

Background

Wisconsin struggles to provide timely birth outcome data that can be used to effectively investigate underlying causes of poor birth outcomes such as Low Birth Weight and infant mortality. This is especially troubling because two major urban cities in the State are experiencing high infant mortality rates, especially among African Americans. In 2006, the City of Milwaukee's Infant Mortality Rate was 11.9, and the City of Racine's Infant Mortality Rate was 11.5, compared to the state average of 6.4 (WISH).

Purpose

The Wisconsin Association of Perinatal Care (WAPC) identified the need for a comprehensive web-based system for collection of perinatal data that allows:

1. Individual hospital access to enter data that can be extracted for quality improvement purposes (including in aggregate state-level reports) and that can be transferred to Wisconsin State Vital Records per state statutes, and
2. Researcher access to state-wide de-identified data to address multiple perinatal issues.

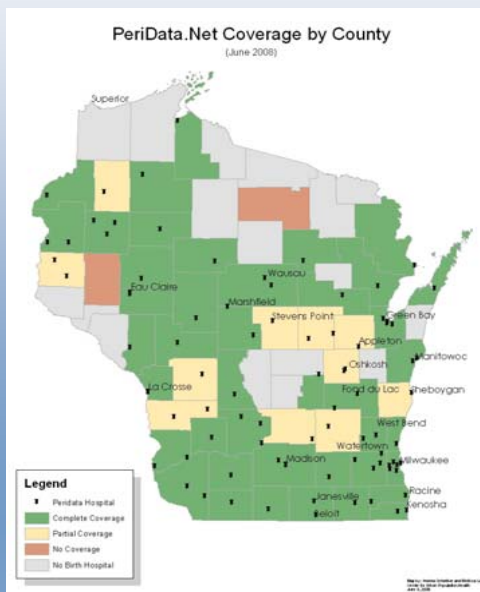
Platform Features

- Flexible data management and reporting
- Allows mother and infant records to be linked
- High on-site and web access security
- Data fields incorporate:
 - All aspects of the pre-existing DOS-based data entry system
 - 2003 Revision of the U.S. Standard Certificate of Birth (CDC)
 - WAPC Perinatal Data Committee recommendations (for hospital reporting and quality monitoring purposes)
- Data collected in the pre-existing system can be converted into PeriData.Net to allow trending

Sample Description

PeriData.Net contains antepartum, intrapartum, and postpartum data

- for over **100,000** births
- across **89%** of Wisconsin birth hospitals
- that will account for **92%** of hospital births in 2008



Content Areas / Data Screens

- | | |
|----------------------------------------------|------------------------------------------|
| Birth Circumstances | Intrapartum Procedures |
| Mother | Attendant |
| Infant | Delivery |
| Husband | Birth Outcome |
| Father | Nursery Care |
| Pregnancy History | Maternal Postpartum Complications |
| Current Pregnancy | Neonatal Procedures |
| Antepartum Risk Factors/Previous Pregnancies | Other Postpartum or Neonatal Information |
| Antenatal Risk Factors/Current Pregnancy | Abnormal Conditions of the Newborn |
| Antenatal Procedures | Congenital Anomalies of the Newborn |
| Intrapartum Data | Maternal Discharge |
| Intrapartum Medications | Infant Discharge |
| | Perinatal Mortality |

The system has capacity to add additional content areas/data screens, such as Neonatal Intensive Care Unit data, Prenatal Care Coordination data, etc.

Implications for Epidemiological Study

Scientists will have real-time access to analyze the de-identified data!

Next Steps

- Although the system already has this capacity, the following research-related issues need to be addressed:
- Hospital buy-in for research
 - Research data use agreements among WAPC, UW-Milwaukee, and Birth Hospitals
 - Mechanism for review and approval of research projects, including fees
 - Human Subjects
 - Wisconsin Institutional Review Board Consortium
 - Coordination of data release/access to data
 - Statewide data density & quality
 - Recommendations to hospitals regarding key interest fields for population health researchers

WAPC Perinatal Data Committee

Charge: To establish, collect, maintain and promote standardized data to support the goals of improved perinatal health. Chaired by Marianne Weiss, DNSc, Marquette University, the multidisciplinary committee also manages PeriDat.Net.

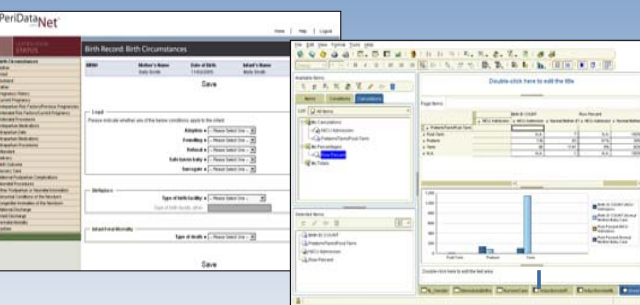
References

- Centers for Disease Control (CDC) National Center for Health Statistics: <http://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf>
- Wisconsin Interactive Statistics on Health (WISH): <http://www.dhfs.state.wi.us/wish/>

Affiliations

- ¹Center for Urban Population Health – University of Wisconsin School of Medicine and Public Health
- ²Marquette University
- ³Wisconsin Association for Perinatal Care
- ⁴Center for Urban Population Health – University of Wisconsin-Milwaukee
- ⁵Center for Urban Population Health – Aurora Health Care, Inc.

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Methods

- Birth hospitals paid initial license fees to WAPC to keep in escrow for WAPC to contract to develop the system
- Data is stored on a secure server at the University of Wisconsin-Milwaukee (UWM) through the Center for Urban Population Health
- Hospitals receive their own logins and can only access their own hospital data
- Business Associate Agreements between each hospital and UWM/Center for Urban Population Health were required prior to “go live” date
- Maintenance and Service Agreements were entered into between hospitals and UWM to allow ongoing support of the system through 2015
- Aggregate data use agreements were entered into between each hospital, WAPC, and UWM to allow anonymous benchmarking and aggregate reporting of data for participating hospitals

Acknowledgements

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Timeline

