Barriers to Self-Disclosing Level of Maternal Care: What Are Wisconsin Hospitals Worried About?

Jenna L. Racine, MD; Katie Gillespie, DNP; Kathy Hartke, MD; Cynthia Wautlet, MD, MPH; Kathleen M. Antony, MD, MSCI

ABSTRACT

Objective: The American College of Obstetrics and Gynecology (ACOG) has recommended every hospital disclose their level of maternal care (LOMC) to categorize the capabilities of their birthing center and regionalize perinatal care. Of the 98 birthing centers in Wisconsin, 44% have self-disclosed their LOMC. In many states, disclosing LOMC is mandated but, despite evidence and professional association recommendations, Wisconsin relies on voluntary self-reporting. We surveyed all birthing centers in Wisconsin to better understand the barriers to disclosing their LOMC.

Study Design: An anonymous survey was sent to all 98 birthing centers in Wisconsin. Survey recipients were hospital administrators, nursing supervisors, or physician directors of obstetric units. The survey sought information on perceived barriers to completing self-assessments and disclosing their hospital's LOMC. Quantitative descriptive statistics were used for data analysis.

Results: Of 98 birth centers in Wisconsin, 40 (40.8%) responded. Fifteen of the 40 responses were from birthing centers that have not yet disclosed their LOMC. Of these, 93% were unsure how to disclose, 73% found the paperwork confusing, and 80% did not have the time or staff to complete the paperwork. Respondents did not report lack of departmental support, concerns about losing business or reputation, or future physician recruitment as barriers. Of all respondents, 77.5% were aware of ACOG's LOMC recommendations, but only 35% thought disclosing their LOMC would be beneficial to maternal care.

Conclusions: Birthing centers in Wisconsin need further guidance on how to complete a self-assessment of their LOMC. In order to increase self-disclosure of LOMC, statewide perinatal organizations will need to continue to emphasize the benefits of releasing this information. Organizations should also provide additional support to level 1 and 2 birthing centers and improve maternal and neonatal care overall.

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INTRODUCTION

In 1976, *Toward Improving the Outcome of Pregnancy* was published, which recommended the development of regional centers for perinatal health services.[1] Studies showed timely access to centers equipped to manage high-risk obstetrical patients improved perinatal outcomes and, thus, designating levels of perinatal services was suggested.[1] Over the ensuing 3 decades, the American College of Obstetricians and Gynecologists, American Academy of Pediatrics, and the March of Dimes have pushed for more consistent regionalization of perinatal care.[2-4]

Other specialty areas, such as trauma surgery and emergency departments, have provided excellent examples of regionalization of care, establishing networks for effective patient care and transports, and verification of disclosed levels.[5,6] Levels of neonatal and pediatric care also have been implemented. However, despite statements provided by The American Academy of Pediatrics in 2004 and 2012[7-9] that defined neonatal intensive care unit (NICU) levels of care and recommended universal disclosure, a recent state-by-state review found only 22 states with relevant policy as well as significant variation in definitions, criteria, and enforcement of reporting.[10]

The American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) released a consensus document supporting disclosure of levels of maternal care (LOMC) in 2015 and revised it in 2019.[11,12]

Table 1. Brief Overview of Required Criteria for Each Proposed Level of Maternal Care

