

Diabetes Shared Learning Network

Stephen Njenga, Director of Quality Measurement and Population Health Improvement

March 19, 2025

Helping Hospitals Manage Operations | Treat Patients | Serve Communities



Diabetes Shared Learning Network

- Mission: Develop and implement a statewide system for shared learning and collaboration among community, public health and provider organizations to increase prevention and care coordination for people with diabetes.
- Vision: *Change the Culture*



Goals

- Develop processes to increase knowledge and dissemination of diabetes resources and programs among stakeholders
- Coordinate and align existing programs to reduce gaps in services for people with diabetes — address disparities
- Evaluate efficacy of existing programs and outcomes
- Innovate through incremental action and big thinking



Welcome



Housekeeping

- We have over 50 participants registered for today's webinar, please take a moment to put your name, title and organization in the chat.
- Please mute your audio.
- You are encouraged to be on camera if comfortable to do so.
- Today's webinar will be recorded, and the resources and slides will be shared with all of those that registered.
- Please take the time to complete the survey when leaving the webinar to give us feedback on today's education.



Models for Statewide Action



Obesity and Metabolic Health



com/

Lindsay Ogle, M.D., ABOM, ABFM Family and Obesity Medicine, Missouri Metabolic Health Website: https://missourimetabolichealth.







Obesity & Metabolic Health

How a Focus on Maternal Health May Be The Answer to This Growing Epidemic

Dr. Lindsay Ogle, MD Family Medicine & Obesity Medicine Missouri Metabolic Health

No pertinent disclosures.



<u>Overview</u>

- Obesity Definitions
- What is Metabolic Health?
- Metabolic Syndrome Criteria
- Connection Between Obesity & Metabolic Syndrome
- Epidemiology
- Reasons for Increased Prevalence
- Impact of Maternal Health, Specifically Gestational Diabetes
- Opportunities for Improvement



Medical Definitions of Obesity

American Medical Association first recognized obesity as a chronic disease in 2013.

"Obesity is an abnormal or excessive fat accumulation that presents a risk to health."

-World Health Organization (WHO)

"Obesity is a chronic, relapsing, multi-factorial, neurobehavioral disease, wherein an increase in body fat promotes adipose tissue dysfunction and abnormal fat mass physical forces, resulting in adverse metabolic, biomechanical, and psychosocial health consequences."

-Obesity Medicine Association (OMA)



Classification	Body mass index (kg per m²)	Waist circum- ference (inches)	Body fat %	
Underweight	< 18.5		_	
Normal	18.5 to 24.9	Female < 35 Male < 40	Female < 32% Male < 25%	
Overweight	25.0 to 29.9 > 23 in people of Asian descent*	Female ≥ 35 Male ≥ 40 People of Asian	Female ≥ 32% Male ≥ 25%	
Class I obesity	30.0 to 34.9 > 27.5 in people of Asian descent*	descent†: Female ≥ 31 Male ≥ 35		
Class II obesity	35.0 to 39.9 > 32.5 in people of Asian descent*			
Class III obesity	≥ 40.0 > 37.5 in people of Asian descent*			



What is Metabolic Health?

The body's ability to process and utilize nutrients and energy.

If this ability is impaired, then dysfunction and disease follow.



Metabolic Syndrome

Meet 3 out of 5 criteria:

- Increased waist circumference
 - 35cm in women
 - 40cm in men
- Elevated BP
 - ≥130/85 mmHg or on antihypertensive
- Elevated fasting glucose
 - ≥100 mg/dL
- Elevated fasting triglycerides
 - ≥150 mg/dL
- Low HDL
 - <50 in women
 - <40 in men





https://obesitymedicinereview.com/f/more-than-just-storage-the-active-role-of-adipose-hormones

Adiposity & Metabolic Dysfunction

Clinical Disease



Complications

Death



Prevalence of Diabetes in Missouri

As of 2023, nearly 600,000 adults in Missouri have been diagnosed with diabetes.

- 12.3% of the population; an increase from 11.2% in 2021
- This does NOT include an the 164,000 that are estimated to be undiagnosed

Risk of diabetes is ~2.5x higher if you live in a household with a combined income of \$25,000 or less compared to to \$75,000 or more.

Risk of diabetes ~2x higher if you did not finish high school compared to someone who did complete high school.

