U.S. "Maternal Mental Health Dark Zones" – Counties with the Highest Risk and Lowest Resources Revealed

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Key Highlights:

- 96% of birthing-aged, American women live in maternal mental health professional shortage areas
- 70% of U.S. counties lack sufficient maternal mental health resources
- Nearly 700 counties face a high risk for maternal mental health disorders
- Over 150 counties fall into the "Maternal Mental Health Dark Zone" with both high risk and large resource gaps
- Texas, Michigan, Tennessee, Louisiana, Oklahoma, and Indiana are the top 6 states in the Maternal Mental Health Dark Zone

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The risk factors contributing to maternal mental health (MMH) disorders are complex and known to disproportionately impact communities of color, rural communities, and other groups facing systemic inequities. However, until recently, little has been known regarding the geographic county-level distribution of risk nor the available MMH provider resources.

Earlier this year, with financial support from Plum Organics, the Policy Center released the first-of-its-kind interactive map to track MMH risk and providers by county. The map uncovered an immense need for increased access to MMH providers and programs.

The report illustrates where, in the U.S., mothers are at the greatest risk for suffering from maternal mental health disorders and where the greatest need for providers and community-based organizations are. **An estimated 62 million birthing-age, American women, or 96% of the potential perinatal population live in maternal mental health professional shortage areas. 13,885 providers are needed across the United States to fill these shortage gaps.**

Risk is assessed by using census data and including predictors of maternal mental health, such as intimate partner violence and poor mental health days. The resources include perinatal mental health certified (PMH-C) providers, as well as psychiatrists who self-certify as having expertise in maternal mental health and community based organizations who directly serve perinatal mental health.

Through the assessment detailed below, it was found that 70% of U.S. counties lack sufficient MMH resources for their perinatal populations, and nearly 700 U.S. counties have unacceptable MMH risk scores.

Risk Assessment

A Risk Factor Score (RFS) system was developed using over two dozen datasets demonstrated by clinical research to be associated with poor MMH, such as domestic violence, poverty, unintended pregnancy, and social isolation, with a point scale of up to 36. A tiered scoring system was developed to assign an RFS for each county in the U.S. The highest-risk counties listed below scored 33 or above on the RFS.

Table 1.0 Highest Risk Counties

U.S. Counties with the Highest Maternal Mental Health Risk

County	State	Risk Factor Score
Muskogee County	Oklahoma	36
Lauderdale County	Tennessee	35
Kusilvak Census Area	Alaska	34
Bradley County	Arkansas	34
Cibola County	New Mexico	34
Adair County	Oklahoma	34
Cherokee County	Oklahoma	34
Choctaw County	Oklahoma	34
Socorro County	New Mexico	33
McKinley County	New Mexico	33
Navajo County	Arizona	33
Jasper County	Texas	33
Carter County	Oklahoma	33
Lamar County	Texas	33
Tyler County	Texas	33
McCurtain County	Oklahoma	33
Garland County	Arkansas	33
Pushmataha County	Oklahoma	33
Seminole County	Oklahoma	33
Dyer County	Tennessee	33
Jackson County	Arkansas	33
Phillips County	Arkansas	33
Scott County	Mississippi	33
Lake County	Tennessee	33

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The highest RFS levels are in the Mississippi Delta region, the Gulf Coast, greater Appalachia, New Mexico, and Arizona; higher RFS are associated with rural regions, which tend to suffer from widespread socio-economic comorbidities. Over fifty percent of the perinatal population live in counties with an RFS of 15 or more.

Counties with the highest Risk Factor Scores tend to share certain thematic profiles. An acute risk level for most Tier I factors predominates, including rates of domestic violence, violent crime, unintended pregnancy, and child poverty, while the only redeeming Tier 1 factor among the most at-risk group indicates higher reported levels of available emotional support. And yet mothers in the most at-risk counties also tend to report a higher number of mentally unhealthy days.

Similarly, elevated Tier II Risk Factors are universal among the most at-risk group of counties; low educational attainment, households with single and/or unemployed parents, high teen birth rates, and relatively frequent delivery complications are present among most counties in the group. The most at-risk counties are furthermore likely to have large contingents of non-white and or Hispanic/Latino women of reproductive age. The final saving grace for mothers in the most at-risk counties is a tendency to report better coping ability, which is likely to be correlated with higher availability of emotional support.

Additionally, the geographic distribution of providers is at odds with the higher RFS levels in rural areas, as the greatest number of providers are in low RFS areas.

