



Assessing the quality of childbirth care in Mexico: findings from the maternal eCohort.

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Childbirth care

- Women around the world aspire to have a **positive childbirth experience that respects their cultural beliefs and expectations, is rooted in evidence-based practices, and is free from obstetric violence or severe maternal or newborn complications.**

WHO, 2018; Downe et al, 2018

- Four out of ten women face physical or verbal abuse, stigma, or discrimination.
- Five out of ten report low quality and satisfaction with intrapartum and postpartum care.



Bohren et al, 2019; Tobasía-Hege et al, 2019; Thompson et al, 2015

Childbirth care

- Poor quality of care during pregnancy and childbirth is a determinant of the adverse health outcomes for the mother and the newborn.
- **Every two minutes, a woman dies from complications related to pregnancy, childbirth, or the postpartum period.** Many of these deaths are preventable.
- Delivering high-quality antenatal, childbirth, and postpartum care could reduce maternal and neonatal deaths by 28% and stillbirths by 22%.



Childbirth care

In 2021, in Mexico:

- **Maternal mortality rate** was five times higher than the OECD average
53 vs. 10.9 deaths per 100,000 live births
- **Infant mortality rate** was three times higher
12.7 vs. 4.0 deaths per 1,000 live births
- **Cesarean section rate** ranged from 37.9% to 60.0%, significantly exceeding the OECD average of 28% and the 10% threshold set by the WHO.



Childbirth care

The Mexican Institute of Social Security (IMSS):

- 74 million affiliates
- 410,000 births annually
- 286 general and 25 high-specialty hospitals nationwide

In 2022, the institution launched the "**IMSS Comprehensive Women-Centered Maternal Health Care Model**" (AMIIMSS) to improve maternal health care quality and provide timely, safe, women-centered care, free from obstetric violence.

To conduct this program, IMSS released

- technical guidelines and
- an online course on "Friendly Obstetric Care" for hospital staff.



AMIIMSS

The IMSS authorities established **four pillars and twelve monitoring indicators** to evaluate the AMIIMSS program in IMSS hospitals.

However, **IMSS did not establish indicators to assess women's experiences with healthcare.**

To address this gap and evaluate the progress of AMIIMSS, a **longitudinal maternal eCohort study.**

The Four Pillars and Twelve Indicators of the Comprehensive Maternal Care Model

1. Training of Health Personnel



20% of health personnel trained in respectful maternal care



80% of health personnel trained in breastfeeding

2. Availability of Hospital Infrastructure



Availability of pre-labor area



Supplies for labor



Rooming-in for mother and newborn



Lactation room

3. Clear Norms and Care Processes



Use of pre-labor room



Respectful care during delivery



Certification as a Baby-Friendly Hospital

4. Women's Empowerment



Guided maternal tours



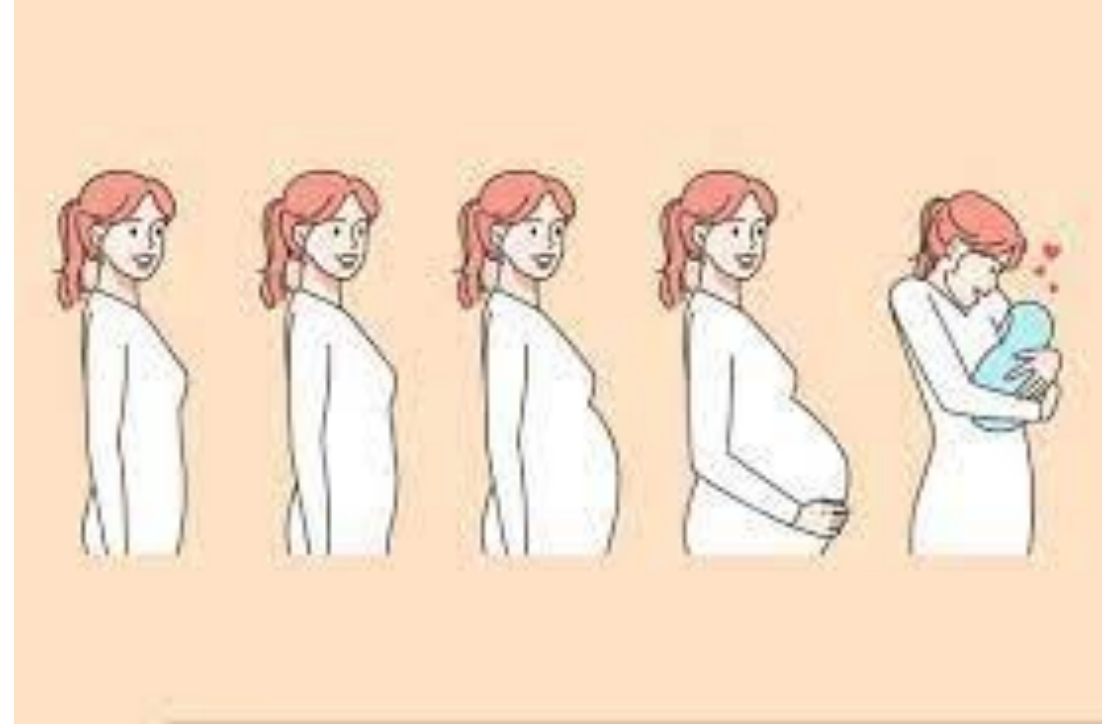
Information on respectful care, delivery, and breastfeeding