Table 1: Prevalence of Diabetes among Adults, Missouri 2023							
	Estimated				Estimated		
	Number	Percent	95% CI		Number	Percent	95% CI
Overall	763,137	15.7		Household Income (\$)			
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Undiagnosed	164,797	3.4*	(2.7-4.2)	25,000-34, 999	66,269	20.2	(10.1-16.7)
Age (years)				35,000-49,999	85,584	13.9	(11.1-16.7)
18-24	na	na	na	50,00 0-74,999	72,997	11.4	(8.9-14.0)
25-44	60,036	3.9	(2.5-5.2)	75,000+	132,044	8.3	(6.7-9.9)
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65+	283,254	23.7	(21.5-25.9)	Less than High School	96,148	21.4	(16.1-26.7)
				High School or			
Race				Equivalent	175,977	11.7	(10.1-13.4)
White (NH)	461,973	12.6	(11.5-13.8)	More than High School	326,019	11.3	(10.2-12.4)
Black (NH)	76,012	14.8	(11.4-18.2)	Insurance Status			
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Sex				Uninsured	558,173	12.8	(11.7-13.8)
Male	297,211	12.7	(11.2-14.2)				
Female	301,129	12.0	(10.7-13.3)				

Source: Missouri Behavioral Risk Factor Surveillance System, 2023. MO DHSS, Office of Epidemiology

Impact of Diabetes in Missouri (data from 2022)

15,100 emergency room visits

15,698 inpatient hospitalizations

1,877 deaths (8th leading cause)

\$6.7 billion each year (per ADA estimate)





National Center for Health Statistics, National Health and Nutrition Examination Survey, 1999–2018.



National Center for Health Statistics, National Health Examination Surveys II (ages 6 11) and III (ages 12–17); and National Health and Nutrition Examination Surveys (NHANES) I–III, and NHANES 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, 2009–2010, 2011–2012, 2013–2014, 2015–2016, and 2017–2018.



Extragenetic Causes

- Environment (family, home, geographic location, school)
- Culture
- Suboptimal nutrition
- Decreased physical activity
- Inadequate sleep
- Adverse consequences of medications (antibiotics and weight promoting medications)
- Mental stress & ACEs
- Viral infections
- Gut microbiota
- Toxins/obesogens (pollutants, endocrine disruptors)

Epigenetics

Preconception paternal and maternal adiposity, unhealthful maternal nutrition during pregnancy, and gestational diabetes may alter fetal epigenetics.



Addressing Maternal Health is Key Opportunity



Maternal Obesity

Per the CDC, in the United States, prepregnancy obesity rose from 26.1% in 2016 to 29.0% in 2019.

Increased risk of complications such as:

- Gestational diabetes
- Gestational hypertension, preeclampsia, eclampsia
- Thromboembolism
- Miscarriage or fetal demise
- Preterm birth
- Birth defects
- Fetal macrosomia which can lead to complicated deliveries or c-section
- Postpartum complications such as infection, bleeding and depression



Gestational Diabetes Mellitus (GDM)

Definition: new diagnosis of diabetes during pregnancy that is not clearly type 1 or type 2 diabetes

Prevalence: 1 out of 11 pregnancies in the United States (doubled from 2006 to 2017)

Diagnosis: glucose tolerance test (GTT) in weeks 24 to 28 or pregnancy; earlier if high risk.

- Estimated that ~80% pregnant women complete testing

Risk Factors:

- overweight/obesity
- excessive weight gain during pregnancy
- westernized diet (high in saturated fats, refined sugars, and red and processed meats)
- advanced maternal age (35+ yo)
- family or personal history of GDM, type 2 diabetes, PCOS or other diseases of insulin resistance

Recommended Weight Gain in Pregnancy

Institute of Medicine Recommendations

Pre-Pregnancy Weight Category	Body Mass Index	Recommended Range of Total Weight Gain (pounds)	Recommended Rates of Weight Gain in the Second and Third Trimesters (pounds) (mean range of pounds / week)
Underweight	<18.5	28-40	1 (1-1.3)
Normal Weight	18.5–24.9	25-35	1 (0.8-1)
Pre-Obesity /Overweight	25.0–29.9	15-25	0.6 (0.5-0.7)
Obesity (all classes)	30.0 and greater	11-20	0.5 (0.4-0.6)

Obesity Medicine Association 2024 Algorithm



GESTATIONAL DIABETES

NORMAL PREGNANCY

npaired



Mitochondrial Dysfunction



Gestational Diabetes Mellitus (GDM)

GDM in mom \rightarrow circulating hyperglycemia \rightarrow compensatory neonatal hyperinsulinemia \rightarrow big baby with immediate risk of hypoglycemia \rightarrow beta cell dysfunction and increased risk of diabetes later in life

This contributes to a vicious intergenerational cycle of obesity and diabetes that impacts the health of the population as a whole.