Resource Assessment

To determine the MMH resources of a given county, a Provider Shortage Gap (PSG) was calculated by estimating the number of additional Perinatal Mental Health providers, prescribers, and community based organizations, all weighted equally, that would be required to meet a county's MMH need. Our model estimates that one of the providers (listed above) is needed per 200 births, or 5.0 providers per 1,000 births. Postpartum Support International's lists of Perinatal Mental Health Certified (PMH-C) providers and reproductive psychiatrists/prescribers by zip code were used for this analysis. The PSG is presented as a simple number of providers a county needs to eliminate a provider shortage.

The top 10 lowest-resourced counties are listed below.

Table 2.0 Lowest Resource Counties

U.S. Counties with the Lowest Maternal Mental Health Resources

County	State	Providers	Required Providers	Gap
Los Angeles County	California	111	495	384
Harris County	Texas	29	314	285
Maricopa County	Arizona	60	243	183
Dallas County	Texas	20	179	159
Cook County	Illinois	120	277	157
Kings County	New York	20	175	155
San Diego County	California	50	188	138
Miami-Dade County	Florida	13	145	132
San Bernardino County	California	9	132	123
Riverside County	California	16	134	118

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The number of births in metro areas greatly exceeds those in rural counties, so much so that highly populated areas still have the greatest need for additional providers. California has the largest PSG even though it has a high number of providers and has prioritized MMH in recent years.

Counties with the Greatest Risk and Lowest Resources

The Policy Center did further analysis to determine the counties of highest risk and that are the lowest-resourced. These are the counties that fall into the MMH Dark Zone.

We define counties with the Greatest Risk and Lowest Resources as MMH Dark Zones.

Of the 3,143 counties in the U.S., 157 (representing a population of 6.2 million women ages 15-44) have an RFS of ≥25 and a PSG of three or more MMH providers (to serve 600 mothers). This group represents the 10% most at-risk and underserved portion of the perinatal population.

Table 3.0 Counties with the Greatest Risk and Lowest Resources (The MMH Dark Zone)

High Risk/Lowest Resource County List

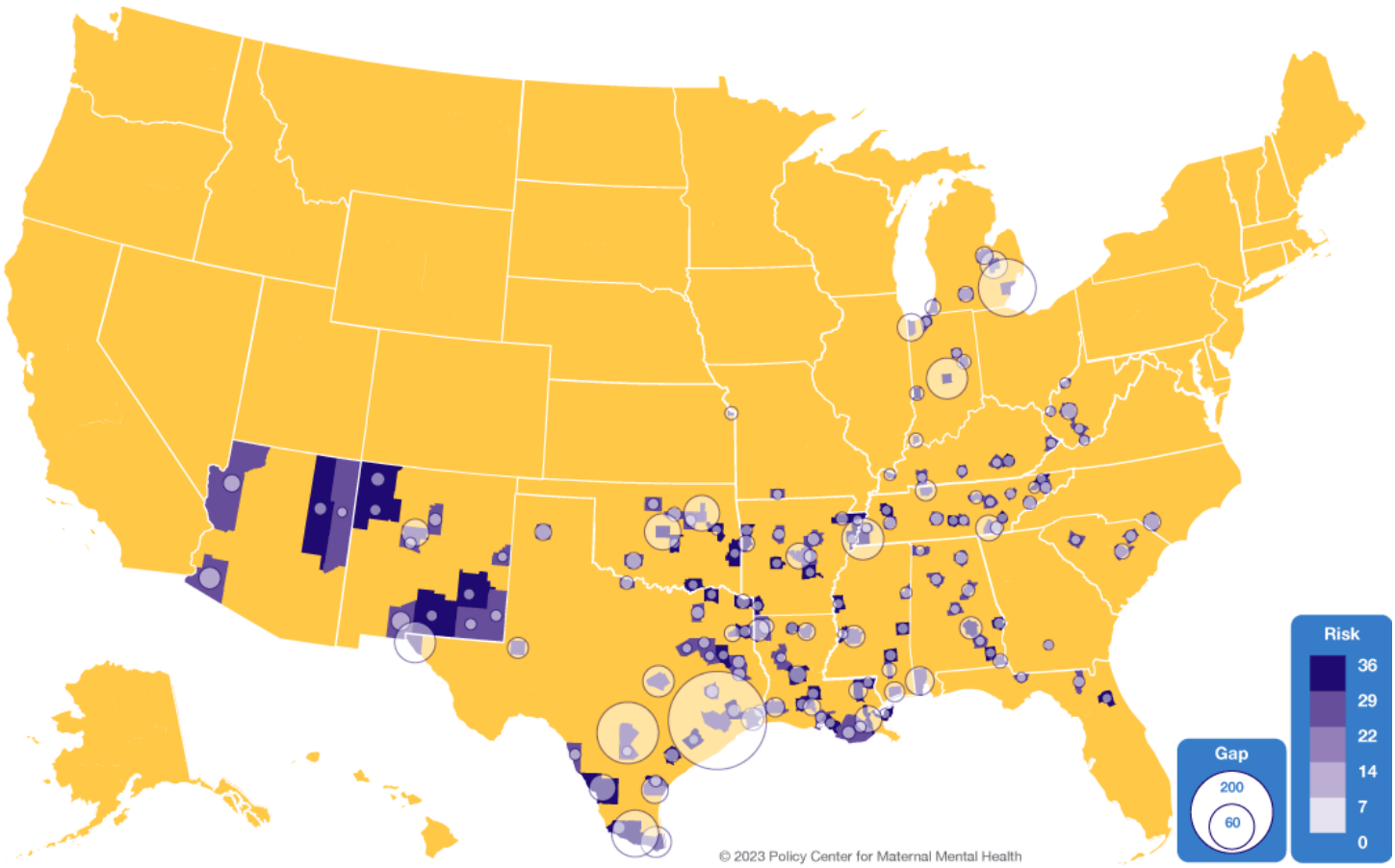
STABRV	STATE	COUNTY	RISK SCORE	RESOURCE GAP
AL	Alabama	Mobile County	28	24
AL	Alabama	Montgomery County	29	15
AL	Alabama	Houston County	27	6
AL	Alabama	Marshall County	25	5
AL	Alabama	Talladega County	28	5
AL	Alabama	Russell County	29	4
AL	Alabama	Walker County	25	4
AL	Alabama	Chilton County	26	3
AL	Alabama	Colbert County	26	3
AL	Alabama	Dale County	29	3
AL	Alabama	Pike County	28	3
AZ	Arizona	Apache County	28	3

