WISCONSIN MATERNAL MORTALITY REVIEW:

Pregnancy-associated overdose deaths (2016-2019)

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Prevention Research Center
UNIVERSITY OF WISCONSIN–MADISON

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I. BACKGROUND AND PURPOSE

The Wisconsin Department of Health Services partnered with the University of Wisconsin-Madison Prevention Research Center to create this report that describes describes selected deaths during and after pregnancy due to overdose that were reviewed by the Wisconsin Maternal Mortality Review Team.

Maternal mortality and morbidity are critical indicators of maternal health and health care quality in Wisconsin. Every maternal death represents the loss of a woman's life and the impact on her family and community. Instances of severe maternal morbidity can be traumatizing for women and families, have lasting health consequences, and avoidable medical expenses.

Though maternal health in the United States has significantly improved during the past century, recent increases in pregnancy-related deaths and significant racial disparities in maternal health demonstrate the need for systematic improvements in the care of pregnant women and mothers.

One way to address maternal mortality is to conduct maternal mortality reviews. The Wisconsin Maternal Mortality Review Team (MMRT) was started in 1997 by the Wisconsin Division of Public Health and the Wisconsin Section of the American College of Obstetricians and Gynecologists. Before 1997, the Wisconsin Medical Society hosted a committee to review cases of maternal mortality. Currently, the MMRT is supported by a CDC Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) grant, the CDC Foundation Rapid Maternal Overdose Review (RMOR) grant, and the Title V Maternal and Child Health (MCH) Block Grant administered by the federal Health Resources and Services Administration.
Review to Action Wisconsin

The MMRT is composed of public health and health care experts who represent professional organizations involved in delivering health care to pregnant women in Wisconsin. The MMRT strives to include representation from multiple disciplines, including public health services, perinatal nursing, midwifery, dietetics, psychiatry, and obstetrics.

The purpose of the Wisconsin Maternal Mortality Review Team (MMRT) is to identify and review pregnancy-associated deaths, identify factors that contribute to these deaths, and propose recommendations that aim to prevent future deaths.

The mission is to increase awareness of the issues surrounding pregnancy-associated and related deaths and make recommendations to promote change among individuals, communities, and health care systems to eliminate preventable maternal deaths among Wisconsin residents.

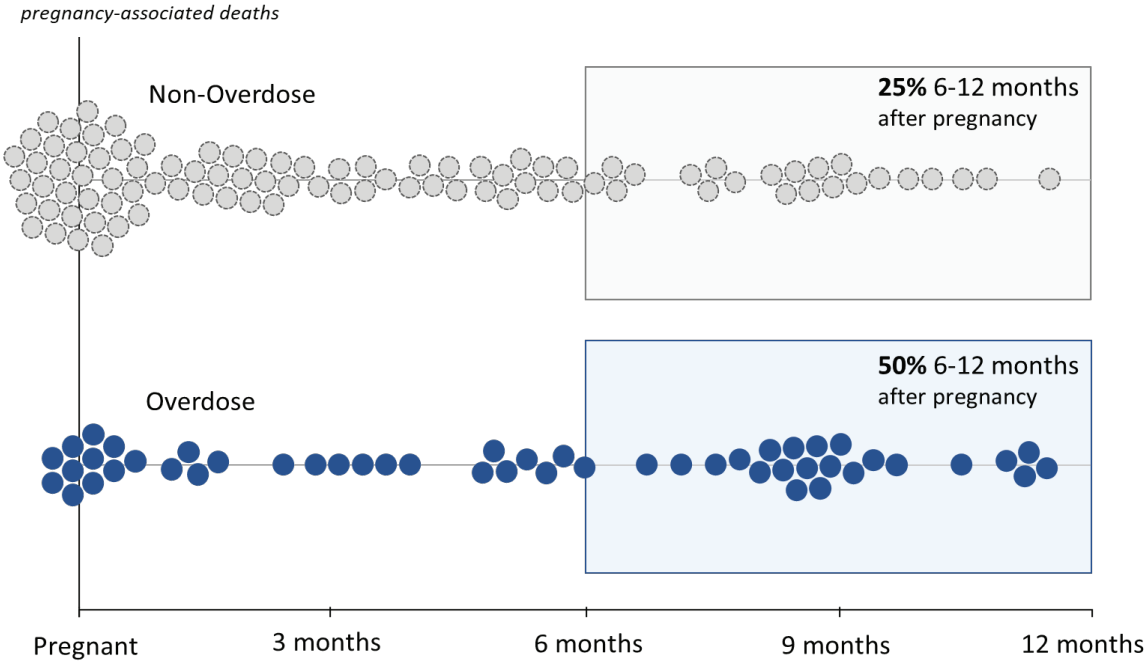
II. PREGNANCY-ASSOCIATED OVERDOSE DEATHS (2016-2019)