Maternal Complications of GDM

Perinatal risk:

- More frequent monitoring (POC glucose & appointments)
- Preeclampsia, eclampsia
- Preterm birth
- Stillbirth
- Fetal macrosomia which can lead to complicated deliveries or c-section

Postpartum risk:

- Postpartum depression
- GDM with any future pregnancy
- Development of type 2 diabetes later in life (10x higher)
- Cardiovascular disease



Impact of GDM on the Child

Immediate risk:

- Macrosomia (large for gestational age)
 - Complicated delivery (shoulder dystocia)
 - Increased likelihood of c-section
- Hypoglycemia
- Stillbirth

Long term risk:

- Overweight or obesity
- Glucose intolerance, insulin resistance and related conditions (ex: type 2 diabetes)
 - Often diagnosed at younger ages
- Cardiovascular disease
- GDM



Treatment for GDM

Randomized controlled double-blind controlled trials cannot be done in pregnant patients.

Frequent appointments and monitoring:

- POC glucose testing
- Fetal monitoring

Lifestyle is first line:

- Healthy nutrition, ideally guided by a registered dietitian
- Exercise

Medications if needed:

- Insulin (most common)
- Metformin
- Glyburide


Opportunities for Improvement

Optimize maternal health preconception

- Access to reliable birth control to allow for family planning
- Improve chronic conditions, specifically diabetes and obesity
 - BMI decrease of 1 kg/m2 reduces risk of GDM by 20-30%
 - Increase fiber, micronutrients and polyunsaturated fats
 - Decrease saturated fats, refined sugars, red and processed mea

Optimize maternal health during pregnancy

- Routine visits and recommended screenings
- Access to dietitian if diagnosed with GDM

Optimize maternal health postpartum

- Continue to work with a dietitian and maintain healthy habits
- Only 35% of patients with GDM undergo ACOG and ADA recommended two-hour GTT 4-12 weeks postpartum
- Continue screening for diabetes q1-3 years
- Reduce all other cardiovascular disease risk factors
 - BP, lipids, smoking cessation, physical activity, stress, weight, etc



What Can Do We For the General Population?

Prioritize maternal-fetal health to protect against epigenetic changes that accelerate prevalence and severity of metabolic health conditions.

Early recognition and intervention of metabolic dysfunction to prevent disease states and their complications.

- Do NOT dismiss dyslipidemia, prediabetes, elevated BP or overweight and obesity

Lifestyle changes DO make a difference.

5%–7% body weight loss can prevent or delay
60% of type 2 diabetes



Barriers & Opportunities

Weight Bias \rightarrow compassion (person first language), education (biology vs moral failing)

Misinformation \rightarrow provider, patient, and community education

Time/access \rightarrow utilize our healthcare teams (provider, RN, CM, RD, PT, counselors, admin, etc); utilize telehealth

Cost \rightarrow adequate insurance coverage and reimbursement (AOMs, surgery, RD, PT, therapy, etc); invest now for long-term improvements

Socioeconomic status → healthcare for all; quality public schools; adequate minimum wage; community support programs



Vision for the Future

Scientists and medical researchers will continue to develop a better understanding of obesity and metabolic diseases; which will lead to new and improved treatment options.

GLP-1 agonists seem to be a great start.

Medical professionals will focus on prevention and treating the root cause rather than symptoms or complications.

Partnering with patients and rebuilding trust.

Healthier patients living fuller lives.

- Focusing on themselves, their family, career and hobbies rather than dealing with chronic disease.



