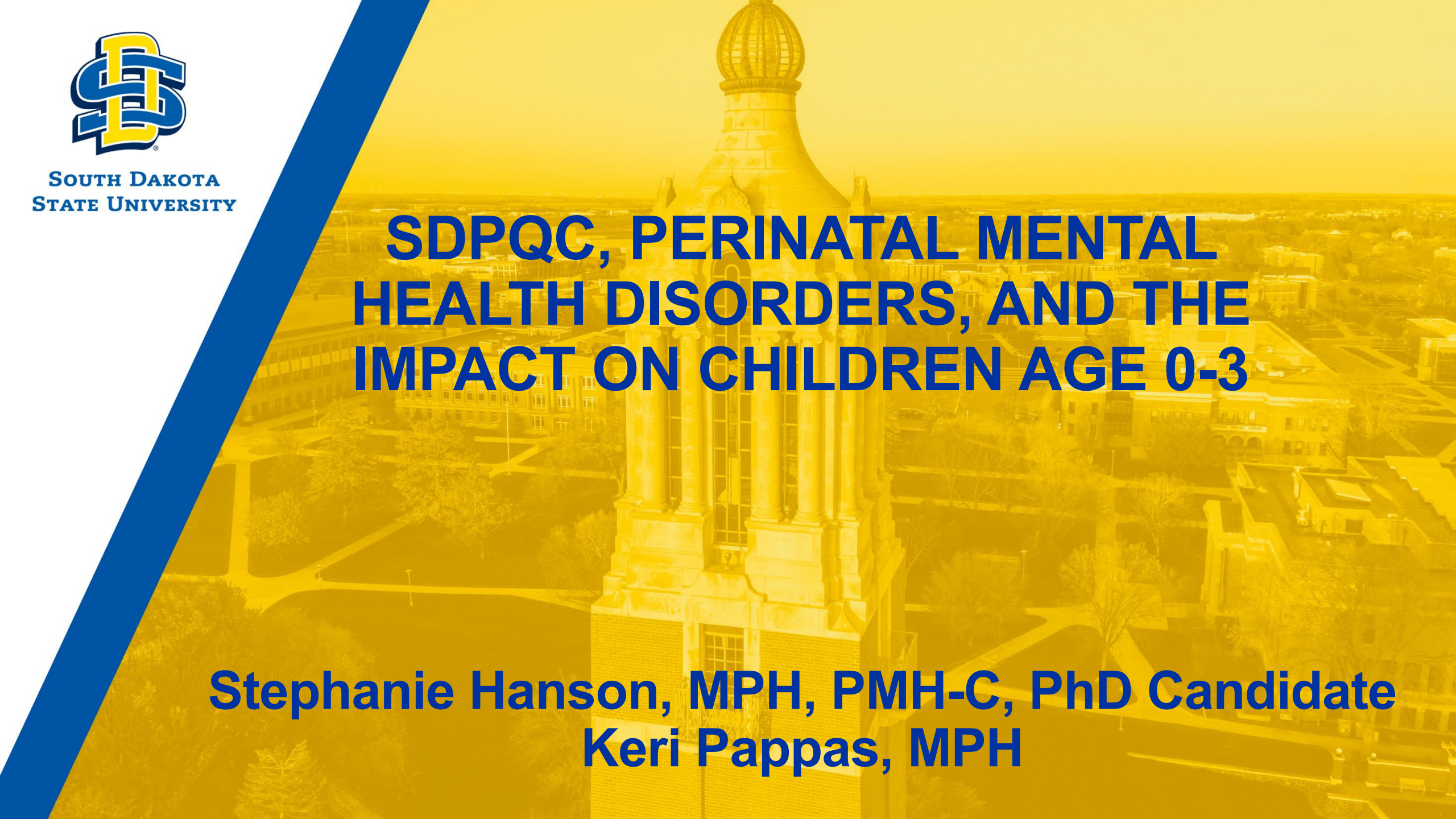


South Dakota State University

SDPQC, PERINATAL MENTAL HEALTH DISORDERS, AND THE IMPACT ON CHILDREN AGE 0-3

Stephanie Hanson, MPH, PMH-C, PhD Candidate
Keri Pappas, MPH

LEARNING OBJECTIVES

- Discuss risk factors and clinical presentation of perinatal mental health disorders
- Describe the purpose and contents of the AIM Perinatal Mental Health Conditions bundle
- Explain the importance of addressing perinatal mental health conditions in relation to short- and long-term effects on mother and infant/child health

BIRTH-SD

DISCLOSURES

The BIRTH-SD-AIM project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $800,000 with 0% financed with non-governmental sources. The contents of this presentation are those of the authors and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information please visit HRSA.gov.

Award Number: 1A30MC50003-01-00

DISCLAIMER

- Throughout the presentation today, we will use the word “mother” to describe the individuals who give birth. We recognize that not all birthing people identify as “mothers” and that this term is not inclusive in nature. However, we want to ensure that we are best representing the research we are presenting and the research we are presenting using the term “mother”.
- Perinatal mental health conditions impact more individuals than those who identify as “mothers” and that should be considered when we discuss the impacts of these conditions

WHERE ARE WE SPEAKING TO YOU FROM TODAY?

