the receiving hospital to plan the transfer. The health care team will discuss the available options with you.

How much notice will we receive prior to transfer?

Each baby's situation is different. We try to plan in advance for a transfer; however, beds often become available on short notice. You will be notified when a transfer is happening. Please keep your contact information up to date.

How will my baby get to the other hospital and who will escort my baby?

Your baby will be transferred in a transport incubator with a member of the health care team.

Appendix VI – Information about Transfer from a Level IIc NICU to another Level II Hospital

Download at www.pcmch.on.ca

INFORMATION ABOUT TRANSFER FROM A LEVEL IIC NICU TO ANOTHER LEVEL II HOSPITAL

The Provincial Council for Maternal and Child Health supports Ontario's maternal and child health care providers in the delivery of health care services. We strive to provide services that are timely, high quality, accessible and family-centered. Our focus is on delivery of the right care in the right place at the right time.

Discharge and transfer planning begins on admission to the Neonatal Intensive Care Unit (NICU). A Level IIc NICU is sometimes called a Special Care Nursery. It provides care to ill and/or premature babies. Level IIc NICUs must have beds available for those babies who need specialized medical care. We know that it is important to you to have your baby in the NICU when s/he is ill. As your baby makes progress and gets stronger, your baby may no longer need the level of care provided in the current Level IIc NICU. When your baby is ready, the health care team will locate a hospital that provides the best level of care for your baby. This transfer to another hospital is called a retro-transfer.

We believe that families are partners in the care of their children. As the health care team begins to plan for transfer, they will discuss the plan with you.

Transfer to a Level IIa or IIb NICU will have many benefits for you and your baby. It will enable you to get to know the health care team in your community hospital.

FREQUENTLY ASKED QUESTIONS:

When will my baby be transferred?

Your baby's health is the most important factor when considering a transfer. All transfer plans will be made based on your baby's condition. The health care team will consult with the receiving hospital to plan the transfer. The health care team will discuss the available options with you.

How much notice will we receive prior to transfer?

Each baby's situation is different. We try to plan in advance for a transfer; however, beds often become available on short notice. You will be notified when a transfer is happening. Please keep your contact information up to date.

How will my baby get to the other hospital?

Your baby will be transferred in a transport incubator with a member of the health care team.

Appendix VII – Retro-transfer Information

Download at www.pcmch.on.ca

This document is available in two formats:

1. PDF document, 4 pages, for use on hospital website (picture here)
2. PDF document, 2 pages, to be printed double sided as a folded booklet

RETRO-TRANSFER INFORMATION

What you need to know about transferring your baby to another hospital

Provincial Council for Maternal and Child Health
building a brighter future

Frequently asked questions

The Philosophy of Care for the Provincial Council for Maternal and Child Health (PCMCH)

The Provincial Council for Maternal and Child Health supports Ontario's maternal and child health care providers in the delivery of health care services that are timely, high quality, accessible and family-centered. Our focus is on delivering the right care in the right place as close to home as possible.

1. Why is my baby being transferred?

As your baby gets bigger and stronger, s/he will be transferred to a hospital that provides the level of care your baby needs. This is a step in getting ready to go home. This is part of the regionalization of health care in Ontario. It is important that your baby graduate to an appropriate level of care when ready. This is the first of many graduation steps and although it may be a bit scary for you, it is also very exciting to see your baby make progress.

2. What can I expect when my baby arrives?

When your baby moves to the new hospital, a health care provider will go with your baby. Your baby will travel in a transport incubator. S/he will be fully monitored during the transfer. The staff in the new unit will be informed about your baby's condition and progress. Information will have been given to the receiving doctor and hospital prior to the transfer.

Patients who move between facilities will have precautions taken for infection. As a routine precaution, your baby may be placed into "isolation" for a short period of time. This is a standard procedure for patients transferred from another hospital.

The team you will meet in the new hospital are qualified to care for your baby. Although the number of babies assigned to each nurse may be different, you can be confident that your baby will be monitored appropriately.

The following list of topics and questions may help you prepare for transfer to the new hospital.

Unit Name: _____

Floor: _____ Elevator: _____ Phone #: _____

Special Access Information: _____

1. Map and directions to the hospital.
2. Parking and public transit information including parking costs.
3. Time period that parents can be with their baby, handwashing and gowning guidelines.
4. Who can come into the unit with me when my baby arrives?
5. Are breast pumps available to use or rent?
6. Are care-by-parent and rooming-in facilities available?