References

- Appreciate photos from the Obesity Action Coalition and The World Obesity Image Bank
 - https://www.obesityaction.org/gallery
 - https://www.worldobesity.org/resources/image-bank
- Obesity Medicine Association Algorithm
 - https://obesitymedicine.org/resources/obesity-algorithm/
- Statistics from National Institute of Health
 - https://www.niddk.nih.gov/health-information/health-statistics/overweight-obesity
- Statistics from Center for Disease Control
 - https://www.cdc.gov/diabetes/about/about-type-2diabetes.html#:~:text=More%20than%2038%20million%20Americans,adults%20are%20also%20developing%20it.
- Statistics from 2025 Missouri Diabetes Report; Primary Care Health Home (PCHH) Program
 - o https://health.mo.gov/living/healthcondiseases/chronic/diabetes/pdf/missouri-diabetes-report.pdf
- Will JS, Crellin H. Gestational Diabetes Mellitus: Update on Screening, Diagnosis, and Management. Am Fam Physician. 2023 Sep;108(3):249-258. PMID: 37725457.
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- Li, M., Chi, X., Wang, Y. *et al.* Trends in insulin resistance: insights into mechanisms and therapeutic strategy. *Sig Transduct Target Ther* 7, 216 (2022).
- Mallardo M, Ferraro S, Daniele A, Nigro E. GDM-complicated pregnancies: focus on adipokines. Mol Biol Rep. 2021 Dec;48(12):8171-8180. doi: 10.1007/s11033-021-06785-0. Epub 2021 Oct 15. PMID: 34652617; PMCID: PMC8604848.



Thank you.

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Website



YouTube



Instagram





Cardiovascular Kidney Metabolic Health in Women



Uzma Khan, M.D., Endocrinology, Diabetes and Metabolism. Professor, University of Missouri-Columbia School of Medicine



Cardiovascular-Kidney-Metabolic Health in Women

The CKM Syndrome

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Disclosures

• I have no conflict of interest related to this presentation

2024 Missouri State Health Assessment

In 2021: Population: 6.17 million 84% white, 12.6 % Black 11.4 % uninsured people

Chronic disease:

- CVD death rates increased 5.7 % in 10 years
- Obesity: ~ 37 % of Missourians are obese
 - 43.8 % in Blacks
- Diabetes: 11.7 % of Missourians in 2022
 - 14.4 % in Blacks

Infant and Maternal Health

- Inadequate care : 15.8 % of pregnant women
- Pregnancy related deaths from 2018-2020 : 32/100,000 live births (Black mothers were 3X higher than white mothers)
- In 2021, 393 infants died in Missouri

Not just a Missouri problem

- NHANES survey data from 2013 to 2023 for nonpregnant adults ages 20 and older , 14.1% had diabetes, 51.4% were female, and average age was 48.5years
- In 2023, diabetes afflicted¹
 - 5% of adults 20 to 44 years
 - 19.3% of those ages 45 to 64
 - 26.9% of those 65 and older
- Maternal Health in the US²
 - In 2023, 669 women died of maternal causes, compared to 817 in 2022
 - Black women, and women above age 40 had significantly higher death rates

^{1.} Inoue K, et al "Prevalence and control of diabetes among US adults, 2013 to 2023" JAMA 2025

^{2.} Maternal Mortality Rates in the United States, 2022

Circulation

Volume 148, Issue 20, 14 November 2023; Pages 1606-1635 https://doi.org/10.1161/CIR.000000000001184



AHA PRESIDENTIAL ADVISORIES

Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association

Summary

There is a high burden of poor cardiovascular-kidney-metabolic health in the population, which affects nearly all organ systems and has a particularly powerful impact on the incidence of cardiovascular disease. More guidance is needed on definitions, staging, prediction strategies, and algorithms for the prevention and treatment of cardiovascular-kidney-metabolic syndrome to optimize cardiovascular-kidney-metabolic health across diverse clinical and community settings.

Ndumele CE, et al. American Heart Association. Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association. Circulation. 2023 Nov 14;148(20):1606-1635

The CKM Syndrome Evolving Definitions based on understanding



- 1. Reaven G.M. Banting lecture 1988. Role of insulin resistance in human disease. Diabetes. 1988;37:1595–1607. doi: 10.2337/diab.37.12.1595.
- 2. Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Executive Summary of The Third Report of The National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). JAMA 2001, 285, 2486–2497.
- 3. Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association, Ciculation, Vol 148, Issue 20, 14 November 2023

CKM Definition: AHA Advisory

"CKM syndrome is a systemic disorder characterized by pathophysiological interactions among metabolic risk factors, chronic kidney disease, and the cardiovascular system leading to multiorgan dysfunction and a high rate of adverse cardiovascular outcomes."



