CMQCC
California Maternal
Quality Care Collaborative

**Obstetric Comorbidity Index for Transitional Care Services**
**Frequently Asked Questions**

1. **What is the Obstetric Co-Morbidity Index (OCI)?**

OCI is a tool used to predict risk of Severe Maternal Morbidity (SMM) based on medical and obstetric complications. Initially, the score was developed for risk adjustment in epidemiological research[1] and was later adapted and validated for clinical use during the labor and delivery period.[2] There have been multiple iterations and validations of the index.[3]

2. **How is it being utilized for Transitional Care Services?**

OCI is one method used in the TCS policy to categorize birthing members into high- vs moderate-intensity services, based on medical and obstetric considerations.
The version recommended for use in TCS is a recently updated version that includes diagnoses aligned with ICD-10 codes and decouples certain diagnoses to avoid under-recognition of high-risk conditions.

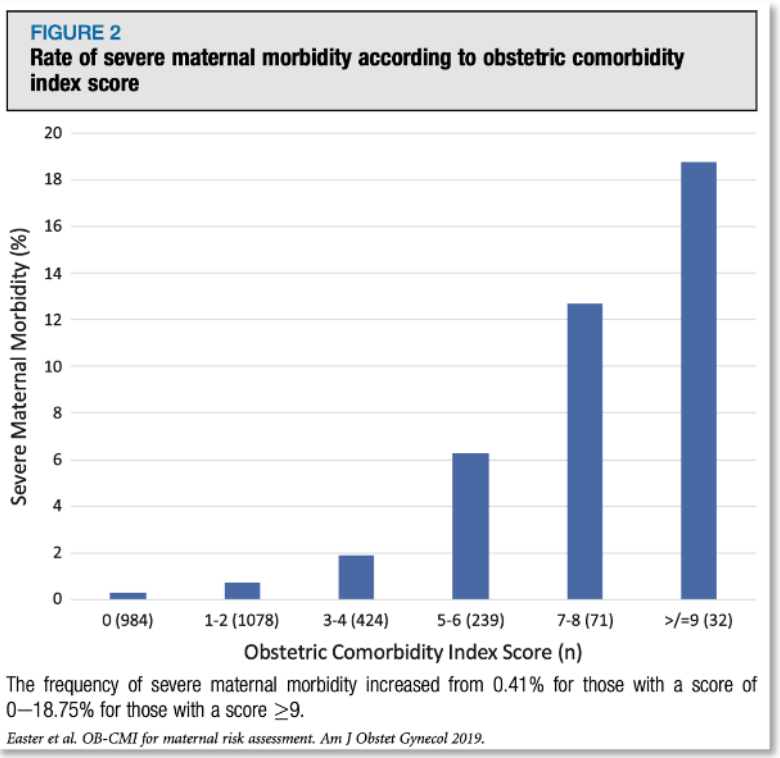
3. **What does OCI not account for?**

The OCI can be used prior to delivery to predict SMM during delivery. It does not provide insight into risk after the delivery period. The index itself does not account for any delivery or postpartum complications.

As such, member categorization into moderate- and high-intensity TCS should include other methods to assess for delivery episode and postpartum complications. This may be accomplished by utilizing RSST birthing or by considering delivery and postpartum complications such as SMM.
Additionally, OCI does not include social health. Ensure utilization of the other recommended categorization approaches to appropriately assess for behavioral health and social considerations.

4. **Why is a score of 6 the set cutoff for high-intensity services?**

When utilizing the OCI, the risk for SMM increases as the OCI score increases. As such, a score of 6 statistically predicts an approximate 6% risk of SMM based on the Easter et al. validation study.[2] Notably, this risk increases with every additional point up to a 20% SMM risk of SMM for individuals with an OCI of 9 or higher.[2] The graph below is are includes the rate of SMM according to the OCI score from the Easter et al. validation study.




The number of members the cutoff of 6 identifies may vary by populations served by the MCP, though multiple studies find that a score higher than 6 accounts for less than 5% of the study populations.[2,4] MCPs may decide to utilize a lower threshold to increase the volume of members identified for high-intensity services by medical and obstetric considerations. There may be additional attention paid to the utilized cutoff by MCPs in rural settings or facing shortages of specialty providers.

### 5. What are some ways in which it can be operationalized?

The OCI can be calculated using claims data via ICD-10 codes or can be used directly by the clinical team to calculate and refer for high-intensity services as needed. Some MCPs may choose to utilize a combination of these approaches.

### 6. Where is there possible alignment for OCI outside of TCS?

Prenatal and postpartum risk assessment broadly, and OCI specifically, is being implemented throughout the state to ensure that birthing individuals receive risk-appropriate and timely care. This includes use of the OCI in certain TMaH region hospitals, implementation of the Office of the Surgeon General's Preconception Medical Assessment (PreMA) patient facing risk screening, and approaches developed through California's Maternal Health Innovation Grant. When operationalizing birthing member risk assessment broadly, and OCI specifically, consider alignment opportunities across stakeholder settings including approaches implemented by direct care providers and community-based organizations.

Alignment in risk assessment implementation and associated action may improve integration across the local maternal health ecosystem.
Additional Materials for OCI include:

- Updated OCI scoring tool
- ICD-10 code list

**References**

1. Bateman BT, Mhyre JM, Hernandez-Diaz S, et al.. Development of a Comorbidity Index for Use in Obstetric Patients. *Obstetrics & Gynecology.* 2013; 122 (5): 957-965. doi: 10.1097/AOG.0b013e3182a603bb.
2. Easter SR, Bateman BT, Sweeney VH, et al. A comorbidity-based screening tool to predict severe maternal morbidity at the time of delivery. Am J Obstet Gynecol 2019;221:271.e1-10.
3. Leonard S, Kennedy C, Carmichael S, Lyell D, Main E. An Expanded Obstetric Comorbidity Scoring System for Predicting Severe Maternal Morbidity. *Obstetrics & Gynecology.* 2020; 136 (3): 440-449. doi: 10.1097/AOG.0000000000004022.
4. Metcalfe A, Lix LM, Johnson J-A, Currie G, Lyon AW, Bernier F, Tough SC. Validation of an obstetric comorbidity index in an external population. BJOG 2015;122:1748–1755.