Definitions

- **Pregnancy-associated (PA):** a death during pregnancy or within one year of the end of pregnancy.
- **Pregnancy-related (PR):** a death during pregnancy or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy. All pregnancy-related deaths are also pregnacy-associated.
- **Pregnancy-associated overdose death (PA overdose death):** a death during pregnancy or within one year of the end of pregnancy documented as an overdose using one or more of the following methods: Poisoning/Overdose determined to be the means of fatal injury by the MMRT on the committee decisions form, an ICD-10 code indicating poisoning/overdose on the death certificate, or a literal cause of death that indicates poisoning-overdose on the death certificate.
- **Pregnancy-associated non-overdose death (PA non-overdose death):** a death during pregnancy or within one year of the end of pregnancy that was not caused by an overdose.

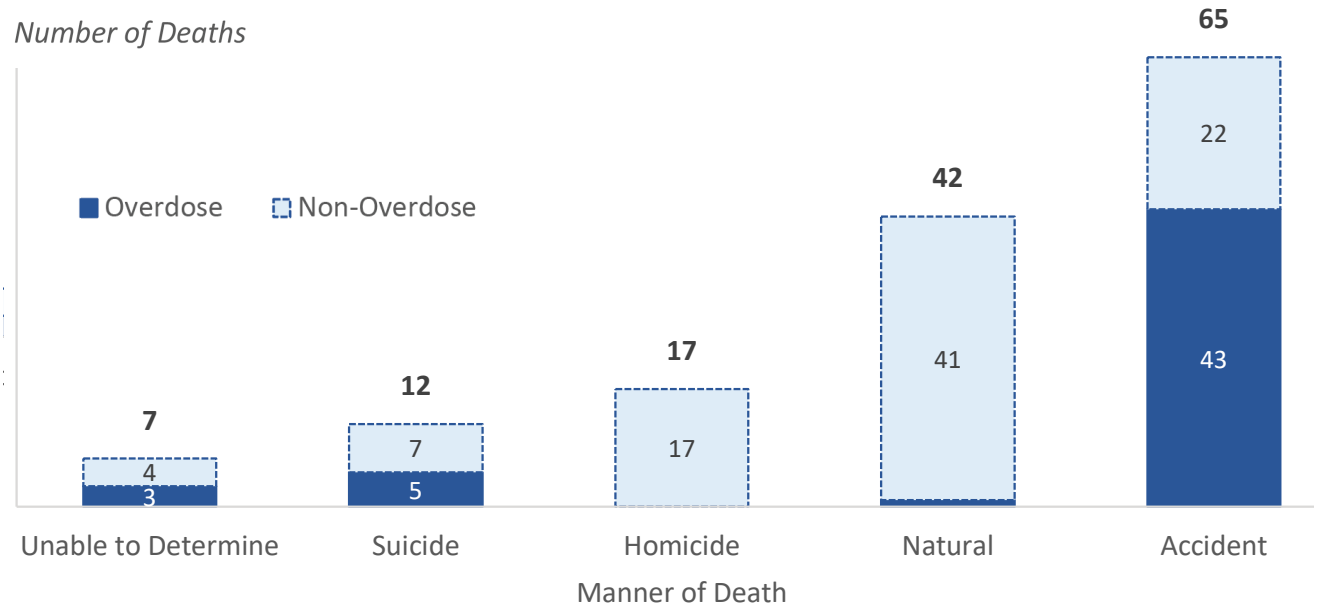
Pregnancy Timing

Half of all 2016-2019 pregnancy-associated overdose deaths occurred 6-12 months after pregnancy, compared to pregnancy-associated non-overdose deaths, where only 25% occurred during the same period.