Patient facing:

CKM syndrome is a health disorder due to connections among heart disease, kidney disease, diabetes and obesity leading to poor health outcomes

Ndumele CE, et al. American Heart Association. Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association. Circulation. 2023 Nov 14;148(20):1606-1635



* VISCERAL ADIPOSITY UNDERLIES CKM SYNDROME *

Pathophysiology

Similar underlying abnormalities Different end results



"Metabolic" Related Risk Factors for CKM Syndrome

Obesity Metabolic Syndrome Prediabetes Diabetes

Cardiac Disease and diabetes in US



- Prevalence of Coronary Heart Disease, by Diabetes Status, Age, and Sex, U.S., 2019–2020.
- Coronary heart disease and diabetes status are self-reported.
- SOURCE: National Health Interview Surveys 2019–2020

Heart Disease and Diabetes

Rita R. Kalyani, MD, MHS, Brendan M. Everett, MD, MPH, Leigh Perreault, MD, and Erin D. Michos, MD, MHS.

Table 1: Prevalence of Diabetes among Adults, Missouri 2023											
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Source: Missouri Behavioral Risk Factor Surveillance System, 2023. MO DHSS, Office of Epidemiology

Kidney Related

CVD in patients with or without CKD in 2011 In Medicare enrollees with CVD, age 66 and older



House AA, American Journal of Kidney Diseases 2018 72284-295DOI: (10.1053/j

Clinical Trials of Risk Factor Control and Lifestyle Management on CV Risk

Study	INTERVENTION	CONTROL	SAMPLE SIZE	AVERAGE FOLLOW- UP (YEARS)	CARDIOVASCULAR ENDPOINT	RELATIVE RISK REDUCTION	P- VALUE	
Steno-2 Trial ¹ 1993-2006	Intensive therapy to lower LDL cholesterol, blood pressure, and glucose	Usual care	160	7.8	Total CVD events	53%	<0.001	↓ 53 % with therapy
Diabetes Prevention Program ² 1996-2001	Intensive lifestyle with 7% weight loss and 150 minutes per week physical activity, or metformin	Usual care	3,234	2.8	Incident diabetes (not a CVD outcomes trial)	58% from lifestyle 31% from metformin	<0.001	↓ 58 % with lifestyle
Look AHEAD ³ 2001-2012	Intensive lifestyle	Usual care	5,145	9.6	Total CVD events	5%	0.51	

1. Gaede P, et al. Multifactorial intervention and cardiovascular disease in patients with type 2 diabetes. N Engl J Med 348:383–393, 2003

2. Knowler WC et al. Diabetes Prevention Program Research Group: Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med 346:393–403, 2002

3. Look AHEAD Group. Wing RR et al. Cardiovascular effects of intensive lifestyle intervention in type 2 diabetes. N Engl J Med 369:145–154, 2013









Ndumele CE, et al. American Heart Association. Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association. Circulation. 2023 Nov 14;148(20):1606-1635





dreamstime.com

ID 83852472 © Iqoncept

Use of large database

- CV manifestation during follow-up in initially CV and renal disease-free patients with DM type 2
- Pooled death risks associated with the single presence groups of cardiovascular or renal disease (CVRD) compared to a CVRD-free type 2 diabetes group.
- Cardiorenal disease defined as heart failure (HF) or chronic kidney disease (CKD). Cardiorenal syndrome defines as the presence of both HF and CKD).



Birkeland KI et al. Heart failure and chronic kidney disease manifestation and mortality risk associations in type 2 diabetes: A large multinational cohort study. Diabetes Obes Metab. 2020

Use of Artificial Intelligence (AI)











Personalize and evaluate impact of health interventions

Chisom J. et al, Combating cardiovascular disease disparities: the potential role of artificial intelligence, American Journal of Preventive Cardiology,2025

Medications



Treatment strategies to reduce CVD risk in CKD and DM



Why focus on CKM Syndrome in Women Who are Pregnant?





Challenges in preventing heart disease in women

<35 years

Lowest awareness of risk Least likely to discuss with provider

Lifestyle choices, reproductive hormones, cigarette smoking

35-49 years

Lack of awareness for screening Obesity Gestational diseases : DM, HTN Increasing maternal age Focus only on child wellbeing

50 - 65 years

Multiple social, psychological and biological challenges

Menopause, and chronic diseases like DM, HTN and CVD

> 65 years

Diagnostic and treatment disparities in genders

Lack of health literacy

Psychosocial factors like isolation and fixed income

Wang, L.YT., Chiang, G.S.H., Wee, C.F. et al. Preventing ischemic heart disease in women: a systematic review of global directives and policies. npj Womens Health 2, 36 (2024)

Pregnancy

A condition in young women!