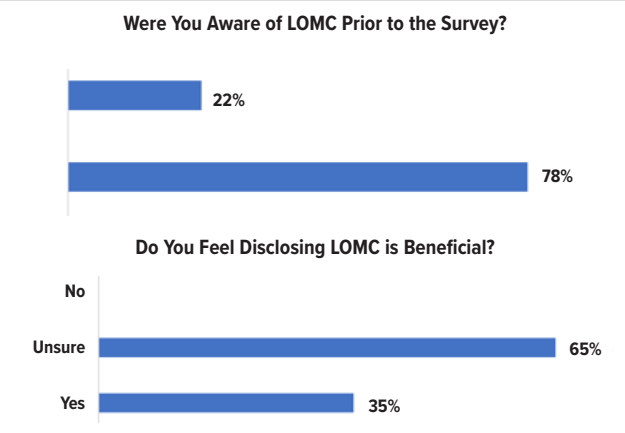
Level of Maternal Care	Criteria
Level 1[a] (Basic Care)	• Limited obstetric ultrasound available at all times • Support services available at all times (blood bank, laboratory testing) • Ability to start emergency Cesarean in a timely fashion • Ability at all times to initiate a massive transfusion protocol • Established procedures for patient stabilization and transport
Level 2[a] (Specialty Care)	Level 1 care plus: • OBGYN readily available at all times • Maternal-Fetal Medicine (MFM) specialist available at all times (telemedicine, telephone, in-person) • Anesthesiologist readily available at all times • Access to radiology and other imaging available daily • Obstetric ultrasound with interpretation available at all times
Level 3[a] (Subspecialty Care)	Level 2 care plus: • Board-certified obestetrician-gynecologist present at all times • Board-certified MFM specialist readily available in-person at all times • Board certified anesthesiologist present at all times • On-site medical, surgical intensive care unit • Access to radiology and other imaging at all times, including interventional radiology • Established procedures to accept patient transports
Level 4[a] (Regional Perinatal Healthcare Center)	Level 3 care plus: • Adult subspecialty consultants who can provide complex antepartum, intrapartum, and postpartum care of mother and infant • At least one of the following adult subspecialties readily available at all times: neurosurgery, cardiac surgery, or transplant

[a]Please refer to ACOG Consensus Statement Number 9 for full criteria. Adapted from: The American College of Obstetricians and Gynecologists and Society for Maternal-Fetal Medicine. Levels of Maternal Care. Obstetric Care Consensus No. 9. *Obstet Gynecol.* 2019;134:e41-55.

Table 2. Disclosed Levels of Maternal Care for Representatives of 40 of the 98 Hospitals With Birthing Centers Who Responded to the Survey

Disclosed Levels of Maternal Care	No. of Respondents
Level 1	15 (37.5%)
Level 2	5 (12.5%)
Level 3	2 (5%)
Level 4	3 (7.5%)
Unknown	15 (37.5%)

Figure 1. Survey Responses



Abbreviation: LOMC, levels of maternal care

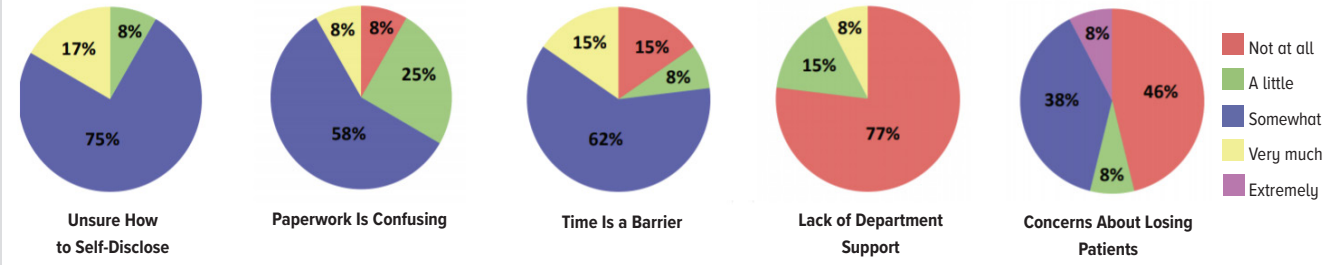
The 2019 consensus was endorsed or supported by the American Academy of Family Physicians, American Association of Birth Centers/Commission for the Accreditation for Birth Centers, American College of Nurse-Midwives, Association of Women's Health, Obstetric and Neonatal Nurses, and the Society for Obstetric Anesthesia and Perinatology.[12] The purpose of this statement was to standardize definitions of levels of maternal care, promote quality improvement, and develop risk-appropriate health care systems.[11]

In the last few years, attention has focused on birthing centers disclosing their LOMC in order to help improve maternal morbidity and mortality in the United States.[12] The Wisconsin Association of Perinatal Care (WAPC) is the organization that administers the voluntary application and approval process for LOMC in Wisconsin. The WAPC criteria are based on the ACOG/SMFM Levels of Maternal Care guidelines, the ACOG *Guidelines for Perinatal Care* 8th edition[11,13] (Appendix).

