



# Case Study: Oklahoma's Cesarean Section Quality Initiative Promotes Improved Birth Outcomes



*Derica Smith*

## Introduction

Improving birth outcomes—including reducing infant mortality—is a priority of many state Medicaid agencies, which finance nearly half of all births nationwide each year.<sup>1</sup> Nearly 60 percent of births in Oklahoma were financed by Medicaid in 2014.<sup>2</sup> Over the last 20 years, the national cesarean section (C-section) rate has continued to steadily increase without a corresponding improvement in maternal or neonatal outcomes.<sup>3</sup> Research suggests a correlation between early elective delivery and poor birth outcomes, such as lower brain mass, low birth weight, feeding problems, and respiratory issues.<sup>4</sup> Additionally, C-sections financed by Medicaid on average cost nearly \$5,000 more than vaginal births, and

the average payment for maternal and newborn care, including neonatal intensive care unit stays, is about \$6,100 higher for C-sections than vaginal births.<sup>5</sup>

### Oklahoma's SoonerCare Medicaid program reduced medically unnecessary C-sections between 2011-2013 among enrollees:

- Hospital claims declined from 19.75 percent to 17.83 percent
- Physician claims decreased from 21.43 percent to 20.03 percent
- The rate of C-sections performed without medical indication decreased from 1.81 percent to 1.43 percent
- The initiative resulted in a cost savings of more than \$1.2 million

The incidence of early elective C-sections and its contribution to the overall increase of C-section rates are not well known, but it is estimated that 2.5 percent of all births in the United States are elective C-sections.<sup>6</sup> The rate of C-sections increased almost 60 percent between 1996 (when it was 20.7 percent) and 2009 (rising to 32.9 percent), and has remained steady since.<sup>7</sup> The rate of early deliveries occurring between 37 and 38 weeks increased almost 50 percent between 1990 (19.7 percent) and 2006 (28.9 percent) but has since declined. The rate was 24.7 percent in 2012.<sup>8</sup> Additionally, births at 39 weeks increased 17 percent from

2006 to 2012 (25.4 percent to 29.8 percent).<sup>9</sup> The American College of Obstetricians and Gynecologists (ACOG) has released clinical guidelines designed to reduce non-medically-indicated Cesarean delivery and early induction of labor under 39 completed weeks.<sup>10</sup>

The following case study highlights Oklahoma Medicaid's innovative and effective Cesarean Section Quality Initiative. This case study is a companion to two other case studies of [Tennessee](#) and [Wisconsin](#) and a [50-state environmental scan](#) of state Medicaid performance measures, improvement projects and incentives promoting women's health services.

## Overview of Cesarean Section Quality Initiative

OHCA created the Cesarean Section Quality Initiative in 2011 to reduce elective C-sections without medical indication. The initiative was designed to decrease the primary C-section rate<sup>11</sup> performed without medical indication to 18 percent or less by encouraging providers and hospitals to follow medical best practice guidelines when performing C-sections on mothers in the SoonerCare program. (See Overview of OHCA Pregnancy Services text box for more information about SoonerCare services). The primary C-section rate reflects first births by SoonerCare mothers for whom C-sections were performed,

as a percentage of all vaginal and primary C-section births among SoonerCare mothers. Oklahoma's initiative includes three main components: provider education, performance feedback, and reimbursement reform (e.g., payment reduction for non-medically necessary C-sections).<sup>12</sup>

In 2011, OHCA sent letters to providers detailing the implementation process of the C-section initiative, including reimbursement reform information.<sup>13, 14</sup> The initiative was implemented in two phases. Phase I started January 2011 and included data collection, feedback to providers and hospitals, and provider education. In collaboration with the University of Oklahoma Quality Department, OHCA provided educational tools and resources for providers and hospitals,<sup>15</sup> including information about trends in Cesarean delivery in the United States, the March of Dimes' Less than 39 Weeks Toolkit,<sup>16</sup> and a link to the ACOG website that provides medical guidelines related to early elective deliveries. In addition, OHCA sent a letter to in-state contracted providers and hospitals that highlighted their primary C-section rate and the total C-section rate.<sup>17</sup>

Phase II began September 2011 and continues today. It includes medical chart reviews of all C-section claims for providers with greater than 18 percent primary C-section rates to identify medical necessity and reimbursement reform opportunities. If reviewers determine that a C-section was medically necessary, OHCA processes the payment at the established C-section payment rate. Conditions indicating medical necessity include but are not limited to: previous C-section, uterine rupture, and multiple gestation.<sup>18</sup> If medical necessity is not established, the delivery claim is paid at the vaginal delivery rate. The Medicaid vaginal delivery rate in Oklahoma is approximately \$200 less than the C-section reimbursement rate for physicians and \$1,600 less for hospitals.<sup>19</sup>

An independent evaluation assessed the effectiveness of the initiative for state fiscal years 2011 through 2013<sup>20</sup> by analyzing available claims data submitted by physicians and hospitals. It focused on the percentage of C-sections performed among the SoonerCare population, C-sections without medical indication, and quality implications.

Results from the evaluation indicated the primary C-section rate among SoonerCare enrollees significantly decreased over the evaluation period.