Reflects "health" of a community

Maternal mortality Maternal morbidity Young women with chronic diseases

Irreplaceable loss for Children, Families, Communities








Chronic health conditions make people more likely to have a preterm birth

The tiles display the 2023 preterm birth rate for babies born to birthing people with each chronic condition (in blue) and percentage of all births exposed to each condition (in parentheses).



Note: More than one condition can occur at the same time. All conditions occur prior to pregnancy. US preterm birth rates for birthing people with each condition are as follows: smoking: 15.5%; hypertension: 23.3%; unhealthy weight: 12.3%; and diabetes: 28.8%.

Source: National Center for Health Statistics, Natality data, 2021-2023.

2024 March Of Dimes Report Card For Missouri | PeriStats | March of Dimes

Missouri Data and Call to Action From 2017 – 2021.....



CVD : responsible for 30% of pregnancy-related deaths, making it the leading cause of maternal mortality in the state

Most of these deaths were preventable, emphasizing the importance of early recognition and management of cardiovascular conditions during pregnancy and postpartum

Black women in Missouri were found to be at higher risk, with significantly higher rates of both severe maternal morbidity and mortality.

Missouri Stats 2017-2021

Figure 9: Count of All Pregnancy-Associated Deaths by Residence, 2017-2021



- ~70 Missouri women died while pregnant or within one year of pregnancy every year (349 deaths total)
- The pregnancy-related mortality ratio (PRMR) was 32.2 deaths per 100,000 live births
- The PRMR for Black women was 2.5 times more than white women.
- 77 % of pregnancy-related deaths were preventable.
- CVD was the leading cause of pregnancy-related deaths, followed by mental health conditions.
- Women living in smaller towns had the highest ratio of pregnancyrelated deaths (38 per 100,000 live births). In the past, women living in bigger cities had the highest ratio.
- Women in rural counties had the highest ratio of pregnancyassociated, not related (PANR) deaths at 67 deaths per 100,000 live births.
- The ratio of PANR deaths for women who had MO HealthNet was more than 7 times greater than the ratio for those with private insurance.

Missouri Pregnancy Associated Mortality Review 2017-2021 Annual Report. Missouri Department of Health and Senior Services. (June 2024)

https://health.mo.gov/data/pamr/index.php

Demographic Ratios Ratios are calculated per 100,000 live births										
Age			Race/Ethnicity			Prepregnancy BMI				
Under 20 years		83	White		85	Normal Weight		66		
20 to 29 years		109	Black		201	Overweight		80		
30 to 39 years		100	Hispanic/Other		103	Obese		92		
40 years or older		140								
Education		Residential Area			Marital Status					
Less than High So	chool	175	Metropolitan		102	Married		45		
High School Grad or GED 210		Micropolitan		133	Not Married		189			
More than High School 45		Rural		99						
Insurance Annual PAMR Report Here Private Insurance 33 Medicaid 176 Self-Pay/Other 63 Self-Pay/Other 63										

Dashboard | Pregnancy Associated Mortality Review | MRSA and VRE Reporting | Health & Senior Services

Missouri Stats

Age



 Women aged 40+ had a pregnancy-related death ratio 2.8 times higher than women between 20 and 29-years-old. Most live births in Missouri (53%) were to women 20-29-years-old.

Race



Black women experienced pregnancy-related death at a ratio 2.5 times higher than their non-Black counterparts. White women had the majority (75%) of live births in Missouri.

Missouri Pregnancy Associated Mortality Review 20172021 Annual Report. Missouri Department of Health and Senior Services. (June 2024) https://health.mo.gov/data/pamr/index.php



Dashboard | Pregnancy Associated Mortality Review | MRSA and VRE Reporting | Health & Senior Services

CVD and pregnancy- Missouri stats

- CVD (cardiomyopathy, hypertension, myocardial infarction, arrythmia) was the leading cause of pregnancyrelated death from 2017-2021
 - Almost half (44%) were from cardiomyopathy, more than any other single CV condition
- 85% resided in metropolitan counties
- 58% were covered by MO HealthNet
- 55% began prenatal care in the first trimester
- Frequent social and emotional stressors that appeared, as well as potential touchpoints for intervention:
 - 44% unemployed
 - 38% noted a history of substance use.