Manner of Death

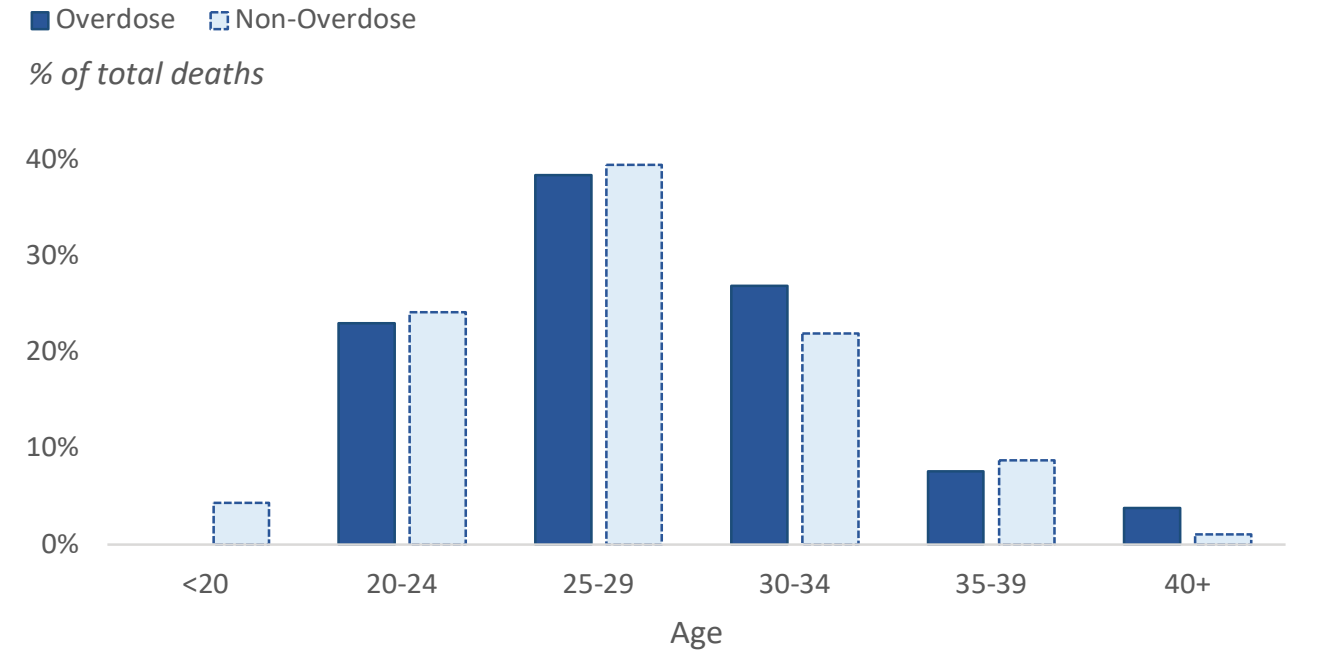
Most **pregnancy-associated overdose deaths** were accidents, while non-overdose deaths were most often natural* (2016-2019).



**Natural deaths are due solely or almost entirely to disease or the aging process. An overdose death can be counted as a natural death if the MMRT disagrees with the manor of death listed on the death certificate and identifies it as an overdose death.*