Childbirth preparation course

Maternal eCohort

- began in August 2023
- included 1,390 pregnant women (aged 18 to 49) affiliated with IMSS
- enrolled after their first antenatal visit
- The sample was drawn from 48 IMSS family medicine clinics across eight Mexican states
- Participants were followed up through monthly phone interviews during their pregnancy and childbirth until 8 weeks after delivery.



Objectives

- To compare the content of care, perceived quality, and health outcomes of women who delivered at IMSS facilities with those who delivered at private hospitals.
- To compare content, quality, and outcomes among women who delivered in hospitals with high adherence to AMIIMSS versus those with low adherence.
- To investigate whether the type of healthcare provider and delivery, the content of care, and the occurrence of obstetric violence are associated with the perceived quality of childbirth care, after controlling for other relevant demographic and clinical covariates.



Maternal eCohort

During the cohort follow-up

- 51 out of 1,390 women experienced miscarriages
- 336 dropped out
- 1,003 completed the postpartum survey, resulting in a response rate of 74.9%.
- **Most women (83.8%) gave birth at IMSS hospitals** (including 19 high-adherence AMIIMSS hospitals and 29 low-adherence hospitals),
- 14.7% delivered in private hospitals and
- 1.5% in other public hospitals.
- We excluded from the analysis 15 respondents who delivered in non-IMSS public health facilities due to their small number.



Women's characteristics

- **85.9%** between 18 and 34 years old
- **64.9%** possessed a high school diploma or higher education
- **60%** employed in a paid job
- **5%** consumption of alcoholic beverages or smoking
- **85.2%** lived in a common law union or were married
- **63.5%** had previous pregnancies
- **17.6%** reported having chronic illness



Results of evaluation



Women's experiences with childbirth care



- **over 90% of women** had their blood pressure measured, and their doctors accessed their clinical information.

Women at IMSS facilities vs private hospitals

- **were asked less frequently about their HIV status** (75.7% vs. 85.7%)
- **received less information regarding their vaginal or C-section delivery** (77.5% vs. 93.9%).
- **Had less C-sections:** 51.3% vs 92.5%
- **Unjustified C-sections being more common in private hospitals** (44.1%) compared to IMSS (25.3%)
- **90.9%** of private hospital patients **were allowed a partner present, versus 26.4% at IMSS.**
- **Obstetric violence** was more common at IMSS (16.7%) than in private hospitals (2%).
- **Non-consensual care** occurred more frequently in private hospitals (19%) compared to IMSS (4.9%).

Women's experiences with postpartum care



IMSS vs private hospitals

Most women reported that their newborns:

- were dried with a towel after birth (69.7% vs. 74.1%),
- placed on the mother's chest (72.0% vs. 76.2%),
- had skin-to-skin contact (90.7% vs. 88.4%%),
- initiated breastfeeding (97.2% vs. 98.6%).

Most women and newborns had a medical check-up before discharge (96.6% vs. 97.3% and 95.1% vs. 92.5%).