Missouri Pregnancy Associated Mortality Review 20172021 Annual Report. Missouri Department of Health and Senior Services. (June 2024) https://health.mo.gov/data/pamr/index.php



CARDIAC CONDITIONS IN OBSTETRIC CARE

Explore this patient safety bundle addressing maternal cardiac conditions—covering cardiovascular disorders that impact health.

Perinatal Quality Collaborative

RESO	URCES	
DOCUMENTS	Documents	
WEBINAR RECORDINGS	Cardiac Conditions in Obstetric Care Resource Workbook	\checkmark
AIM PATIENT SAFETY BUNDLE RESOURCES	Life QI Quick Start Guide	\checkmark
	MO AIM CCOC Data Specification Manual	\sim

Goals of CCOC Project

Risk assessment and screening standardization

Pregnancy Heart Team

Training and education for respectful care

Training for early identification of cardiac illnesses

Transition of care and referrals

Goals of CCOC Project (modification •)

Risk assessment and screening standardization of CKM Syndrome

Pregnancy Heart Team

Training and education for respectful care

Training for early identification of CKM Syndrome

Transition of care and referrals

Even Wikipedia has only a paragraph......

E Cardiovascular−kidney−metabolic syndrome		文 _人 Add languages ~	
Article Talk	Read	Edit View history Tools \checkmark	
From Wikipedia, the free encyclopedia			
Cardiovascular–kidney–metabolic syndrome (CKM syndrome) is a multisystem disorder of the metabolic, renal and cardiovascular systems. ^[1] The interactions between	Cardiovascular–kidney–metabolic syndrome		
metabolic risk factors, such as type 2 diabetes and obesity, with chronic kidney disease	Other names	CKM syndrome	
and cardiovascular disorders lead to an increased mortality risk and significant impact on morbidity. ^[1]	Specialty	Cardiology Endocrinology Nephrology	
See also [edit]	Prevention	Life-style changes	
Cardiorenal syndrome References [edit]			
 A a b Ndumele CE, Rangaswami J, Chow SL, Neeland IJ, Tuttle KR, Khan SS, Coresh J, Ma Despres JP, Ho JE, Joseph JJ, Kernan WN, Khera A, Kosiborod MN, Lekavich CL, Lewis EF Pencina MJ, Powell-Wiley TM, Sperling LS, Virani SS, Wright JT, Rajgopal Singh R, Elkind M Metabolic Health: A Presidential Advisory From the American Heart Association" C. Circulatic doi:10.1161/CIR.000000000001184 3. ISSN 0009-7322 C. PMID 37807924 C. S2CID 263 	thew RO, Baker-Sn ⁻ , Lo KB, Ozkan B, F MS (9 October 2023 on. 148 (20): 1606– 773961 ⊉.	nith CM, Carnethon MR, Palaniappan LP, Patel SS, 3). "Cardiovascular-Kidney- 1635.	

Wikipedia contributors. (2024, November 12). Cardiovascular–kidney–metabolic syndrome. In *Wikipedia, The Free Encyclopedia*. Retrieved 18:53, March 11, 2025, from https://en.wikipedia.org/w/index.php?title=Cardiovascular%E2%80%93kidney%E2%80%93metabolic_syndrome&oldid=1256965936

Email for March 7, 2025

Pec Pulse



Delivering you up-to-date news, resources and learning opportunities on maternal and child health care in Missouri

STAT OF THE WEEK

Annually, an average of <u>70 Missouri women</u> die while pregnant or within one year of pregnancy. 84% of pregnancy-related deaths were deemed preventable.

NEW THIS WEEK

The Missouri Perinatal Quality Collaborative launched a statewide initiative called Ask Me 5 to improve maternal health outcomes

during pregnancy and the postpartum period. Missouri has one of the highest maternal mortality rates in the country, with the majority of pregnancy-related deaths deemed preventable.

Ask Me 5 seeks to change these outcomes by promoting five essential health questions that build trust, open dialogue and address critical health concerns. These issues are outlined in an easy-to-recall acronym, H.E.A.R.T.