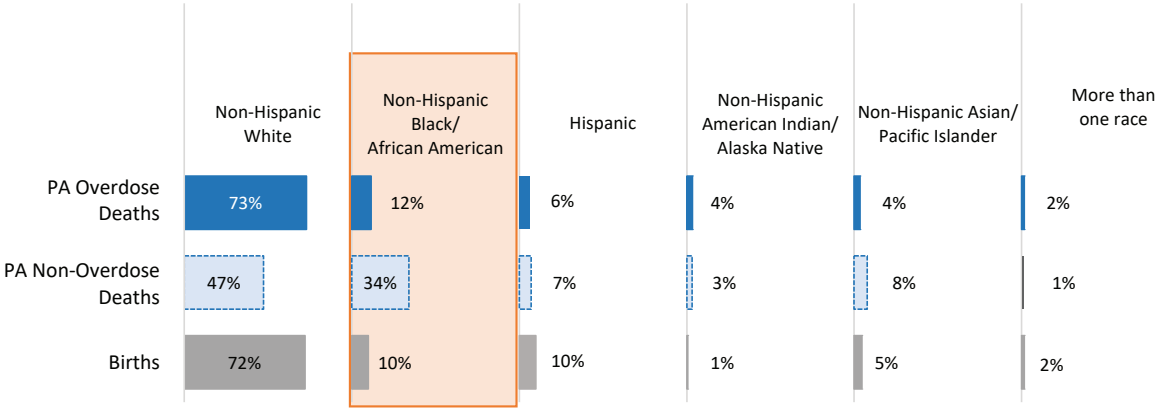
Age

Pregnancy-associated overdose deaths had a similar age distribution compared to pregnancy-associated non-overdose deaths (2016-2019).



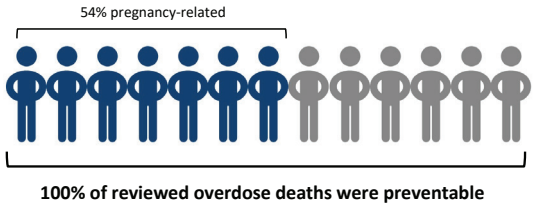
Race and Ethnicity

While all racial and ethnic groups generally make up the same proportion of pregnancy-associated overdose deaths as they do total births, **the Black population is overrepresented in pregnancy-associated deaths from all other causes**, making up only 10% of Wisconsin births but 34% of all other pregnancy-associated deaths (2016-2019).

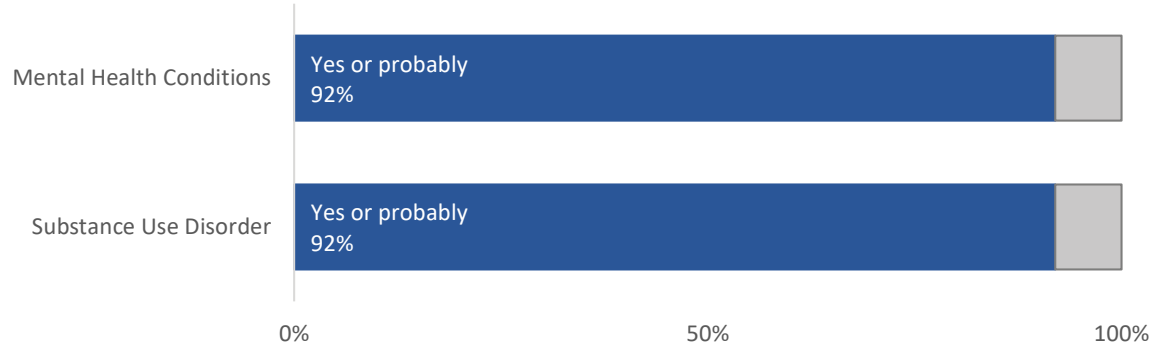


Reviewed Cases

- Of the 2016-2019 pregnancy-associated overdose deaths, 13 have been reviewed at the time of this report.
- For all pregnancy-related overdose deaths, the underlying cause of death selected most often was PMSS-MM* code 100.9 Other Psychiatric Condition (86%).**



Of the 13 reviewed overdose cases, just over half were determined to be **pregnancy-related** by the MMRT. Mental health conditions and substance use disorder contributed to **nearly every reviewed overdose death**. *Did mental health conditions or substance use disorder contribute to the death?*



Pregnancy Mortality Surveillance System

**The "Coding Underlying Cause of Death for Suicides and Overdoses" decision tree was introduced to the WI MMRT in 2020 and so might not have been used consistently throughout all 2016 reviews.*

III. MMR TEAM RECOMMENDATIONS

The MMRT reviews a summary of the clinical and social events leading up to the death. Based on this information, the team identifies the critical factors that contributed to the death. Based on the critical factors, the group makes recommendations that could have altered the outcome and will likely prevent future deaths. The recommendations are directed to individuals and families, providers, facilities, communities, and systems. We took a closer look at the critical factors and recommendations from a subset of cases that occurred in 2016-2017 and were reviewed by the MMRT.