BCG vaccination was more frequent at IMSS than at private hospitals (68.4% vs. 17%).

Women's experiences with postpartum care



Postpartum counseling was similar in both IMSS and private facilities

Most women were guided on:

- newborn screening tests (91% in IMSS vs. 92.5% in private hospitals)
- exclusive breastfeeding (88.9% vs. 83.7%)
- umbilical cord care (80.5% vs. 85%)
- vaccination schedules (77.3% vs. 76.2%)
- danger signs requiring hospital visits (83.8% vs. 88.4% for newborn; 85.3% vs. 87.8% for women)
- when to seek postnatal care (78.1% vs. 79.6%).

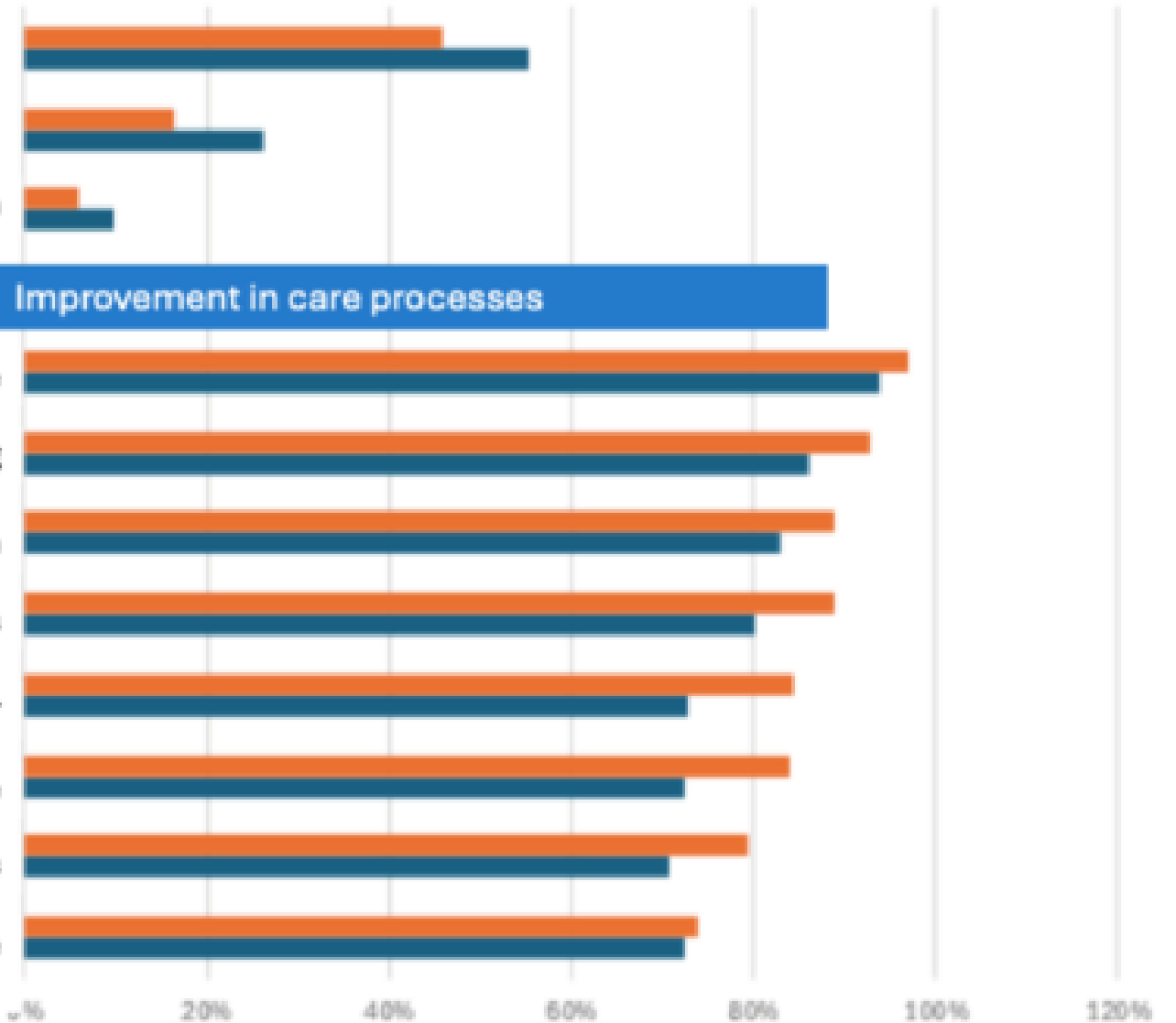
Women's experiences with postpartum care