Additional notes

Levels of Maternal Newborn Care in Ontario

Level III, may also be called tertiary care.

This is the highest level of care reserved for the sickest babies in Ontario. There are 8 of these units in Ontario.

Level II, including three levels: IIA, IIB, and IIC.

Level II units are located in most large community hospitals. They care for babies less ill and those recovering from level III care but not quite ready to be discharged home. Babies are transferred to a level II unit as part of the regionalized system of maternal newborn care in Ontario.

Level I

Level I units are located in smaller hospitals and care for low risk mothers and babies. Most babies stay with their mothers throughout their hospital stay.

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Adapted from the Child Health Network for the Greater Toronto Area

Appendix VIII – Guide to assist hospitals to develop a Level II Nursery, Information Brochure or Webpage for Parents

Download at www.pcmch.on.ca

Guide to assist level II hospitals to develop a nursery information brochure or webpage for parents

Parents whose infant has been retro-transferred to another hospital frequently experience anxiety and concern. Information provided at the time of retro-transfer can often ease the anxiety associated with this event. This checklist is designed to help you develop an information package for parents whose baby has been retro-transferred to your nursery. Use it to guide the selection of topics that are relevant to your hospital. It is recommended that you provide it to parents upon admission and also make it available on your hospital website for access prior to retro-transfer.

General hospital information

- Hospital name, address, phone number, map
- Parking: location, rates, long term discounts
- Internet , cell phone, telephone and Blackberry use
- Food services and hours, food kiosks, vending machines
- Bank machine, pharmacy, chapel, gift shop

For baby

- Isolation: purpose, process
- Parent involvement in baby care: feeding, bath, kangaroo care
- Breastfeeding assistance: lactation consultant, clinic
- Breast milk: storage, breast pump availability: borrow or rent, kits, cost, sterilization, donor milk
- Tube feeding by slow infusion, continuous pump or slow drip gavage
- Oxygen therapy & methods of delivery
- Hearing screening, car seat testing
- ROP follow-up screening: on site, remote or other location
- Neonatal follow-up clinic
- RSV clinic

The health care team

- Manager, educator, nurses, nurse practitioners, clinical nurse specialists, physicians, clerical staff, lactation consultant, pharmacist, dietician, social worker, respiratory therapist, occupational therapist, spiritual care

For parents

- Care-by-parent and rooming-in facilities
- Family accommodations: on site, sleep room, local
- Parent lounge facilities including access to food, cafeteria hours, fast-food kiosks, food storage, washrooms and showers
- Guests/Visitors: siblings, family, friends
- Parenting classes, i.e. breastfeeding, bathing, safety, CPR

The unit

- Location within the hospital
- Unit phone number
- Security information or special access
- # of beds
- Nursing information: model of care, i.e. primary nursing, shifts, shift changes, etc.
- Daily rounds
- Type of physicians and availability, MRP
- Physician unit coverage
- Hand washing
- Telephone availability
- Courtesy room
- Discharge preparation and criteria
- Laundry facilities
- Nurse manager title and phone number
- Research may be supported if baby was participating in research at the previous hospital

Appendix IX – Provincial Maternal Transfer Record

Download at www.pcmch.on.ca

Provincial Council for Maternal and Child Health — building a brighter future

Provincial Maternal Transfer Record

☐ Antepartum ☐ Intrapartum ☐ Postpartum

Addressograph stamp or electronic patient record label

MT or PTAC #: .....

Date of transfer (YYYY/MM/DD): ..... /..... /.....

Transfer From: (Institution) .....

Referred By: .....MD/RM

Obstetrical care provider: ....MD/RM

Transfer To: (Institution) ..... Health Card #: ..... Version Code .....

Name of Accepting MD: ..... Next of Kin: .....

Send Copy of Discharge Summary to: ..... Relationship:..... Telephone #: (.....) .....

REASON FOR TRANSFER ☐ **Maternal** *(describe)*

☐ **Retro-transfer** ☐ **Acute Transfer** ☐ **Fetal** *(describe)*

ALLERGIES ☐ No Known Allergies Specify (drug, food, tape, dyes, latex, other) and reactions:

OBSTETRIC HISTORY ☐ ***Copy of chart with patient and additional information, such as fetal monitor strips, if indicated.***

Gravida: ..... Para: ..... LMP: ..... EDB/C: ..... Gestation (weeks + days) .....