South Dakota State University

BIRTH-SD-AIM

Stands for: Bridging Information and Resources to Transform Health for South Dakota parents – Assessing need and Implementing Maternal health safety bundles

Implementing patient safety bundles from the Alliance for Innovation on Maternal health (AIM)

Funding period is September 2023 – August 2027

Focused on two bundles: Substance Use Disorder (September 2023 – March 2025) and Perinatal Mental Health (May 2025 – August 2027)

SDPQC

NNPQC
National Network of Perinatal Quality Collaboratives

NICHQ National Institute for Children's Health Quality

Stands for: South Dakota Perinatal Quality Collaborative

Formally established in August 2024 → Every state in the nation now has an independent PQC

PQCs do different work in each state but all of them focus on improving maternal and child health through quality improvement work

BIRTH-SD-AIM work operates under this umbrella, but the PQC will ideally expand beyond the AIM bundle implementation projects

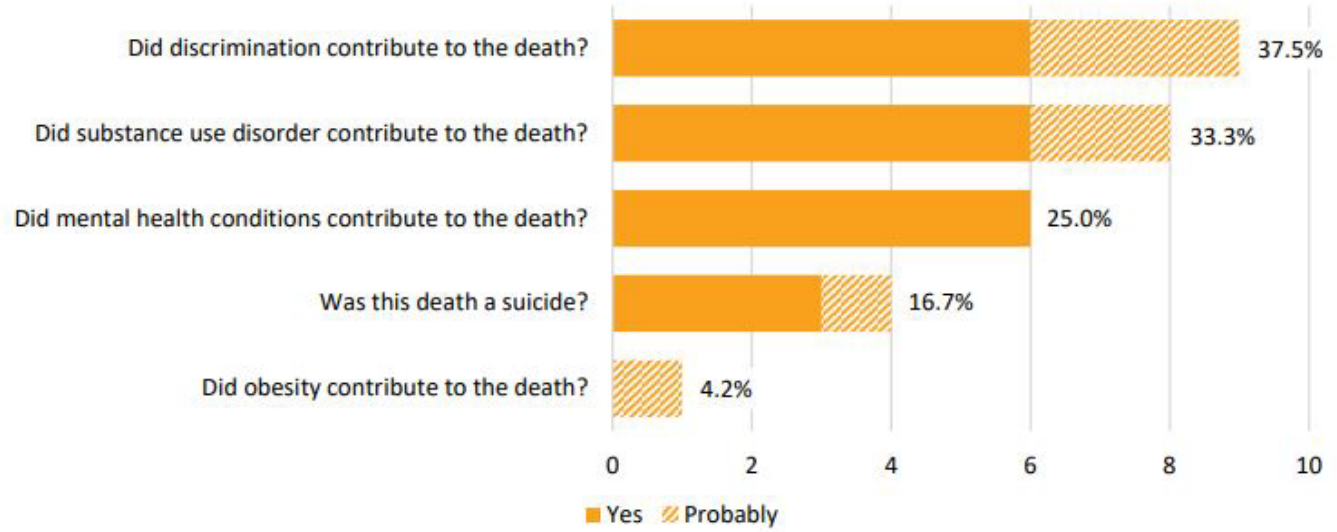
SOUTH DAKOTA

When you look at factors that contribute to maternal mortality in SD, mental health and related conditions play a significant role

out of 52 (March of Dimes, 202

Pregnancy-associated and Infant deaths in South Dakota: 2012-2021

Selected committee determinations on circumstances surrounding pregnancy-associated deaths.



Source: Maternal Mortality Review Information Application.

BIRTH-SD-AIM → SDPQC → SOUTH DAKOTA

BIRTH-SD-AIM is a federally funded grant program operating out of SDSU which is funded to implement patient safety bundles (quality improvement projects) from the Alliance for Innovation on Maternal health

South Dakota Perinatal Quality Collaborative was founded in August 2024 and is committed to improving maternal outcomes in SD through the use of quality improvement projects

South Dakota consistently ranks among the states with the worst infant and maternal mortality in the US. We know mothers and children are regularly dying in our state

WHAT IS A PERINATAL MENTAL HEALTH DISORDER?

PERINATAL MENTAL HEALTH DISORDERS

- Perinatal Mental Health Disorders (PMHDs) or Perinatal Mental Health Conditions (PMHCs) refer to a set of mental health conditions which impact individuals throughout the perinatal period
- These conditions include: perinatal depression, perinatal anxiety, perinatal OCD, perinatal PTSD, perinatal bipolar mood disorders, and postpartum psychosis
- PMHDs are the number one complication of childbirth
- PMHDs contribute significantly to maternal morbidity and mortality but continue to remain underdiagnosed and are often untreated or undertreated

PERINATAL MENTAL HEALTH DISORDER MISCONCEPTIONS

- The baby blues are NOT the same thing as perinatal or postpartum depression
- PMHDs can begin during pregnancy or in the postpartum period → these are not exclusive to postpartum
- PMHDs impact fathers/the non-birthing partner as well
- Medication management can be part of treatment for PMHDs regardless of when diagnosis takes place, if breastfeeding is occurring, or if SUD is involved