- Hospital claims declined from 19.75 percent to 17.83 percent over the two-year period;
- Physician claims decreased from 21.43 percent to 20.03 percent;<sup>21</sup> and
- The rate of C-sections performed without medical indication also significantly decreased from 1.81 percent to 1.43 percent.<sup>22</sup>

While not a primary goal, the initiative also resulted in cost savings for the SoonerCare program. For C-sections without medical indication, hospitals were paid at the lower vaginal delivery rate. This resulted in a more than \$1.2 million savings for the SoonerCare program over two years.<sup>23</sup> The average cost of both methods of delivery significantly decreased over the initiative period too. In 2016, the primary C-section without medical indication rate was 15.6 percent.<sup>24</sup>

### Overview of OHCA Pregnancy Services

The Oklahoma Health Care Authority (OHCA) administers the SoonerCare (Medicaid) program and determines financial eligibility. It is the primary entity in Oklahoma charged with controlling the costs of state-purchased health care. Sooner Care's goal is to improve access, quality, and utilization of health care for pregnant women and children. OHCA offers a variety of pregnancy services to women in Oklahoma with incomes at or below 133 percent of the Federal Poverty Level (FPL) through the SoonerCare program. Additionally, pregnant women with incomes between 134 and 185 percent of FPL are eligible for pregnancy-related health care coverage through the Soon-to-be-Sooners Maintenance (STBS-M) program. Pregnant women who are not eligible for SoonerCare due to citizenship status may be eligible for pregnancy-related coverage through Soon-to-be-Sooners (STBS). STBS coverage provides services beneficial during pregnancy to promote healthy pregnancies and improve birth outcomes. These services include, but are not limited to, delivery services, smoking cessation, high-risk obstetric care, genetic counseling, and maternal and infant health social work.

## Partnerships to Improve Outcomes

OHCA partners with the Oklahoma Department of Public Health on a statewide initiative, Preparing for a Lifetime, It's Everyone's Responsibility, funded by the state's Title V Maternal and Child Health Services Block Grant.<sup>25</sup> The overarching goal is to reduce infant mortality and other adverse birth outcomes as well as reduce racial disparities related to these outcomes.<sup>26</sup> As part of the planning process, data analysis revealed the need for medical professionals and hospitals to implement interventions that focus on both maternal and infant health.

- Maternal health issues include behaviors before and during pregnancy, maternal infections, preterm birth, postpartum depression, and tobacco use.
- Infant health efforts focus on infant safe sleep, breastfeeding and childhood injury.

A key component of this partnership initiative is education around prevention of preterm birth, which includes early elective inductions or C-sections that are not medically indicated.<sup>27</sup>

Additionally, early elective delivery is a national outcome measure for the federal Title V MCH Services Block Grant<sup>28</sup> tracked by Oklahoma through the state's Pregnancy Risk Assessment Monitoring System (PRAMS).<sup>29</sup> This measure offers a potential opportunity for state Medicaid and Title V programs in Oklahoma and across the country to collaborate and share data related to services and health outcomes of shared interest.

Oklahoma is an active member of the Collaborative Improvement and Innovation Network to Reduce Infant Mortality ([IM ColIN](#)), led by the National Institute for Children's Health Quality and supported by the Maternal and Child Health Bureau in the Health Resource and Services Administration.<sup>30</sup> IM ColIN promotes state efforts to prevent and reduce infant mortality and eliminate disparities in birth outcomes. Following an IM ColIN Infant Mortality Summit in 2012, OHCA implemented an Interconception Care (ICC) case management<sup>31</sup> project in 2013 for pregnant women ages 12 to 18 in counties with high infant mortality. The ICC case management project provides care coordination and relevant health education and life planning assistance during the woman's pregnancy and continues during the first year of a newborn's life.

## Conclusion

OHCA's efforts to address C-sections without medical indication provide a model for other states that are considering strategies to reduce infant mortality and improve birth outcomes. Overall, OHCA's Cesarean Section Quality Initiative has been successful in reducing C-sections without medical indication among SoonerCare mothers. Additionally, the state's experience to date demonstrates how state agencies can partner to achieve shared goals for maternal and infant health.

## Endnotes

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5. Ibid.
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7. Centers for Disease Control and Prevention. (2017). "Recent Declines in Induction of Labor by Gestational Age" accessed July 7, 2017, <https://www.cdc.gov/nchs/data/databriefs/db155.htm>

8. Ibid.
9. Ibid.
10. Centers for Disease Control and Prevention. "Primary Cesarean Delivery Rates, by State: Results From the Revised Birth Certificate, 2006–2012" accessed July 7, 2017, [https://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63\\_01.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_01.pdf)
11. Primary C-section rate is defined as the number of first births performed by C-section divided by the total number of vaginal deliveries and first birth C-sections as defined by OHCA.
12. Oklahoma Health Care Authority. "OHCA Policies and Rules," accessed July 7, 2017, <https://www.okhca.org/xPolicySection.aspx?id=6063&number=317:30-5-56.&title=Utilization%20review>
13. "Cesarean Section Quality Initiative (Hospital Administrator)." Oklahoma Health Care Authority, 2011. <http://www.okhca.org/WorkArea/showcontent.aspx?id=12551>
14. "Cesarean Section Quality Initiative (Provider)." Oklahoma Health Care Authority, 2011. <http://www.okhca.org/WorkArea/showcontent.aspx?id=12550>
15. Oklahoma Health Care Authority. "OHCA Cesarean Section Resources," accessed July 7, 2017, <https://okhca.org/providers.aspx?id=12549>
16. The toolkit provides hospitals with support in eliminating non-medically indicated (elective) deliveries before 39 weeks' gestational age. The toolkit can be found at the following link: <http://www.marchofdimes.org/professionals/less-than-39-weeks-toolkit.aspx>.
17. Phase I excluded providers and hospitals with less than six deliveries per quarter in a fiscal year, out-of-state providers and hospitals, and assistant surgeons.
18. Conditions indicating medical necessity include: previous C-section delivery, previous uterine rupture, HIV positive, invasive cancer of cervix, placenta abruption, uterine rupture, multiple gestation, cord around the neck with compression complicating labor and delivery, postdates [greater than 41 weeks Estimated Gestational Age (EGA)], placenta previa, placenta accrete, transverse lie; or malpresentation.
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21. Ibid.
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#### Author's Note:

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