Knowledge of a hospital's LOMC conveys information about what resources are or are not available and also can elucidate hospitals that are under-resourced and may benefit from assistance. A brief overview of criteria required for each level of care is provided in Table 1. (See ACOG's *Obstetric Care Consensus on Levels of Maternal Care* for further details regarding criteria.[11,13]) A cross-sectional survey of California hospitals demonstrated that over half did not meet criteria for the lowest level of maternal care.[14] There is also evidence that high-acuity women who deliver at low-acuity hospitals have a higher risk of severe morbidity.[15]

Wisconsin is plagued by high rates of maternal and neonatal morbidity and mortality and some of the highest rates of maternal and infant racial health disparities in the country.[16,17] It is also important to note that women residing in rural areas face their own set of health disparities, specifically access to risk-appropriate care.[18] In September 2019, the Wisconsin Department of Health Services Maternal Mortality Review Team (MMRT) was awarded a 5-year federally funded Centers for Disease Control and Prevention ERASE grant (Enhancing Reviews and Surveillance to Eliminate Maternal Mortality). The MMRT enters deidentified confidential death review reports into a nationwide data system, the first step to understanding the causes of maternal mortality and eliminating preventable maternal deaths. Reports now include the LOMC. If the level of maternal care has not been assessed for the facility, that is noted

Figure 2. Perceived Barriers to Self-Disclosing Level of Maternal Care (N=15)[a]



[a]Data is from 15 birthing centers that have not disclosed levels of maternal care.

in the data system and shared with the review team. This data is necessary to make recommendations and improve care. Despite significant ongoing efforts by WAPC, when this project was designed, only 44% of Wisconsin birth centers—mostly from urban centers—had self-disclosed their LOMC.[19] There is an urgent need to understand the barriers to self-disclosing LOMC and to close gaps in reporting the state.

MATERIALS AND METHODS

Study Design

Between May 2019 and August 2019, online surveys were sent to representatives of all hospitals in Wisconsin that provide labor and delivery services. These representatives included chief executive officers, chief nursing officers, physician directors, and nursing supervisors of the 98 birthing centers. A total of 170 surveys were sent via email. Each representative was sent 3 emails with an opportunity to complete the survey at 2-week intervals. The survey was sent to up to 3 representatives from each institution. This study was approved by the University of Wisconsin-Madison Institutional Review Board (2019-0356).

Questionnaire

With the assistance of the University of Wisconsin-Madison Survey Center, an anonymous online survey was composed using REDCap (Research Electronic Data Capture, Vanderbilt University). Respondents were given an opportunity to state whether their institution had already disclosed their LOMC. Branching logic was then used to separate those that have self-disclosed and those that have not. The survey aimed to understand the birthing center's current resources, staffing, and consultants; their institution's barriers to self-disclosing their LOMC; and their perceptions of how LOMC would influence perinatal care. Each question posed a statement; respondents were asked to gauge the degree to which they agreed with the statement, from "not at all" to "extremely" or "immensely." There were also free text boxes provided for respondents to indicate whether additional barriers or concerns existed.

Survey responses were anonymous; however, investigators were privy to which birthing center representatives completed the study. Respondents provided consent to participate in the survey, and no incentive was offered for completion. Quantitative descriptive statistics were used for data analysis.