PMHD PRESENTATIONS

Slides will be made available following the presentation and for the sake of time today, we will not read everything from each slide

DEPRESSION DURING PREGNANCY & POSTPARTUM

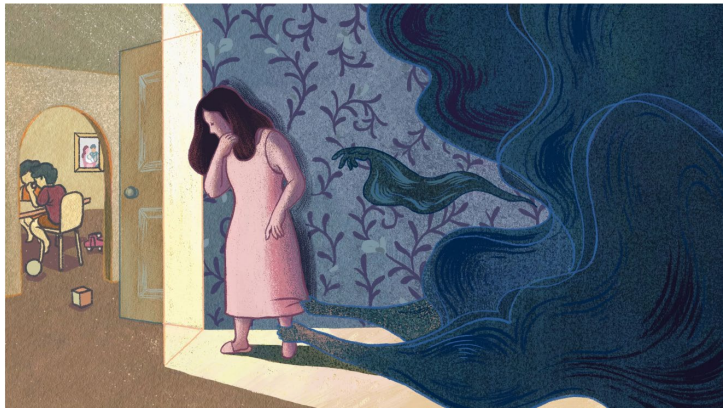
Symptoms	Prevalence
Symptoms can start any time during pregnancy and postpartum 5 or more symptoms need to be present during the same two week period: • **Depressed mood most of the day, nearly every day** • **Loss of interest, joy, or pleasure** • Significant weight change or appetite disturbance • Sleep disturbances • Psychomotor agitation or retardation • Fatigue or loss of energy • **Poor concentration, focus, indecisiveness** • Feelings of worthlessness • **Excessive or inappropriate guilt** • Recurrent thoughts of death, recurrent suicidal ideation	• Approximately 20% of women experience significant depression following childbirth • 1 in 10 men • Women who live in poverty experience higher rates • Rates for teen parents can be twice as high

ANXIETY DURING PREGNANCY AND POSTPARTUM

Symptoms	Prevalence
Must have 3 or more symptoms: • **Excessive anxiety and worry (often about one's health or baby's health)** • **Intrusive thoughts** • **Difficulty controlling one's worry** • **Agitation, irritability, this can escalate to rage** • Typically a trigger to the thought spiral • Restlessness, inability to sit still, feeling on edge • Poor concentration or mind going blank • Sleep disturbance • Increased somatic symptoms (muscle tension, palpitations, racing heartbeat, shortness of breath, GI distress)	• Between 11% - 21% of people assigned female at birth will experience (Cleveland Clinic, 2022) • 4.1% - 16.0% of dads experience anxiety during the prenatal period • 2.4% - 18.0% of dads experience anxiety during the postnatal period

PREGNANCY OR POSTPARTUM OBSESSIVE-COMPULSIVE DISORDER (OCD)

Symptoms	Prevalence
Most misunderstood and misdiagnosed of the perinatal disorders! • **Intrusive, repetitive thoughts – usually of harm coming to the baby** • Caught in a spiral of "what if" thinking • Tremendous guilt and shame • Horrified by these thoughts • **Hypervigilance** • **Mothers engage in repetitive behaviors to avoid harm or minimize triggers**	• 3-5% of women experience OCD symptoms • 65% of women with OCD have comorbid depression • 80% of new mothers, even those without PPOCD, will experience harm related thoughts towards their newborn child shortly after birth (CalOCD, n.d.) • **These images are anxious in nature, not delusional, and have a very low risk of being acted upon**



PERINATAL POST-TRAUMATIC STRESS DISORDER

Symptoms	Prevalence
Occurs after traumatic event or stressor. Symptoms need to last for more than one month after the event for diagnosis and are split into four categories: • **Criterion B – Intrusion:** flashbacks, nightmares, somatic complaints, distressing memories, physical reactivity • **Criterion C – Avoidance:** constricted emotions, social withdrawal, denial, apathy, avoidance, emotional numbing • **Criterion D – Negativity in Cognitions and Mood:** guilt, depression, irritability, hopelessness, negative thoughts, persistence and distorted sense of blame of self or others, diminished interest in activities • **Criterion E – Arousal:** sleep disturbance, poor concentration, aggression, hypervigilance	• 30% of women suffer some symptoms of PTSD after childbirth (Postpartum Depression, n.d.) • Postpartum PTSD occurs at 4% within community samples (typical populations) • Postpartum PTSD occurs at 18.5% in high-risk groups

BIPOLAR MOOD DISORDERS

Symptoms	Prevalence
Bipolar 1 Mood Disorders – manic/depressive • Periods of severely depressed mood and irritability • Rapid speech • Little need for sleep • Racing thoughts, trouble concentrating • Continuous high energy • Delusions • Impulsiveness, poor judgment, grandiose thoughts	• Bipolar mood disorders are incredibly hard to diagnose • There is no known prevalence rate of bipolar mood disorder on its own • 22.6% of women who screened positive for postpartum depression had a bipolar disorder (Wisner et al., 2013)
Bipolar 2 Mood Disorders – manic phase less obvious • Periods of severe depression • Rapid speech • Little need for sleep • Racing thoughts, trouble concentrating • Anxiety, irritability, and continuous high energy	

