

Labor and Delivery

Insight for better perinatal care—and healthier moms and babies

Type: Analytics Accelerator

Status: Custom Services

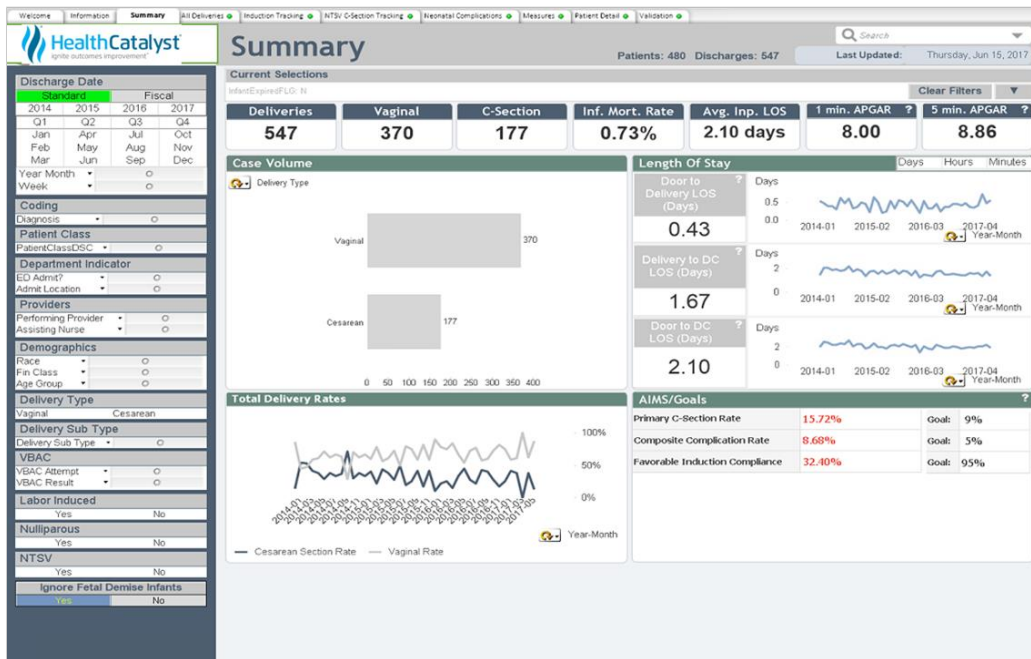
Revised: 2019-11-15



The **Labor and Delivery** analytics accelerator provides insight into the perinatal care for an organization's pregnancy cohort. The application supports tracking and reporting on key components of best practice (administration of antenatal steroids, indications for cesarean sections, timing of induction of labor, antepartum care) and helps identify opportunities for improving care in these areas. The result? Care teams have the insight needed to drive toward better clinical and financial outcomes: shorter lengths of stay, lower costs, and lower mortality and complication rates for both mother and baby.

Note: Like all analytics accelerators, this application is implemented in a custom way. Organizations identify their own areas of focus—and the appearance and functionality of the accelerator may differ from what is presented here.

- ### Intended users
- CMO
 - CNO
 - Chief of Obstetrics
 - Women and Newborn clinical and operational directors



- ### Potential data sources
- EMR - Clinical
 - Finance/Costing
 - Patient Satisfaction
 - Other clinical specialty sources such as Labor and Delivery: induction, dating, status, patient presentation, patient history, obstetrics, summary

This accelerator supports a disciplined, data-driven approach to best-practice perinatal care.

The problem

- **Care varies significantly within and between hospitals.** Despite evidence-based guidelines and established best practices for labor and delivery, clinical care varies widely—particularly for Cesarean deliveries, elective labor induction, perinatal care, and obstetric critical care. Such variation may indicate underuse or overuse of certain clinical practices—resulting in unnecessary risk and cost.
- **U.S. maternal mortality and obstetric complications are rising.** Although worldwide maternal mortality rate decreased in the last 30 years, the U.S. rate doubled between 1991 and 2014. Racial disparity is part of this disturbing trend; for example, African American women are 3 to 4 times more likely to die in childbirth than white women.
- **Costs associated with care variation and complications are high.** Hospital stays are longer and 50% more costly. Standardizing practices according to evidence-based guidelines improves quality of care, decreases costs, and minimizes liability.

Our approach

The Labor and Delivery analytics accelerator supports an evidence-based approach to perinatal care, helping organizations manage risks, improve patient outcomes, lower costs, and increase satisfaction. Typical implementations focus on the appropriateness of labor induction and C-section delivery, the use of antenatal steroids in women at risk of preterm delivery, and antenatal care of C-section patients—areas where getting it right is particularly meaningful for improving quality and outcomes.

Benefits and features

- **Gain an at-a-glance view of quality of care and its impact.** The application visualizes outcome and process metrics in an easy-to-consume, one-page summary that shows the number of deliveries, the number of C-sections, current C-section rate, average LOS, 30-day readmission rate and mortality. Organizations can see trends as they develop—and take timely action to address issues.
- **Start faster with meaningful, scalable clinical definitions.** The cohorts (e.g., NTSV), definitions (e.g., LOS), and process measures that come with the accelerator are clinically relevant, standard, and meaningful across domains, ready for customization or adoption in your organization. Regulatory metrics (e.g., for The Joint Commission's perinatal care practices) are present out-of-the-box and help organizations drive toward improvement.
- **Do more than monitor: understand.** Detailed analytics provide dynamic data exploration, real-time filtering, and drill-down to patient-level detail. Users are able to enrich understanding of the patient and the appropriateness of the care they receive. The application also provides export or print capability for the patient list, metric performance, etc. so you can share and follow up.
- **Compare and contrast.** A Compare tab lets you review patient and care variables—demographics, variation in care, performance in different facilities or shift, etc.—to determine what's working and not working to improve outcomes. This feature also allows you to gauge the ROI of improvement work in particular areas: what could you achieve if every unit and provider standardized to match your best performance?

Key measures

- Mortality
- Complications (assisted deliveries, infant weight and HR, APGAR scores)
- Deliveries: number, timing (weeks gestation), delivery type (e.g., vaginal, C-section), patient type
- C-sections: number, rate, indication, per patient type (e.g., NTSV C-sections)
- Inductions: elective, indications, timing
- Antenatal steroids: eligible patients receiving, timing
- Adherence to antenatal C-section care standards

Use cases

- After a newspaper article highlighted the hospital's comparatively high C-section rate, the CEO meets with the Chief of Obstetrics. Using the application, they're able to identify high NTSV C-section rates as a key driver of their overall C-section rates. The Chief meets with physician and nurse leaders to explore the data further, ultimately determining that lack of labor admission criteria and standard protocol for active labor management likely contribute to the variation in this area. The team develops and socializes new standards of care for labor management, deploys training, and then uses the application to monitor adherence to the new protocol as well as their impact on outcomes such as APGAR scores and neonatal complications.
- A hospital's executive team identifies the need to lower early induction rates to meet The Joint Commission PC-02 requirements. The Chief of Obstetrics assembles a team to explore organizational performance and devise a plan to improve. Using the application, the team identifies the extent and source of variation in early induction. Data shows that the providers who most consistently meet criteria for early induction have the best clinical outcomes—but that these providers' approach does not represent the current norm. The team uses this insight as the basis of a provider education program to better align practice with evidence-based recommendation.

Success stories

For examples of how customers have used Health Catalyst products and services to improve outcomes, visit <https://www.healthcatalyst.com/knowledge-center/success-stories/>

Contact us

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