Past C-Section or Uterine Surgery: ..... Incision Type: .....

LABOUR & BIRTH Onset of Labour: ..... Membranes Ruptured: ☐ Yes ☐ No Time: Colour: .....

Cervical Exam: ...../ ..... / ..... Fetal Position: A: ..... B: ..... C: .....

Placenta (multiples): ☐ DI/DI ☐ MONO/DI ☐ MONO/MONO ☐ Other: .....

Maternal Vital Signs: BP ...../..... Pulse: ..... Resp: ..... Temp: ..... Fetal Fibronectin: ☐ Positive ☐ Negative

MEDICATIONS Regular medications:

Antibiotics:	Date:	Time:	Other:
Steroids:	Date:	Time:	
Magnesium Sulfate for: ☐ Seizure prophylaxis ☐ Neuroprotection	Date:	Time:	

MEDICAL/SURGICAL HISTORY ☐ ***See chart***

Relevant medical / surgical history

SOCIAL ISSUES ☐ ***See chart***

IN TRANSIT ☐ **SEE TRANSPORT RECORD** **IV:** ..... TBA on arrival ..... mL Rate ..... mL/hr

Time	FHR	Pulse	Resp	BP	Contractions			Medications (Dose / Route)	Comments
					Frequency	Duration	Intensity		

TRANSFER INFORMATION Departure Time: ..... Time of Arrival at Receiving Hospital: .....

☐ SEE TRANSPORT RECORD Accompanied By: .....Relationship: ..... Attendant During Transfer: .....

Signature/Status: ..... Print Name: .....

Sept. 2013 *Adapted from the South Western Ontario Perinatal Partnership* Distribution: Original: Admitting Hospital; Copy – Discharging Hospital

Appendix X – Provincial Neonatal Transfer Record

Download at www.pcmch.on.ca

Provincial Council for Maternal and Child Health
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Provincial Neonatal Retro-transfer Record

PATIENT LABEL

FAMILY INFORMATION — **INITIAL:**

Date of Birth: ..... / ..... / ..... **Time:** ..... hours
Date of transfer: ..... / ..... / ..... **Time:** ..... hours

Patient name: ☐ M ☐ F
Singleton, Twin, other:

Mother:
Maternal ID#:
Address:

Home phone:
Cell phone:
Contacted/informed about transfer ☐ No ☐ Yes

Parent(s):

Home phone:
Cell phone:

Referring hospital:
Referring unit:
Referring resident/fellow/NP:
Staff MD:
Phone:

Destination hospital:
Accepting MD:
Phone:
MD contacted/informed of transfer: Date ..... / ..... / ..... Time ..... hours
Comments:

MT #

Health card#

Parent(s)/family involved in care: ☐ Mother ☐ Father ☐ Other:
Care by parent(s): ☐ Bath ☐ Holding ☐ Changing ☐ Kangaroo Other:
Visiting patterns: Restrictions:

Relevant Maternal Information:

BASELINE INFORMATION — **INITIAL:**

Birth weight:	Current weight:	Gest age @ birth:	Corrected age:	☐ Incubator ☐ Bassinet	Last void:	Last stool:

FEEDING PLAN — **INITIAL:**

☐ Breast ☐ Expressed breast milk Donor breast milk: ☐ No ☐ Yes Number of days received: .....
☐ Breast milk substitute ☐ Other:
Feeding type: TFI **Frequency** **Last fed at:** ☐ NG ☐ OG ☐ G-Tube
Feeding mode: ☐ Breast ☐ Bottle ☐ Pump ☐ Gravity Other: Insertion date:
Size: .....Fr ..... cm

CURRENT THERAPIES/TEST RESULTS — **INITIAL:**

Vitamin K given: ☐ No ☐ Yes **Eye ung given**: ☐ No ☐ Yes **Hearing Screen** ☐ Not completed ☐ Pass ☐ Referred
Newborn Screening: ☐ No ☐ Yes Date: ..... /..... / ..... 3 week repeat (if candidate): ☐ Done ☐ Due: ..... /..... / .....
Retinopathy of Prematurity: Last exam date: ..... / ..... / ..... Results: Follow-up:

Latest test results:

Last Bilirubin: Date:
Last Hgb: Date:

Results to follow:

Transfused: ☐ No ☐ Yes Date:
Direct Donor: ☐ No ☐ Yes ☐ Donor blood sent

IV Therapy:	**Rate:**	**Site:**	**Inserted:**
1:			
2:			
3:			

Date started	Medications	Dose	Times	Last given

Original: Admitting Hospital Copy: Discharge Hospital Page 1 of 2
Adapted from Mount Sinai Hospital Neonatal Retro-transfer Record *Sept. 2013*

IMMUNIZATIONS, INFORMATION, REFERRALS & TEST RESULTS — INITIAL:

RSV Candidate: ☐ No ☐ Yes Prophylaxis given: ☐ No ☐ Yes Reference # Date last given: ..... / ..... / .....

Information package sent with baby related to: ☐ Yes ☐ No ☐ Given to parents

Immunization given:	Date	Immunization given:	Date

Hepatitis B Vaccine given: ☐ No ☐ Yes
Next due:

Hepatitis B Immunoglobulin given: ☐ No ☐ Yes
Date: ..... / ..... / .....

Special precautions: ☐ Isolation ☐ Antibiotic resistant organisms ☐ Precautions:

Neonatal Follow Up Clinic referral(s): ☐ N/A ☐ Yes Location:

Referral requested: ☐ No ☐ Yes Appointment Date: ..... / ..... / ..... Time: .....hours

Social Worker: ☐ No ☐ Yes **Name** **Phone #**

CAS involved: ☐ No ☐ Yes ☐ To be referred **Contact name:** **Phone:**

Copy of apprehension letter attached: ☐ Yes ☐ N/A

Occupational therapy: ☐ No ☐ Yes **Physiotherapy**: ☐ No ☐ Yes

***Pre-transport Equipment check*:** ☐ O_2/Air tanks ☐ Suction ☐ Bag/mask ☐ Supplies **INITIAL:**

CARE DURING TRANSIT (Chart q15 minutes) — INITIAL:

Time	Incubator Temp	HR	RR	O_2 sat	FiO_2	Mode	A/B/ Desat	Intervention/Comments
Departure								
Arrival								

TRANSFER OF ACCOUNTABILITY INFORMATION

Date & Time:	Patient ID intact & checked & report received by:	IV Site/Solution checked by:
	_____/_____ sign print	_____/_____ sign print

Referring Hospital: _____ / _____ Sign Print

Documents sent with patient:
☐ Immunization card
☐ RSV package
☐ Medical Discharge Summary
☐ PICC Line Package Sent: ☐ Yes ☐ N/A
☐ Other: (Images CD, etc.,)

Patient possessions: ☐ Clothing/toys
☐ EBM ☐ Donor Milk
Other:

SECTION V: SIGNATURES

PRINT NAME	SIGNATURE	INITIAL	DATE	TIME

Original: Admitting Hospital Copy: Discharge Hospital Page **2** of **2**

Adapted from Mount Sinai Hospital Neonatal Retro-transfer Record *Sept. 2013*

Retro-transfer Implementation Work Group

Metrics for the Health of the Neonatal Retro-transfer System

METRIC	RATIONALE	DATA SOURCE	ACCOUNTABILITY
1. Volume of completed repatriation requests.	To quantify the volume of repatriations within the CritiCall system.	CritiCall Provincial Hospital Resource System (PHRS) Repatriation tool	CritiCall to provide report to PCMCH monthly* MNAC to monitor quarterly
2. Median number of hours a patient spends waiting for retro-transfer. Aggregate by both sending and receiving hospital sites and by LHIN. a. Number of hours from request until acceptance b. Number of hours from acceptance until repatriated (departure time from sending hospital). c. % compliance of sending hospital to enter time of repatriation.	To quantify efficiency of repatriation by hospital site and by LHIN, reflecting access to care. Compliance rates will reflect data entry.	CritiCall PHRS Repatriation tool	CritiCall to report to PCMCH monthly* MNAC to monitor quarterly
3. The rate of successful repatriation by median acceptance time in hours. Aggregate by both sending and receiving hospital sites and by LHIN.	To identify acceptance rates and median acceptance time by site.	CritiCall PHRS Repatriation tool *Limitations in the tool may limit the ability to accurately report this data.*	CritiCall to provide report to PCMCH monthly MNAC to monitor quarterly
4. Reasons for non-acceptance of request for repatriation. Aggregate according to individual hospitals and by LHIN using the following indicators (**See definitions p. 2): a. At capacity b. No accepting MD c. No equipment d. No transportation e. Staff unavailable f. Infection control g. Other	To identify factors contributing to non-acceptance of repatriation request.	CritiCall PHRS Repatriation tool	CritiCall to provide report to PCMCH monthly* MNAC to monitor quarterly
5. Reasons for deferral of acceptance of request for repatriation. Aggregate according to individual hospitals and by LHIN using the following indicators: a. No beds b. No accepting physician c. No transportation d. Infection control	To identify factors contributing to deferral of acceptance and therefore delayed retro-transfers.	CritiCall PHRS Repatriation tool	CritiCall to provide report to PCMCH monthly* MNAC to monitor quarterly