POSTPARTUM PSYCHOSIS

Symptoms	Prevalence
• Onset is often sudden, most commonly within the first two weeks postpartum, but can appear any time in the first year • Cognitive symptoms: poor concentration, impaired sensorium, disorientation • Behavioral symptoms: agitated, hyperactive, emotionally distant • Mood symptoms: elated, labile, dysphoric or less often depressed • Speech symptoms: rambling • **Thought content symptoms: thought broadcasting, thoughts of reference, thoughts of being controlled** • **Thought process symptoms: disorganized thinking, flight of ideas** • **Perception symptoms: hallucinations, commanding auditory**	Approximately 1-2 out of every 1,000 deliveries (Postpartum Support International) Of those women, we know the following: • 5% die by suicide and 4.5% commit infanticide • 50% of first-time mothers who experience psychosis had no previous psychiatric hospitalization • Onset usually within first two weeks after birth

RISK FACTORS FOR PMHDS

Risk factors for perinatal mental health disorders vary greatly and include a wide range of factors

Family history	Major recent life event	Inadequate support	History of abuse	Past mental health condition
NICU	Perinatal complications	Financial challenges	Traumatic birth experience	Lack of sleep
Unplanned pregnancy	Thyroid imbalance	Fertility challenges	Substance use	Previous psychotic episode

WHAT IS THE AIM PMHC BUNDLE?

WHAT IS A PATIENT SAFETY BUNDLE?

“Patient Safety Bundles are a structured way of improving the processes of care and patient outcomes. The goal of PSBs is to improve the way care is provided to improve outcomes. A bundle includes actionable steps that can be adapted to a variety of facilities and resources levels”

WHAT IS IN THE PMHC BUNDLE?

