

Innovations in Patient Care: A Framework for a Clinical & Decision Support Partnership to Improve Best Practice

Phil Murphy, MSc^{1,2}, Christine Winters, RN¹ and Lorraine Burrage, RN, MSc¹.

¹Newfoundland and Labrador Provincial Perinatal Program, Eastern Health, and ²Faculty of Medicine, Memorial University, St. John's, NL, Canada A1B 3V6.



Abstract

In the traditional hospital organization, the clinicians gather patient data on a routine basis but the use of its information is often delayed or not utilized at all. Given this reality, collaboration between clinicians, decision support staff and management is essential to enhance the quality of care and improving best practice.

The Newfoundland and Labrador Provincial Perinatal Program (NLPPP) has established a framework that will foster this partnership. The model involves a process of: simplified data capture; analysis & dissemination; then, collaboration with clinicians and decision support staff to interpret, design and implement an action plan with Neonatal Intensive Care Unit (NICU) staff and their clients' follow-up information.

A ten year summary (1995-2004) of outcomes of infants at high risk for developmental delay is presented. The result of this interdisciplinary initiative has allowed clinicians and staff to become more informed of their clients' developmental outcomes and improve their daily clinical practice and patient care.

To improve quality of reproductive care and pregnancy outcomes in the province, the NLPPP aims for a collaborative approach in translating the knowledge of patient data back to the clinicians who initially captured the information.

About the NLPPP

- Established in 1979.
- Mandated to improve quality of reproductive care and pregnancy outcomes in Newfoundland and Labrador.
- Provides a province wide follow-up clinic to infants at high risk for developmental delay (~3% of annual 4500 live births).
- Surveillance of provincial deliveries, decision support role for Eastern Health and applied health research with Memorial University.



Who's Referred

Some infants, including those of low birth weight or have breathing problems after birth, are automatically referred to the clinic before they are discharged from hospital. Most of the infants who are referred to the clinic have been admitted to the NICU or Special Care Nursery following birth.

A Typical Clinic Visit

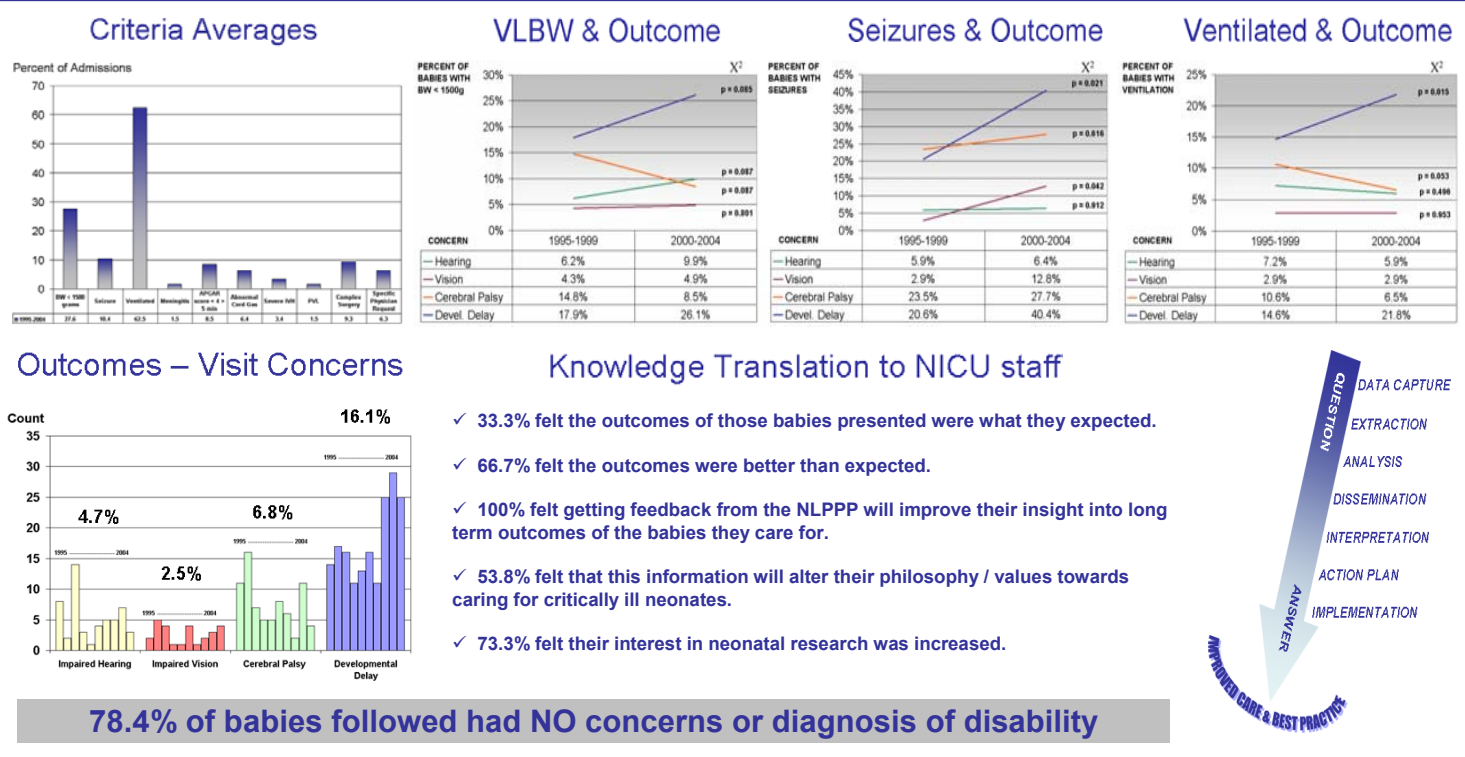
- Children are seen at approximately 4,8,12,18 months and 3 years of age.
- Developmental screening, neurological and physical assessments are done at each visit and child is appropriately referred should additional intervention be necessary (Physiotherapy, Speech, OT, Audiology, etc.).
- At age 3 years, Bayley III Scales of Infant Development performed by psychologist.
- All information is entered into a database.
- Following the 3-year visit, information is sent to the Public Health Nursing Division to assist the pre-school assessment.

Methods

- Data from the High Risk Follow-Up database (Microsoft Access) on babies born between 1995-2004.
- Information from each visit for all babies was analyzed using SPSS 15.0.
- Outcomes of interest were clinical concern or diagnosis of cerebral palsy, developmental delay, impaired hearing and impaired vision.
- Summarized information was presented to NICU staff and a 10 point Yes/No questionnaire was disseminated.

Results

- 1102 babies were followed (61 or 5.5% went on to other follow up)
- 73.8% were born in St. John's (urban)
- 57.3% were males
- 83.8% were singletons
- 66.0% were born preterm
- Decrease in Cerebral Palsy
- Increase in Developmental Delay



Conclusion

- Administrative databases such as the NLPPP's follow-up database provide a rich source of information that can be utilized to improve quality of care and services.
- The key is through collaboration among clinicians, decision support and quality and risk management that allows easy data capture and analysis that will lead to better decision making.
- Discussion with front line caregivers is crucial.