The critical factors identified by the MMRT related to the overarching themes of access to care, bias and discrimination, policy, and support. The recommendations to address the critical factors target all levels. This report highlights a select few of the team's recommendations that were identified using a modified Rapid Qualitative Analysis (RQA) process.

Critical Factor: Support

Financial Support speaks to a lack of available housing and homelessness.
Recommendation: *"Health systems should **coordinate with community programs to financially support** pregnant and postpartum women with stable housing prior to discharge."*

Social Support refers to the individual and family history of trauma that can lead to social isolation and distrust of healthcare and other services. A lack of support surrounding traumatic events contributed to worsening mental health and substance use that preceded death.
Recommendation: *"Providers should **identify support opportunities for families** after a miscarriage, especially for those with pre-existing conditions such as mental health and substance use challenges."*

Educational Support relates to a lack of education and counseling for patients and their families. Providers lacked skill in assessing the patient's risk and, as a result, were often unaware of the patient's substance use.
Recommendation: *"Providers should **educate patients about the increased risk of overdose postpartum and when changing treatment** at the time of discharge or change of therapy."*

Care Coordination was missing in many cases that had obvious missed opportunities to intervene and change the outcome. The coordination of care was viewed as critical during times of transition between care facilities or when discharged to home.
Recommendation: *"Health systems should **provide wraparound care coordination services** for patient and **provide options to resume care** after leaving against medical advice."*

Critical Factor: Access

Access to Family Planning/Prenatal Care relates to missing or delayed care. It was noted that many women entered prenatal care late or not at all. In many instances it also appeared that family planning was not offered.
Recommendation: *"Providers and public health need to assure that **contraceptive options are made available to women who have a substance use disorder** and desire to prevent pregnancy."*

Access to Substance Use Resources and Treatment relates to services either not being available or providers not facilitating access. It also speaks to the variable practice of prescribing rescue medications to patients and families.
Recommendation: *"Treatment facilities caring for women should have **strong expertise or access to the appropriate expertise for treating women in the perinatal period** and through the first year **postpartum**."*

Access to Quality Care was viewed as missing when recommended screenings and follow-up were not completed. There were also instances when recommended prescribing practices were not followed.
Recommendation: *"Providers, pharmacists, public health, and community agencies should **educate the community on the use and availability of Narcan**."*

Access to Mental Health Services refers to the frequent instances of unmanaged mental health due to interruptions in medication or therapy.
Recommendation: *"Health systems should **fund and develop program specializing in perinatal patients** with substance use and mental health disorders."*

Critical Factor: Policy

Legal System/Requirements relates to the stress caused by the requirements for community service and groups sessions. The lack of child care and transportation were frequently noted to contributed to further punishment. There were also instances when mothers and their children were separated and this was viewed as a trigger for relapse.
Recommendation: *"Transportation and day care should be provided by the organization requiring mandatory community service or work."*

IV. COMMUNITY INPUT

Members of the University of Wisconsin–Madison Prevention Research Center's (UWPRC) Community Advisory Board (CAB) were asked to give input on the feasibility and actionability of the MMRT findings. The CAB members brought their expertise in community services and advocacy from a variety of organizations and geographic locations that could be utilized when implementing the recommendations from the MMRT. After looking at the MMRT findings the community partners offered a deeper understanding of the barriers that pregnant and postpartum women face. They also suggested what is needed to facilitate care and treatment in their communities.

Throughout the two meetings the CAB continuously emphasized the importance of trust and capacity building within communities to ensure that the MMRT's recommendations would be successful. There were calls that "people from the community with trust and care are needed to do the intervention work and should be compensated accordingly" and to "fund community capacity building, so that leaders can emerge and bring community wisdom and lived experience to the table". Working within communities and maintaining trusting relationships throughout any interventions were considered key for pregnant and postpartum people to willingly participate in substance use recovery, according to the discussions with the CAB.