Patient Safety Bundle Documents

Patient Safety Bundle

Element Implementation Details

Implementation Resources

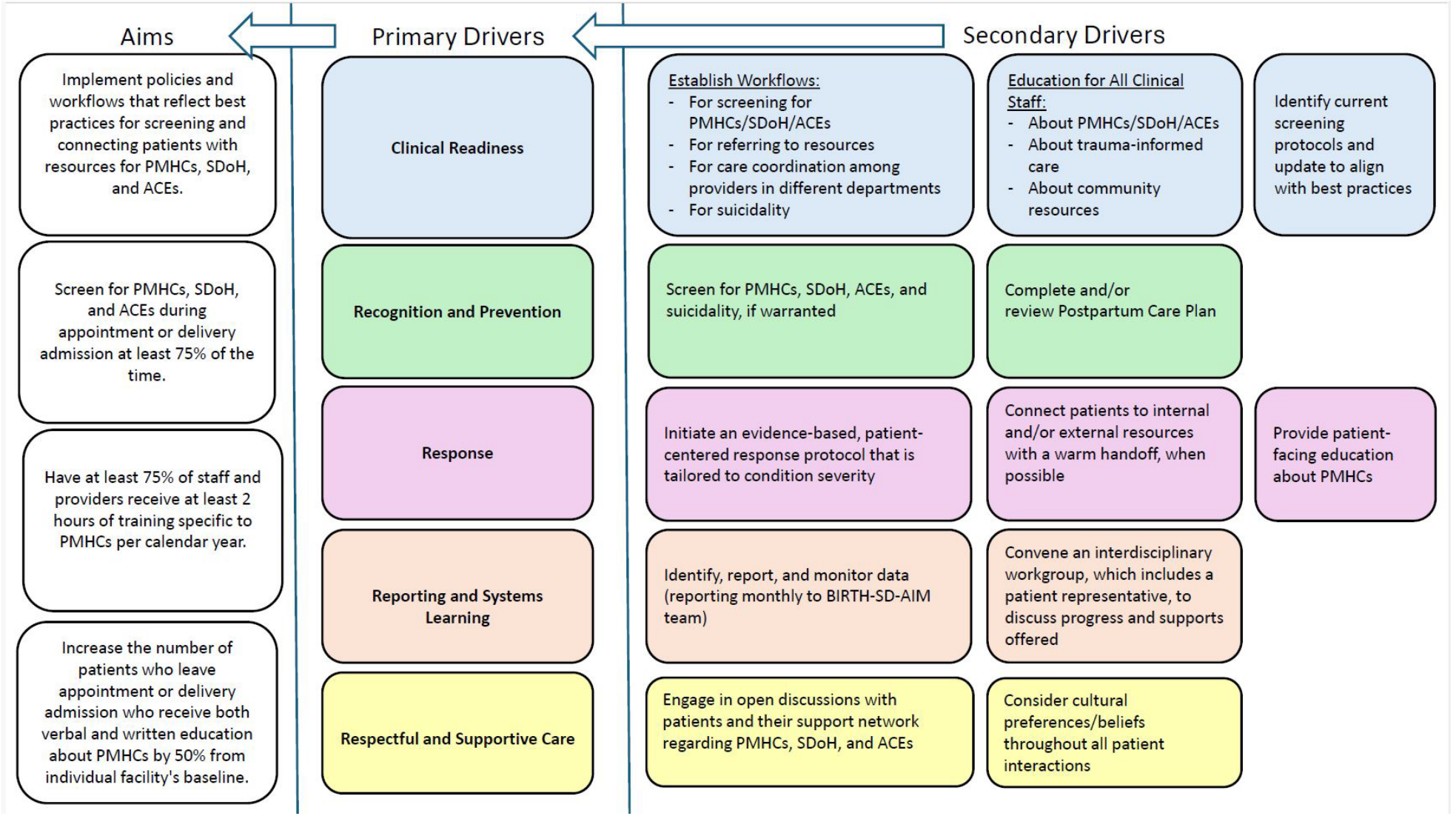
Data Collection Plan

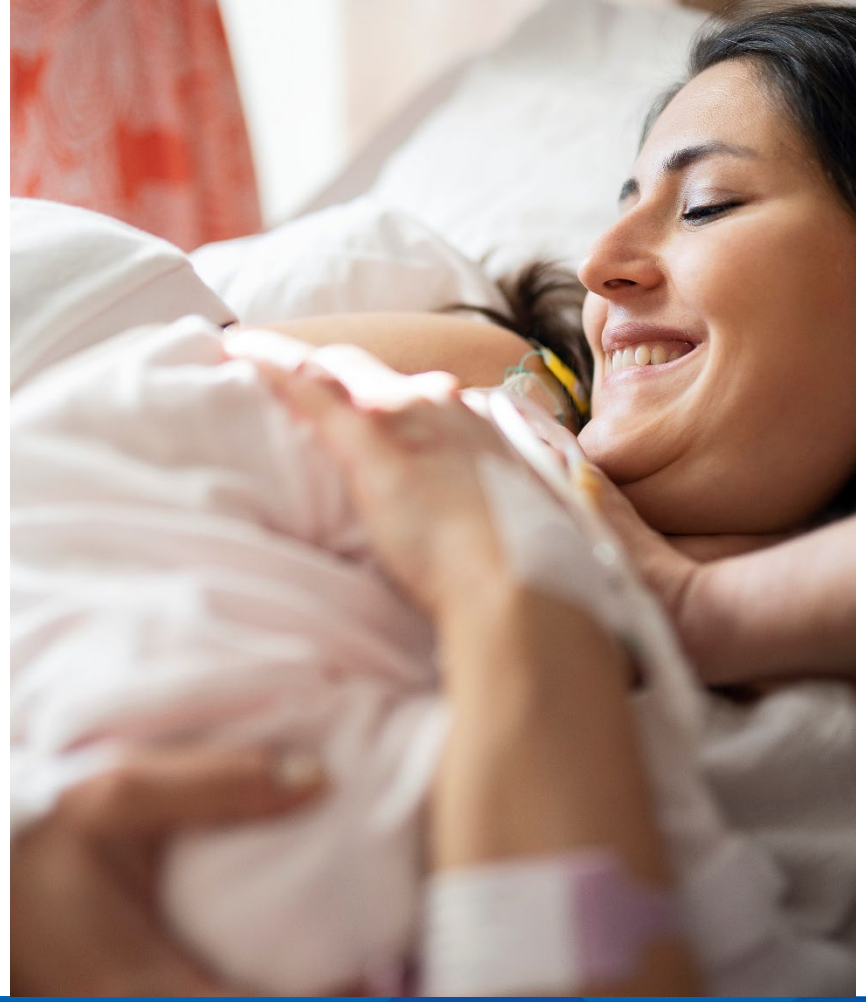
Change Package

Learning Modules

WHAT IS BIRTH-SD-AIM DOING WITH THIS PROJECT?

- Modifying the bundle more specifically to the needs of SD and the goals of stakeholders here
- Providing core documents to facility teams
- Providing quality improvement coaching to help facilities select goals
- Providing educational opportunities
- Will be providing data support to help facilities track progress towards selected goals and outcomes


Aims
Primary Drivers
Secondary Drivers
Implement policies and workflows that reflect best practices for screening and connecting patients with resources for PMHCs, SDoH, and ACEs.
Clinical Readiness
Establish Workflows:
- For screening for PMHCs/SDoH/ACEs
- For referring to resources
- For care coordination among providers in different departments
- For suicidality
Education for All Clinical Staff:
- About PMHCs/SDoH/ACEs
- About trauma-informed care
- About community resources
Identify current screening protocols and update to align with best practices
Screen for PMHCs, SDoH, and ACEs during appointment or delivery admission at least 75% of the time.
Recognition and Prevention
Screen for PMHCs, SDoH, ACEs, and suicidality, if warranted
Complete and/or review Postpartum Care Plan
Have at least 75% of staff and providers receive at least 2 hours of training specific to PMHCs per calendar year.
Response
Initiate an evidence-based, patient-centered response protocol that is tailored to condition severity
Connect patients to internal and/or external resources with a warm handoff, when possible
Provide patient-facing education about PMHCs
Reporting and Systems Learning
Identify, report, and monitor data (reporting monthly to BIRTH-SD-AIM team)
Convene an interdisciplinary workgroup, which includes a patient representative, to discuss progress and supports offered
Increase the number of patients who leave appointment or delivery admission who receive both verbal and written education about PMHCs by 50% from individual facility's baseline.
Respectful and Supportive Care
Engage in open discussions with patients and their support network regarding PMHCs, SDoH, and ACEs
Consider cultural preferences/beliefs throughout all patient interactions


HOW DOES THIS RELATE TO MATERNAL AND CHILD HEALTH?