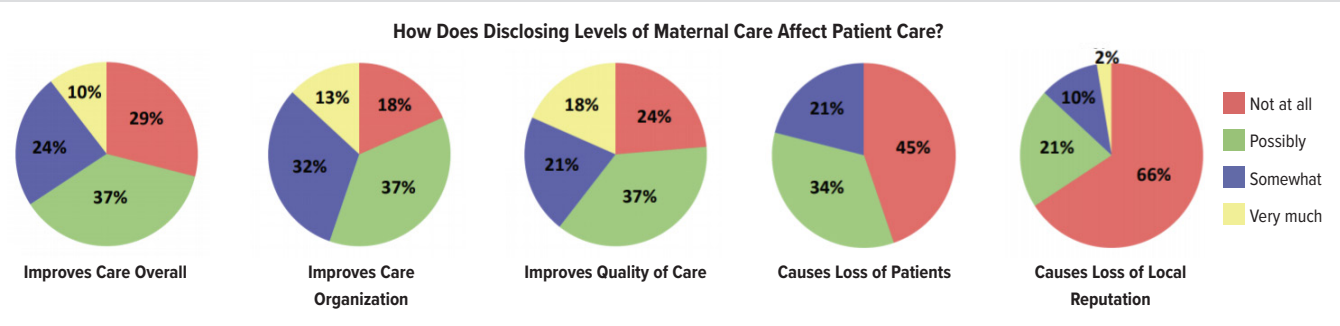
RESULTS

Of 98 hospitals with birthing centers, representatives from 40 birthing centers (40.8%) responded to the survey (Table 2). Fifteen of 40 responses were from birthing centers that stated they had not yet disclosed their LOMC. Respondents were asked if they were aware of ACOG's LOMC recommendations[11] prior to receiving the survey and 78% agreed. When asked if they felt disclosing LOMC was beneficial in general, 65% of respondents were unsure, while 35% agreed it was beneficial (Figure 1).

Of the 15 birthing centers that had not self-disclosed their LOMC, 92% of respondents were at least somewhat unsure how to disclose. The paperwork was at least somewhat confusing to 66% of respondents, and 77% indicated that time was at least somewhat a barrier. Respondents did not report lack of departmental support, concerns about losing business or reputation, or future physician recruitment as barriers. However, 46% reported they were somewhat (38%) or extremely (8%) concerned about losing patients (Figure 2). Two respondents omitted answering certain portions of the questions related to barriers to disclosing their LOMC.

The survey asked respondents if they felt disclosing their LOMC would be beneficial to perinatal care overall. All respondents indicated it would be at least somewhat beneficial, but no one thought it would be "immensely" beneficial. Of all respondents, 35% said disclosing LOMC would at least somewhat improve patient care, 45% said there would be somewhat of an improvement in care organization, and 39% said it would at least somewhat improve the quality of care. A majority indicated they did not think disclosing LOMC would affect patient numbers or local reputation, but 33% at least somewhat had concerns about effects on local reputation (Figure 3). No respondents said that self-disclosing LOMC would immensely benefit the organization or quality of care.

Figure 3. Data From All Respondents Regarding Their Thoughts About Disclosing Levels of Maternal Care (N=40)



DISCUSSION

Barriers to disclosing LOMC experienced by Wisconsin birthing centers included lack of knowledge about how to self-disclose, lack of administrative time, confusing paperwork, and some concern regarding loss of patients. No respondents said they felt that self-disclosing LOMC would immensely benefit patients, the organization, or quality of care. It is also important to note that 7 respondents did express concern regarding loss of patients or local reputation.

While 78% of survey respondents were aware of ACOG's LOMC guidelines, 65% of respondents were unsure whether disclosing their LOMC was beneficial to perinatal care. This is in contrast to other states, such as Texas and Illinois, that have mandated all birthing centers disclose their LOMC in an effort to regionalize perinatal care. It is important to note states like Texas and Illinois are similar to Wisconsin, specifically as they all have large rural areas with smaller hospitals and fewer resources. Disclosing LOMC will foster the establishment of connections between birth facilities to ensure that appropriate resources are available for women with high-acuity conditions. These connections can provide consultative support, facilitate appropriate patient transports and care organization, impart educational resources, and create collaborative efforts to improve the care of moms and babies throughout the state. Prior studies have shown that timely access to centers equipped to manage high-risk obstetrical patients improved perinatal outcomes.[1]

One significant obstacle we did not anticipate was the inability to procure an updated, verified list of contacts for birthing center administrators. The initial list we identified was comprised of hospital chief executive officers or chief nursing officers who were not always the appropriate contact personnel to complete the survey, nor are they likely to be the primary official responsible for disclosing LOMC. This prompted us to create a list of obstetric-care administrative contacts for Wisconsin hospitals. We were able to contact 72 birthing centers and confirmed contact information for 63 of the facilities. This list of contacts was shared with WAPC and the Wisconsin Perinatal Quality Collaborative to maintain and update.

A critical limitation to our study was a low response rate. We believe this can be attributed to the lack of appropriate contact information mentioned above and also lack of time on behalf of health care administrators. However, we received responses from a geographically diverse group of birthing centers that also differ in delivery volume; therefore, we believe the results are likely generalizable to institutions in Wisconsin. The questions within the survey were also mostly close-ended questions. Therefore, there may be other key barriers that were not captured within our survey. As of November 25, 2019—after our study period was complete—an additional 6 birthing centers disclosed their LOMC. Because the survey was anonymous, we cannot recalculate our data to fit the most updated information, nor can we identify if those were birthing centers that acknowledged our survey.