The CritiCall Ontario PHRS Repatriation Tool pilot was implemented April 1, 2013. CritiCall Ontario Repatriation Reports are in the development phase. Report format, timeline and distribution are to be determined.

METRIC	RATIONALE	DATA SOURCE	ACCOUNTABILITY
6. % of time that a unit is restricted, closed or open by month.	To identify trends for restricted or closed beds that impede access to care, patient flow, the success of retro-transfers and reflect resource utilization.	CritiCall PHRS *Projected availability: May 2013*.	CritiCall to provide report to PCMCH monthly MNAC to monitor quarterly
7. Average monthly % occupancy by level of care reported by individual hospitals and LHIN.	To monitor trends in bed utilization that may impact patient flow and retro-transfer capacity.	CritiCall PHRS *Projected availability: May 2013*.	CritiCall to provide report to PCMCH monthly MNAC to monitor quarterly
8. Readmission rate to higher level of care within 48 hours after retro-transfer.	To identify trends that may indicate an infant was repatriated to a lower level of care too soon.	BORN To be reported by PCMCH	Reported to M-NAC annually Beginning 2013-2014
9. Number of inborn nursery admissions ≥ 37 weeks to Level II nurseries.	To monitor trends in bed utilization that may impact patient flow and retro-transfer capacity as a result of nursery admission of newborns ≥37 weeks that could have been prevented, for example, variations in transition that may resolve with skin to skin care with the mother, such as hypothermia and grunting. Exceptions: Some Level II nurseries keep babies for observation, without admitting them. Also, some Level III's who observe a baby in the resuscitation room, don't get admitted to the nursery.	BORN To be reported by PCMCH	Reported to M-NAC annually Beginning 2013-2014
10. Number of infants ≤ 32 weeks born outside Level III centres.	To quantify number of infants ≤ 32 weeks who are not born at a level III hospital. Consider Level II C hospitals that deliver 30-31 weeks gestational age.	BORN To be reported by PCMCH Benchmarking Report	Reported annually to M-NAC Beginning 2013-2014
11. Volume of infants with NAS (Neonatal Abstinence Syndrome) occupying level II or III beds and length of stay, report by LHIN.	Newborns with NAS have long lengths of stay which impact capacity in the nursery, potentially preventing timely retro-transfers.	CIHI PCMCH Maternal Child Benchmarking Report Includes all infants up to 28 days regardless of where they are located in the hospital.	Reported to M-NAC annually Began in 2012

****Metric 4: PHRS Repatriation Tool: Reasons for non-acceptance of request for repatriation**

Definitions for 'Unable to Accept'

- At Capacity – The hospital does not have a bed for the patient on the specified repatriation date
- No Accepting MD – There is no physician available to accept the patient on the specified repatriation date
- No Equipment – The equipment the patient requires is not available or will not be available on the specified repatriation date
- No Transportation – The hospital has the resources the patient requires but transportation is not available and the requested repatriation date cannot be met. **Important note: Transportation delays will be identified by the hospital that has initiated the repatriation request after the request has been "Accepted." In order to capture this information accurately for report purposes, it will be necessary for the requesting hospital to update the actual status of requests that have been "Accepted". To "Not Accepted" reason: "No Transportation" in the event the transportation delays prevent repatriation of the patient.**
- NSG Unavailable – Nursing resources are unavailable and the request cannot be accommodated
- Infection Control – The request cannot be accommodated due to an infection control issue or limitation at the receiving hospital
- Other – The patient cannot be repatriated due to reasons not included in the menu.