- High blood pressure/preeclampsia
- Emotional and mental health
- Access to health care
- Recognizing substance use
- Trauma, abuse and safety





Cardiac Conditions in Obstetric Care

Jessica Stultz, MHA, BSN, RN, CPPS, CPHQ, LSSGB Director of Clinical Quality, Missouri Hospital Association Missouri Perinatal Quality Collaborative <u>Cardiac Conditions in Obstetric Care | Missouri PQC</u> (CCOC)



CCOC Collaborative Overview

- Funded by CDC
- 10 birthing hospitals participating in the collaborative
- Participating hospitals report and track data on structure, process, outcome, and mortality measures
- We continue project efforts to
 - > Improve maternal health and outcomes
 - Reduce health disparities related to race, ethnicity, language, and SDOH
 - > Engage patient/family voice
 - Connect providers with referral networks



Stephen Njenga, MPH, MHA, CPHQ, CPPS, LSSYB Director of Quality Measurement and Population Health Improvement Missouri Hospital Association



Diabetes Shared Learning Network Workgroup Updates

MISSOURI HOSPITAL ASSOCIATION

DSLN Workgroups

Health Equity/SDOH/Health Education SEMO Population/Community Health





Action Item #1: Two Part Webinar Series

Session 1: SDOH screening, coding, & utilizing closed loop referral network to address care gaps.

When :Tuesday June 3rd 10 a.m. to 11:30 a.m.

- o **Dr. Anne Eisenbeis**, Director of Practice Development, Missouri Pharmacy Association
- Latisha Bryant, Community Integration & SDOH Coordinator, Missouri Primary Care Association

Presenters will:

- Highlight the important role of CHWs and pharmacy technicians in addressing SDOH's
- Review the process of coding SDOHs into their claims data.
- Review SDOH screening tools and coding process in rural pharmacies.
- Review SDOH screening tools process in community health centers.
- Overview of the CPSEN program in Missouri Missouri Pharmacy Association
- Overview of the gravity Interventions project Missouri Primary Care Association

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Action Item #1: Continued..

Session 2: Payer and Provider Perspective of SDOH/Z Codes

When :Tuesday June 24th 10 a.m. to 11:30 a.m.

- Rashmi Srivastava, MD, Chief Medical Officer, Missouri and Iowa Health Plan, UnitedHealthcare Community and State.
- Alexandra Garrick, Collective Impact Director, Missouri, National Kidney Foundation
- Megan Schultz Population Health Partnership Director, National Kidney Foundation

•Presenters will:

- Highlight information about the payer perspective of SDOH/Z Codes
- Review information about how payers leverage the AZARA platform
- Review covered benefits that relate to non-clinical social needs value added services
- Share insights about a provider perspective of SDOH/Z Codes



Action Item #2: Literature Reviewed Publication

Conduct a literature review and recommendations of best practices for leveraging closed loop referral platforms.





MISSOURI HOSPITAL ASSOCIATION/MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES MISSOURI DIABETES SHARED LEARNING NETWORK SEMO POPULATION/COMMUNITY HEALTH REGIONAL MEETING 10 a.m. to 2 p.m. Thursday, April 3, 2025 471 Siemers Drive Cape Girardeau, MO 63701

AGENDA

- I. Welcome Stephen Njenga
- II. Announcements
- III. Missouri Hospital Association updates Stephen
- IV. Missouri Department of Health and Senior Services updates Joyce /Taylor
- V. Current Activities in SEMO
 - A. Importance of Faith Based Approaches in Promoting Health Pastor Darryl Minner, Pilgrims Rest Baptist Church
 - B. Where Quality Meets Compassion Ashley Lipke, Diabetes Care and Education Specialist, Meagan Fornkahl, Population Health Coordinator, Cross Trails Medical and Dental Center
 - Lunch Break 12:00 p.m. 12:30 p.m.
 - C. Substance Use Activities in SEMO Shawn Billings, Vice President of Substance Use Programming, Missouri Hospital Association
 - D. Maternal Health Activities in SEMO Morgan Nesselrodt, PQC Specialist, Missouri Hospital Association
- VI. Group Discussion Potential action items and opportunities to collaborate
- VII. Next Steps
 - A. Fall 2025 virtual/face-to-face meeting.
- VIII. Adjournment



Group Discussion



Next Steps



Next Meeting



Adjournment



Contact Information

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