Resource June 5, 2012

Spread collaborative: optimizing labor management through use of the partograph in Ivanovo, Tula, Kostroma, Yaroslavl and Tambov regions of Russia

Date improvement activities began: October, 2010
Date of end of collaborative: November, 2011
Aims/objectives:

To increase use of the partograph for labor management
To improve management of complications of labor
To decrease rates of birth hypoxia and asphyxia

Implementation package/interventions:
The WHO partograph
A locally developed instruction manual on management of anomalies of labor, tested and revised during a demonstration collaborative
Regular audit and feedback

Measurement:

--Self-reported by hospitals on a monthly basis:

*Percent of all births begun vaginally, in which the partograph was completed

*emergency caesarian sections as a percent of all births begun vaginally
* percent of births begun vaginally with use of labor augmentation

--Self-reported by hospitals on a quarterly basis:

*percent of newborns with intruterine hypoxia or asphyxia. Asphyxia was defined as an Apgar score of 7 or below at one minute after birth
*percent of newborns with birth trauma

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--regional level statistical data, collected annually from official reports

*the number and percent of newborns with intrauterine hypoxia and asphyxia (ICD-10 codes P-20, P-21)

*the number of deaths from intrauterine hypoxia and asphyxia,

*the number of cases and number of deaths from birth trauma (ICD codes P10-P15).

*overall early neonatal mortality.

Spread strategy:

The demonstration collaborative (see related profile) was implemented at 13 maternity hospitals in 3 Russian regions (Kostroma, Yaroslavl and Tambov). The collaborative was expanded to two additional regions, Ivanovo and Tula.

The lessons from the collaborative were distilled into a revised written change package and implementation was continued at 10 of the demonstration collaborative facilities, spread region-wide in Kostroma, where an executive order required completion of the partograph, and spread to 8 additional facilities in the two additional regions.

Number of sites/coverage:

19 maternity hospitals in 5 of Russia's 83 regions were targeted; Kostroma region required implementation in all maternity facilities.

Coaching:

Each region was designated a quality improvement coach. Coaches included QI specialists from the Russian Institute for Health Care Organization and Information, clinical experts from the Ivanovo Institute for Motherhood and Childhood who had been trained in QI, and a clinician from Tver region facility with long QI experience. We tested various technical assistance strategies for spread and continuation in the various oblasts during the spread collaborative. The overall strategy was that teams, with basic orientation and training in QI, could use the detailed written change packages and online resources to achieve cost-effective improvement. Having noted the success of the initial intensive team orientation in achieving rapid spread at Galich Hospital in Kostroma region, we attempted to replicate this approach at each of the new hospitals in Ivanovo region. Rather than conducting joint learning sessions, we conducted individual orientations for the regional improvement teams, where collaborative topics were selected, and then for each facility improvement team onsite. In this manner, a larger number of facility staff could be oriented to the project. In Tula region because time was short, we conducted an intensive orientation for all maternal and child health facility leaders in the region, provided training on the web portal and provided a single on-site supportive visit.

For Kostroma region, where training on the partograph had been provided to all maternity hospitals by regional experts during the demonstration phase, we continued the strategy of intensive on-site supportive visits. In Tambov
region, we worked primarily in the capital, at the regional level. And in Yaroslavl oblast, we tested an entirely long-distance, web-based support strategy. One training on the partograph was provided for Ivanovo region, which was also attended by professors from Ivanovo State Medical Academy.

Learning sessions & communication among teams:

Spread of the written change package was conducted through learning sessions where the change package was discussed and distributed, the project web portal, QI trainings for the new sites, clinical trainings with participation of physicians and nurses from demonstration collaborative sites, and experience sharing through visits of improvement team members from new sites to model facilities and programs developed during the demonstration phase. An initial learning session was conducted in October 2010, an interim session in May 2011 and a final project conference/video conference in November 2011. Obstetrics expert Zulfiya Khodzhaeva from the Kulakov Center for Obstetrics, Gynecology and Perinatology led monthly videoconferences among obstetricians and gynecologists from all the sites.

Results:

The collaborative had the following direct impact:

- Median partograph completion rate over 90% at participating hospitals

The collaborative made a plausible contribution to the following overall results:

- Overall incidence of hypoxia and asphyxia reduced 30% in Kostroma and Tambov oblasts, 2008-10.

- Number of neonatal deaths from hypoxia and asphyxia reduced from 19 in 2008 to 7 in 2010 in Kostroma oblast, with number of total births staying constant.

- National methodologic recommendations on labor management using the partograph were adopted by the Ministry of Health and Social Development

More detailed results are available in the attached report.

Best practices/conclusions:

The final change package, contained the following elements: all of which needed to be introduced together, were:
1. Adoption of a hospital-wide policy requiring real-time completion of the partograph for all births begun vaginally at later than 33 weeks gestation

2. Introduction of the partograph documentation system
   a. Assuring a supply of partograph forms
   b. Creating a system for completion and filing of the partograph
   c. Training staff

3. Introduction of the algorithms for management of complicated labor
   a. Supplying instructional materials and reminders
   b. Ensuring all delivery rooms have the necessary equipment and medications
   c. Training staff

4. Regular audit
   a. Daily audit and review of all births at maternity department meetings
Partograph report [2]
daily-partograph-review-tula.png [3]
Maternal, Newborn, and Child Health [4]
Obstetric Care [5]
Countries: Russia [6]
Report Author(s): Nicole Simmons
Organization(s): Health Care Improvement Project, Russian Institute for Healthcare Organization and Information, Kulakov Center for Obstetrics, Gynecology and Perinatology, Ivanovo Institute for Motherhood and Childhood named for Gorodkov
ASSIST publication: no

Improvement Story [7]

English [8]