PERINATAL MENTAL HEALTH IMPACTS ON CHILDREN AND MOTHERS

The impacts of PMHCs on children and mothers depend heavily on which condition(s) are present, social determinants of health, past mental health history, and several other factors

Some of the most common and widely accepted impacts are as follows:

IMPACTS ON CHILDREN – EMOTIONAL DIFFICULTIES

- Longitudinal studies have linked postpartum depression to emotional regulation issues and long term risk of the child being diagnosed with depression in adolescence (Stein et al., 2014)
- Postpartum PTSD has been significantly linked with poor child social-emotional development at the age of 2 (Garthus-Niegel et al., 2016)
- Perinatal anxiety has been linked to emotional problems for boys and girls in early childhood and have been linked to more persistent emotional concerns for boys into middle childhood (Rees et al., 2018)

IMPACTS ON CHILDREN – BEHAVIORAL DIFFICULTIES

- Infants may be more irritable, less active, be less attentive, and have fewer facial expressions (Muzik and Borovska, 2010)
- Several studies have linked postpartum depression to persistent attention deficit hyperactivity disorder (Stein et al., 2014)

IMPACTS ON CHILDREN – HIGHER ACE SCORE

- The American Academy of Pediatrics classifies an untreated PMHC is an adverse childhood experience in itself (American Academy of Pediatrics, 2022)

IMPACTS ON CHILDREN – PHYSICAL GROWTH AND DEVELOPMENT

- Potential increase for pre-term delivery and/or low birth weight (Muzik and Borovska, 2010)
- Brain may be physiologically different and infants may show elevated cortisol levels, decreased levels of dopamine and serotonin, etc. (Muzik and Borovska, 2010)
- Physical safety for infants is at risk in cases of postpartum psychosis (Cleveland Clinic, 2022)

IMPACTS ON CHILDREN AND MOTHERS - ATTACHMENT

- Antenatal depression (depression occurring while pregnant) is associated with disorganized attachment while postpartum depression is associated with an increased risk of insecure mother-infant attachment (Stein et al., 2014)
- Relationship may be impaired and lead to maternal social withdrawal which has long-term developmental implications for children (Muzik and Borovska, 2010)
- Perinatal OCD may significantly impact attachment and bonding between mother and infant. Mothers may become avoidant of infants or in other cases may not be able to be away from their child at all (Hudepohl and Howard, 2014)

IMPACTS ON MOTHERS - ECONOMIC

- It is estimated that untreated PMHCs cost the U.S. $14.2 billion based on births that occurred in 2017 and following mother/child dyad through 5 years postpartum (Luca et al., 2019)
- Costs are associated with:
  - Decreased maternal productivity
  - Greater use of public sector services, including welfare and Medicaid
  - Higher health care costs due to worse maternal and child health

IMPACTS ON MOTHERS

- Physical Health Concerns
  - Postpartum psychosis is an immediate medical emergency
  - Impacts sleep
  - Increased risk of cardiometabolic disorders (Krewson, 2024)
  - Impacts provision of prenatal care and postpartum care (MMHLA, 2024)
  - More likely to experience physical, emotional, or sexual abuse (MMHLA, 2024)
- Mental Health Concerns
  - Suicide rates increase (Howard and Khalifeh, 2020)
  - Substance use disorder rates often decrease during pregnancy and then increase following birth of child (Recover Research Institute, 2025)
  - Can lead to mothers questioning their competences as mothers (MMHLA, 2024)
  - Untreated or undertreated PMHC symptoms can persist and contribute to lifelong mental health concerns
- Ultimately, the cumulation of all factors contributes significantly to preventable maternal morbidity and mortality

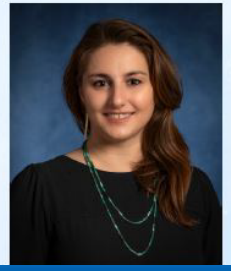
Introduction to Perinatal Mental Health Conditions and Screening - Part II