[See the full list.]

Our findings indicate that Texas holds over 40% of the total Provider Shortage Gap in the MMH Dark Zone, with a staggering shortage of 741 providers. Moreover, approximately 43% of all mothers giving birth in Texas live in high-risk counties. **Michigan**, **Indiana**, **Tennessee**, **Louisiana**, **and Oklahoma** each have total state-wide Provider Shortage Gaps of nearly 100 or more, and at-risk mothers in each of these states are giving birth to over 25,000 babies yearly. Dark Zone counties in these 5 states account for a total Gap of 619 providers and an annual birth rate of over 145,000 among at-risk mothers.

Map 1 Highest Risk & Lowest Resource Counties

"Maternal Mental Health Dark Zones"



Although the MMH Dark zone threshold for provider shortages was set to three additional providers needed to meet the need, when the PSG is increased to 10, 32 counties in high-risk areas need more than 10 providers to meet the mental health needs of their perinatal populations.

Table 4.0 Counties with the Greatest Risk and PSG of 10 or more

High Risk U.S. Counties with 10+ MMH Providers Needed

County	State	Risk Factor Score	Providers Needed
Harris County	Texas	26	285
Bexar County	Texas	27	112
Wayne County	Michigan	28	98
Hidalgo County	Texas	30	65
Shelby County	Tennessee	32	52
Marion County	Indiana	29	50
El Paso County	Texas	26	50
Oklahoma County	Oklahoma	30	39
Tulsa County	Oklahoma	28	38
Bell County	Texas	25	29
Cameron County	Texas	30	28
Mobile County	Alabama	28	24
Lake County	Indiana	25	22
Genesee County	Michigan	29	22
Bernalillo County	New Mexico	25	22
Jefferson Parish	Louisiana	29	21
Nueces County	Texas	26	21
Webb County	Texas	30	21
Pulaski County	Arkansas	28	20
Hamilton County	Tennessee	25	20
Montgomery County	Alabama	29	15
Jefferson County	Texas	32	15
Yuma County	Arizona	27	14
Caddo Parish	Louisiana	28	14
Hinds County	Mississippi	28	14
Montgomery County	Tennessee	25	13
Ector County	Texas	26	13
Harrison County	Mississippi	27	12
Calcasieu Parish	Louisiana	26	11
Dona Ana County	New Mexico	27	11
Tangipahoa Parish	Louisiana	29	10

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High-risk regions are ripe for interventions to identify and bolster the MMH workforce and require multi-sectoral efforts (such as the formation of maternal mental health task forces). These strategies

are essential to address the persistent, systemic drivers of MMH disorders, including experiences of violence with domestic partners and within the community, poverty, unintended pregnancy, and social isolation.