Based upon our data, we suggest that future statewide efforts focus on emphasizing downstream benefits of disclosing LOMC for the purpose of regionalizing perinatal care and improving perinatal outcomes. It is well documented that integrating systems of care across levels improves outcomes. Many states have used a level of care process to monitor access and quality of maternal and infant care. Understanding a hospital's level of maternal care is a critical step toward ensuring that women are giving birth at a hospital that is equipped to adequately meet the level of risk. However, it is critical to also implement monitoring of adherence to best practices aligned with each level.

There remains significant variation in state endorsement of LOMC disclosure. Currently, implementation of LOMC is at the state's discretion, and there is not a federal mandate in place for birthing centers to disclose their LOMC. However, LOMC has caught the attention of federal programs, specifically the Centers for Disease Control and Prevention (CDC). The CDC's Maternal and Child Health Epidemiology Program has worked to design a tool to help birthing centers assess their capabilities—the CDC LOCATe tool.[20] The tool is easily accessible and has been used by other states, such as Texas and Illinois, to assess a birthing center's capabilities and help regionalize perinatal care. Texas has led these efforts and, as of March 2018,

has required every birthing center disclose their LOMC and participate in an onsite verification process in order to receive Medicaid funds.[21] Birthing centers in Texas will be required to disclose their LOMC by August 2021 to receive Medicaid reimbursement for obstetrical care.[22] The state of Illinois also has been able to implement perinatal regionalization using a state-specific adaptation of the CDC LOCATe Tool.[23,24] Illinois also is currently part of a 3-state program implementing onsite verification of LOCATe results.[12]

Despite success in other states, Wisconsin has not prioritized policies regarding disclosing LOMC. These results likely align with data from California suggesting many birthing centers may not meet criteria for even the lowest level of maternity care and, therefore, may need additional support to reach these criteria.[14] It is important to note these efforts also may address the benefits of knowing the level of maternity care for one's own hospital, as well as regional hospitals, in order to effectively regionalize perinatal care. Knowing the level of maternity care can also aid hospitals and clinicians in stratifying risk-appropriate care for their patients, given that high-acuity patients who deliver at low-acuity hospitals have increased morbidity compared to high-acuity patients who deliver at high-acuity hospitals.[15,20] LOMC disclosure also can aid in facilitating a network for maternal transfers and ambulance direction. The level of maternal care cannot be assumed to be the same as the level of neonatal care, as these levels are often discordant.[14] The primary issues surrounding access to risk-appropriate care are difficult access to tertiary care centers for some women in rural areas, the patient's lack of awareness of the birthing center's capabilities, and the frank unpredictability of pregnant and postpartum women's medical status. We believe providers understand their hospital's limitations; however, patients may present to them in emergency situations they may be ill-equipped to manage.

Because the mandates in both Texas and Illinois are recent, without full implementation until the future, outcomes cannot yet be assessed. Regardless, implementing statewide LOMC is still recommended by all of the organizations listed above. We encourage all statewide organizations that provide care to pregnant women to also support efforts to encourage birthing centers to complete their self-assessment of LOMC.

Statewide organizations may also focus on establishing avenues for disseminating information, which may include regional forums where hands-on sessions could assist participants to access the website and complete their LOMC. Birthing centers should also be given the opportunity to evaluate the application or request feedback in order to improve the application process. Lastly, state organizations should keep a statewide repository of updated contact information for birthing center administrators to improve communication amongst institutions providing perinatal services. By providing clear communication about the resources available at each birthing center, statewide implementation of LOMC should make childbirth a safer experience for mothers in Wisconsin.

CONCLUSION

Birthing centers in Wisconsin need further guidance on how to complete a self-assessment of their LOMC. In order to increase self-disclosure of LOMC, statewide perinatal organizations will need to continue to emphasize the benefits of releasing this information. Organizations should also provide additional support to level 1 and 2 birthing centers and improve maternal and neonatal care overall.

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Appendix: Available at www.wmjonline.org.

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