BIRTH-SD

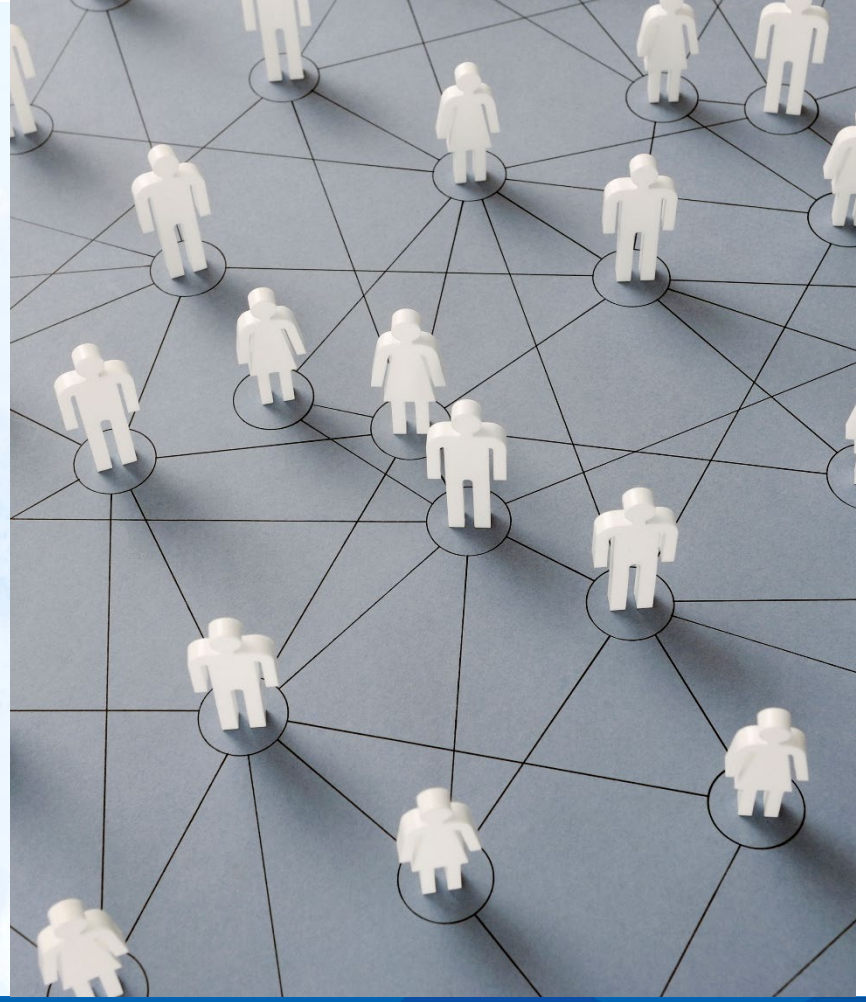
Please plan to join the BIRTH-SD-AIM team for the continuation of an exciting educational opportunity about perinatal mental health conditions presented by Dr. Lindsay Standeven!

This presentation will include an overview of the remaining PMHCs not previously covered in June 2025 as well as discuss screening recommendations.

Date: Wednesday August 27, 2025
Time: 12 PM - 1 PM CT
Where: Zoom
Registration Link: QR code to the right or https://sdstate.zoom.us/meeting/register/mvo7kqldQKC_kC8gBZB9OQ
Questions: If you have any questions please reach out to Keri.Pappas@sdstate.edu or Stephanie.Hanson@sdstate.edu



Dr. Lindsay R. Standeven is a Visiting Clinical Associate Professor of Psychiatry at the University of Colorado School of Medicine, Adjunct Faculty at Johns Hopkins, and co-founder of the Baltimore-based practice, The Reproductive Psychiatry Collaborative Inc. She completed her residency and a fellowship in reproductive psychiatry at Johns Hopkins, where she later directed clinical and educational programs in reproductive mental health. Dr. Standeven is committed to advancing women's mental health education and co-developed a national training program for psychiatrists. She has received NIH funding to explore the role of neurosteroids in the psychiatric symptoms among women with Polycystic Ovary Syndrome. Clinically, she specializes in mood changes related to pregnancy, postpartum, infertility, reproductive



THE CLIMB

WHAT CAN YOU DO TO BE FURTHER ENGAGED?

RECOGNIZING PERINATAL MENTAL HEALTH AS A CRITICAL PART OF CHILDHOOD HEALTH AND DEVELOPMENT

- Adopting the mindset that the maternal/child dyad is a dyad and what impacts mothers will have an impact on children both immediately and in the future
- Addressing maternal mental health should be viewed as an “upstream” method to addressing childhood mental health concerns, childhood development concerns, childhood safety concerns, etc.

NORMALIZING CONVERSATIONS ABOUT MATERNAL MENTAL HEALTH

- Maternal mental health is the most common complication of pregnancy and birth but yet remains highly stigmatized
- Normalizing conversations about maternal mental health is critical to being able to address maternal mental health concerns quickly and appropriately