Care coordination, including warm handoffs and continued follow-up, was another priority that came out of the CAB discussions. According to CAB input, many of the MMRT findings "imply a single person or entity is keeping track of the next steps in a referral process". This feedback emphasizes that navigators would be important when implementing many of the recommendations even if a navigator is not explicitly written in the recommendation. A navigator is another opportunity to prevent women from getting lost in the system. We need stronger navigation between systems and coordination for the pregnant person instead of requiring the individual to self-navigate. Additionally, care coordination can alleviate some of the uncertainty about who is the responsible party for some of the MMRT findings. "Providers" is a vague term for actionable recommendations and needs to be more specific and based on who has capacity and funding to follow through with the recommendation. Increased specificity of the responsible party when recommendations are disseminated.

The CAB also brought attention to the role of corrections plays throughout the entire process and many of the MMRT recommendations. Care coordination and navigation should include the justice system to spread the ownership of recommendations across the community. The discussions recognized the potential positive role courts can play in helping individuals find treatment, so the CAB felt it was important that the justice system is an organic partner while determining recommendations. In addition, the gatekeeping of what substances are acceptable in society is an entrance to the corrections and justice system. There was a focus of the CAB discussion on a restorative justice approach to prevent this gatekeeping and improve outcomes.

Bias showed up in some of the discussions with the CAB. It highlighted the underlying perception that an individual has control of addiction without recognizing addiction as a physiological illness. There is a fundamental belief that people with substance use disorders are making conscious

decisions to choose substances. The dichotomy of wanting to support the birthing person's right to have a baby and at the same time holding them accountable persisted throughout the discussions. If this bias was present during targeted discussions with the CAB, it should be considered when the MMRT recommendations are disseminated to any wider audience. Bias training could be needed across all programs and services that result from the MMRT recommendations.

Trust

Trust was a theme during the community partner sessions that included discussions about the importance of shared decision-making, communication across organizations, and valuing providers with lived experience. Building and maintaining trust was identified as a crucial to successful implementation of the MMRT recommendations.
Feedback: *"Trust is established when the individual senses there is communication between agencies on their behalf."*

Community Capacity

Valuing the community capacity to do work, such as innovative models, non-healthcare settings for services, combining housing and care, and the understanding that contextual issues require community approaches.
Feedback: *"People from a community with trust and care are needed to do the intervention work and should be compensated accordingly."*

Care Coordination

Care coordination was also noted by the community partners in addition to the MMRT. Discussions about missed opportunities, shared services, and the need to require medication-assisted treatment with therapeutic programs were highlighted.
Quote: *"The incarcerated facility needs to have a process for pregnant people. There needs to be better coordination. It seems very baby focused; the mother's health is secondary." — Community Partner #3*

Navigation

The difficulties of navigating healthcare and other systems was a theme of discussion during the community partner sessions. Partners noted that successful implementation of the MMRT recommendations would be more likely with community-based navigators and a centralized intake system that reduces the number of entry points.
Feedback: *We need stronger navigation between systems, coordination for the pregnant person instead of requiring the individual to self-navigate.*

Justice System

There were suggestions from community partners to involve justice and corrections as a positive force from the beginning of the process. Additionally, statewide policy changes and treating addiction like a disease to promote healing in the justice system were suggested to improve outcomes.
Quote: *"Corrections has a role to play with this issue and should be an organic partner from the start." — Community Partner*

Bias

Bias showed up in some of the comments and suggestions from the community partners. Recommendations should consider that everyone has bias as well as consider the gatekeeper role for many of the responsible parties identified in the recommendations.

Quote: *"Lack of anonymity and changing cultural factors in rural areas may be challenges to implementing recommendations in rural areas." — Community Partner*

Support

Community partners identified opportunities to support pregnant and postpartum people with substance use disorders including housing, childcare, healthcare services beyond the perinatal period, and safe transitions.

Feedback: *We need policies and funds to cover a range of supports that add to the stress someone may be experiencing.*

V. WHAT IS NEXT FOR THE MMR PROGRAM

Reflecting on the process and bias

The Maternal Mortality Review Team will use the results of this analysis and the community partner input to focus on some key opportunities to improve the reviews. The team will consider ways to address the following concerns: 1) maintaining objectivity during the reviews; 2) making recommendations that explicitly include who, when, where, and how; 3) expanding the team to include law enforcement and child protective service providers; and 4) conducting family interviews to expand the understanding of circumstances surrounding these deaths.

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For more information, visit dhs.wisconsin.gov/mch/maternal-mortality-and-morbidity.htm.

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