Just as important are the small number of regions that provide a positive model, with relatively low Risk Factor Scores and low Provider Shortage Gaps, including Minnesota, the metropolitan Atlanta region, and the Northeast Corridor.

Regions with the lowest risk factor scores include the Northeast Corridor, the Upper Midwest, Minnesota in particular, and Southern California. These areas have relatively low RFS overall, exhibiting a resilience that spans the breadth of our base of indicators. While it certainly lends promise that MMH risk factors can be dampened if not eradicated under the right conditions, we find it troubling that lower-scoring areas tend to be associated with higher educational attainment as well as smaller proportions of non-white mothers. Surely, we cannot reduce the reality of suffering and the fate of mothers to matters of education and race.

The good news is that we have some key examples that provide a counterpoint to some of these geographic generalizations. Metropolitan Atlanta stands out, as does the "Research Triangle" of North Carolina. Both of these regions feature large proportions of women of color and lower levels of educational attainment among recently pregnant women. But we can also observe lower rates of domestic violence, violent crime, children in poverty, teen pregnancy, and, as a corollary, fewer reported mentally unhealthy days. As a result, Atlanta and North Carolina have RFS that are similar to the urban populations of the northeast. However, these regions remain afflicted by wide gaps in coverage that must be filled.

Recommendations

There is an urgent need for policymakers to design targeted interventions to expand MMH providers and programs in counties and regions with the greatest risk and lowest numbers of providers and community based organizations.

Below are recommendations from our policy roadmap that can address these gaps.

1. Form a Cross-Sector Commission to Study and Develop a State Strategic Plan

> Though there are some general barriers that apply across state lines, many challenges are state-specific. It takes leaders from state healthcare professional associations, government, insurers, hospitals, and mothers with lived experience to get to the root causes of poor outcomes in states. These Commissions or task forces can be formed at the urging of the governor, by the

state health and human services agency (or its delegated agency), by the legislature, or through HHS/public health directly. Model legislation, model agendas, and template reports are available through the Policy Center for Maternal Mental Health.

2. Propel Peer Support Specialists for Maternal Mental Health

All states now have a state-sanctioned certified peer support training, certification, and Medicaid reimbursement program. However, states that developed these programs years ago may only have addressed the use of peers for substance use disorders. In that case, programs should be expanded to address the provision of mental health services. States should recognize the value of peer support services (MH/SUD) for the maternal population and work to deploy them into clinical and community-based settings to immediately expand the behavioral health workforce and provide culturally competent and approachable services to mothers and expectant mothers in need.

3. Support Community Based Organizations

Through legislative and/or agency-based services, states can support existing nonprofit community-based organizations (CBOs) and the development of new CBOs by offering grant programs and training on how to become a billing provider, hiring/supervising certified peer support specialists, and billing for certified peer support services and community-based social service, for example.

4. Require Health Plan/Insurer Coverage of Group Maternity Care, Birth Doulas, Postpartum Doulas, and Home Health Nursing Care

Cover through Medicaid and require commercial insurers to cover group maternity care programs such as “Centering Pregnancy,” certified doulas offering support during pregnancy and labor and delivery, and certified doulas offering postpartum home care as well as home health nursing care. Birth doulas provide support to those who are pregnant through labor and delivery. They provide education about staying healthy and the birth process and serve as an interface between medical providers, as needed, particularly during labor and delivery. This coverage is particularly important for those who indicate they don’t have a partner or family member to support them through pregnancy and/or labor and delivery. Additionally, Medicaid and commercial plans/insurers should cover postpartum doula home visits. Postpartum doulas offer holistic care for the entire family during the postpartum transition, including support with infant sleep, breastfeeding, and more. Finally, coverage should be provided for home health nurses for any birth where there were infant or maternal medical complications, including a c-section. In addition to requiring coverage, these benefits should be explained to beneficiaries/covered members, such providers/services should be addressed in provider directories, and benefits should be explained in writing to contracted maternity care providers, including publishing the billing codes.

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Closing gaps in maternal mental health care.

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