BECOME AWARE OF FREE RESOURCES TO SUPPORT MATERNAL MENTAL HEALTH

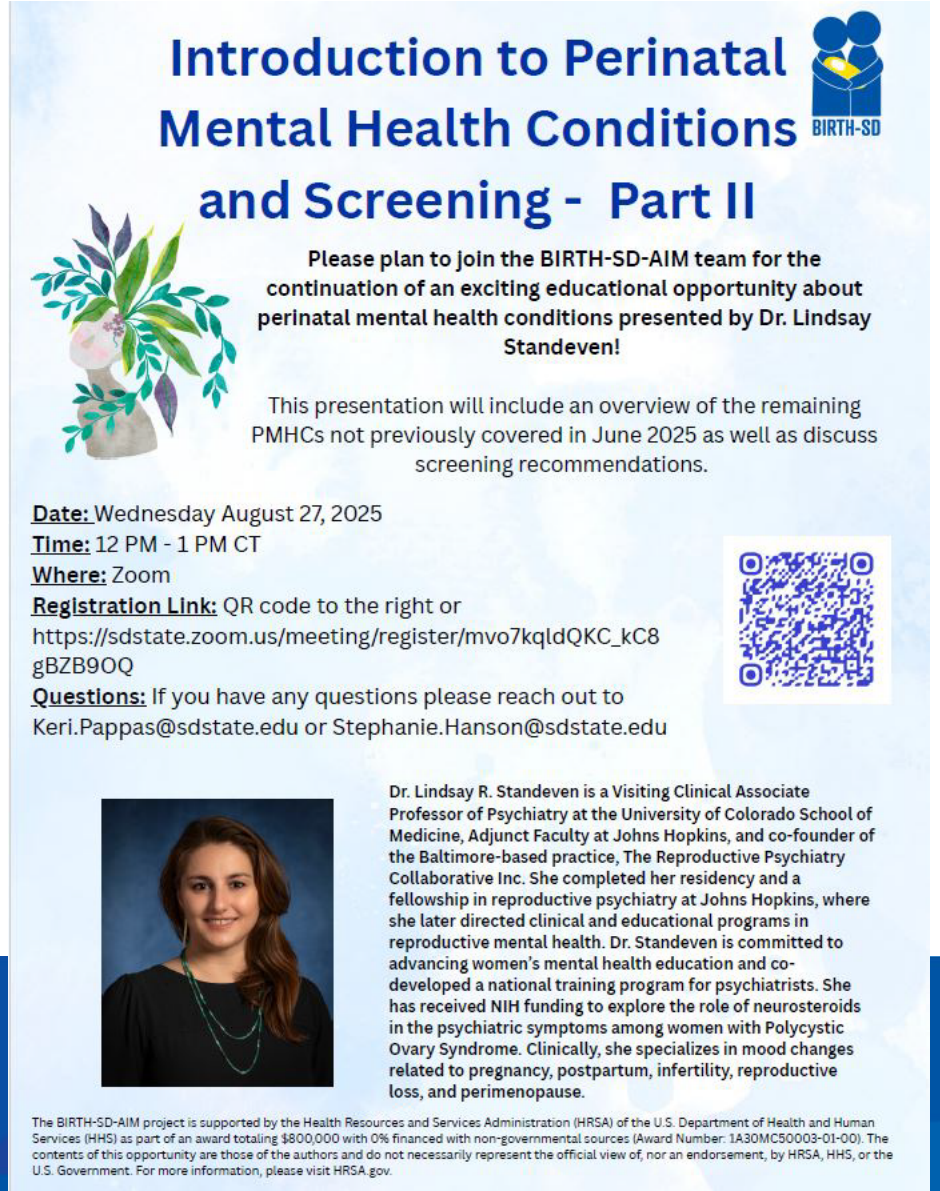
- Postpartum Support International
  - Support groups: https://postpartum.net/get-help/psi-online-support-meetings/
- Maternal Mental Health Hotline
  - 1-833-TLC-MAMA
  - 1-833-852-6262
- BEAM-SD
  - Technical support for providers in South Dakota (pediatric focused but serves maternal population as well)
  - https://beam-sd.org/
- BIRTH-SD
  - Technical support for facilities in South Dakota (maternal focused but impacts pediatric population as well)
  - https://www.sdstate.edu/pharmacy-allied-health-professions/community-practice-innovation-center/birth-sd

ENGAGE WITH LOCAL ORGANIZATIONS WORKING TO ADDRESS MATERNAL MENTAL HEALTH IN SOUTH DAKOTA

- There are already several groups working to improve maternal mental health in SD!
  - Postpartum Support International – South Dakota Chapter (Social media)
  - South Dakota Doulas (Social media)
  - National Alliance on Mental Illness South Dakota – NAMI SD (social media, website, and annual conference)
  - South Dakota Perinatal Association (website and annual conference)
  - BEAM-SD Team (website)
  - BIRTH-SD-AIM Team (website)

ATTEND BIRTH-SD-AIM EDUCATIONAL OPPORTUNITIES

- BIRTH-SD-AIM hosts monthly educational opportunities where you can learn more about perinatal mental health and the work that we are doing
- August Educational Event: August 27th, 2025 at 12 PM CT
- Registration link: https://sdstate.zoom.us/meeting/register/mvo7kqldQKC_kC8gBZB9OQ



ATTEND THE CLIMB!

- The Climb is a program of PSI and is a fundraising event dedicated to “raising awareness and understanding of perinatal mental health disorders”
- Stephanie is organizing and hosting one in Brookings on October 4th!
- There is a Facebook event for the event: “PSI-SD Climb”
- The fundraising website is below: https://postpartum.net/join-us/theclimb/find-a-climb/
- Please put it on your calendars to attend and watch the Facebook page for details! It should be a fun event to raise awareness about PMHCs in SD and there is no pressure to donate!

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THANK YOU!

Please do not hesitate to reach out to us with any questions you may have!

- Stephanie: Stephanie.Hanson@sdstate.edu
- Keri: Keri.Pappas@sdstate.edu