The percentage of activities performed by health professionals during and after delivery was higher among women who gave birth at private facilities, with a median of 85% of completed activities (ranging from 22.2% to 100%), compared to women who gave birth at IMSS facilities, with a median of 83.3% (ranging from 12.5% to 100%)



Reduction in C-sections, complications, and mistreatment

Proportion of C-sections
Complications from mother during delivery
Women ignored when asked about their health and their baby's health



■ Hospitals with high adherence n = 348

■ Hospitals with low adherence n = 493

Maternal health outcomes

About 21% of women reported experiencing one or more complications.

- 9.5% developed pre-eclampsia or eclampsia
- 6.5% had heavy vaginal bleeding
- 11.8% exhibited postpartum warning signs, primarily severe headaches (7.5%), intense abdominal pain (3.2%), or fever (2.6%).
- **1.7% were admitted to the intensive care unit.**

Hospitals with higher adherence to AMIIMSS had

- fewer intrapartum maternal complications, such as hypertensive disorders of pregnancy, and heavy bleeding, with rates of 16.4% compared to 26.4% in low-adherence hospitals ($p = 0.001$).
- Fewer postpartum warning signs were also lower, at 9.2% versus 14.4% ($p = 0.023$).



Neonatal outcomes

There were:

- 5 stillbirths, 3 neonatal deaths, and 10 reports of congenital abnormalities.
- 8.6% of newborns experienced preterm birth and low birth weight.
- 28% of newborns faced complications during or after delivery.

These complications included:

- difficulty breathing (11.9%), jaundice (8.9%), infections and/or fever (5.0%), feeding problems (3.7%), and other issues (3.7%).
- 7.5% of newborns required hospitalization in the neonatal intensive care unit.

AMIIMSS low-adherence group had five stillbirths and two neonatal deaths, while only one neonatal death was reported in the high-adherence group.

Newborns in hospitals with high adherence to AMIIMSS were less likely to experience jaundice and feeding problems, with rates of 6.3% versus 12.1% ($p = 0.006$) and 2% versus 4.9% ($p = 0.039$), respectively.



Factors associated with perceived quality of care during the intrapartum and postpartum periods

Perceived better quality of care



- Higher care content
- Care in third-level hospital
- Care in private hospital
- Western, or Southern regions

- Obstetric violence



Perceived lower quality of care



Conclusions and recommendations

AMIIMSS program demonstrated significant potential in enhancing healthcare clinical activities during childbirth.

- ✓ It is important to **reinforce the program's foundational pillars—namely, training, infrastructure, regulatory adaptation, and women's empowerment**—to improve experiences and promote higher utilization of IMSS facilities.
- ✓ The activities of healthcare personnel must adhere to institutional and international guidelines for childbirth management
- ✓ **Regular monitoring of women's experiences** and satisfaction with care is strongly recommended to assess AMIIMSS program advances and barriers to refine strategies for achieving Women-Centered Maternal Health Care at IMSS.



Publicaciones

Doubova SV, Quinzaños Fresnedo C, Paredes Cruz M, et al. **A comprehensive assessment of care competence and maternal experience of first antenatal care visits in Mexico: Insights from the baseline survey of an observational cohort study.** *PLoS Med.* 2024;21(9):e1004456.
<https://doi.org/10.1371/journal.pmed.1004456>.

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<https://doi.org/10.1186/s12884-025-07397-3>.

- Spanish: <https://blogs.iadb.org/salud/es/hacia-un-modelo-de-atencion-mas-amigable-para-las-embarazadas-en-mexico/>
- English: <https://blogs.iadb.org/salud/en/towards-a-more-supportive-care-model-for-pregnant-women-in-mexico/>



Hacia un modelo de atención más amigable para las embarazadas en México

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