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Transforming Healthcare in Missouri

Policy and Community Strategies to Improve Outcomes for Diabetes and Obesity

CENTER FOR HEALTH ECONOMICS AND POLICY

Institute for Public Health at Washington University in St. Louis

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Executive Summary

Diabetes and obesity are critical problems for pediatric and adult populations in Missouri and the rest of the United States. Missouri ranks 26th and 32nd among US states in health outcomes related to diabetes and obesity respectively.[1,2] In addition, Hispanic Missouri residents have substantially disproportional mortality rates for stroke and diabetes.[3] Moreover, diabetes prevalence has been shown to increase with age. Adults who live in households with a combined income under $25,000 had a higher prevalence than those with a household income of $50,000 or greater. [4]

Our April 2022 meeting assembled stakeholders in Missouri who are interested in improving outcomes for diabetes and obesity. Participants heard from experts who shared diverse ideas on how to meaningfully reduce diabetes and obesity in different settings. Attendees discussed models and other ideas of interest that have the potential to advance the quality of care for people in Missouri. The innovative ideas discussed by the speakers and during the breakout sessions may be able to address disparities related to obesity and diabetes and to improve outcomes in Missouri.

This white paper summarizes the models presented, as well as describing related policies in Missouri and the programs that have been successfully implemented. Furthermore, the paper articulates the viewpoints of the various stakeholders in attendance and provides policy recommendations based on consensus views.

Innovative and successful ideas and interventions were presented by the expert speakers at the meeting. Highlights from their work to address obesity and diabetes are included below:

- Dr. Nancy Schoenberg's research has used mobile health and faith-based programming as motivational community-engaged research programs that improve rural obesity and diabetes outcomes by promoting health and decreasing health disparities in rural settings.
- Dr. Debra Haire-Joshu presented her research that has integrated community partnerships to ensure reach and sustainable impact that can last for years. She has focused on intergenerational approaches to address diabetes and obesity in young women and children by working with young women in Diabetes Prevention Program (DPP) and leveraging existing home visiting models to promote health via the Parents as Teachers (PAT) program.
- Dr. Denise Wilfley explained her work in developing Medicaid payment codes for behavior modification interventions to address obesity and diabetes in young adults. This work positively supports behaviors in both children and parents to create lasting change and can be generalized to other family members. Family-Based Treatment (FBT) and Social Facilitation Maintenance (SFM) treatment can help parents and children establish sustainable eating and physical activity changes across multiple socio-environmental contexts.

Executive Summary (Continued)

The following recommendations were developed in the breakout discussions at the meeting by the stakeholders in attendance. The stakeholders participating in these discussion groups included providers, payers, academic researchers, community organizations, foundations and representatives from the Missouri Department of Social Services and the Department of Health and Senior Services.

The most frequently endorsed suggestions for improving Missouri's diabetes and obesity outcomes for different populations are as follows:

Childhood Obesity	• Distribute child tax credits as monthly payments to encourage families to spend the money on healthy foods • Encourage implementation of the Family Based Treatment (FBT) program. • Strengthen community-based partnerships with state-level social service agencies and organizations. • Encourage corporations to solve food insecurity by offering to promote their role in helping communities to build their reputation and strengthen people's perceptions of their brand.
Weight Management and Diabetes Prevention	• Expand the DPP program framing to emphasize health and wellness, not just diabetes. • Incentivize providers to address outcomes through adjustment of payment methodologies. • Reimburse school-based clinics (SBCs) for adult care. • Expand the Community Health Worker (CHW) model. • Partner with Managed Care Organizations (MCOs).
Gestational Diabetes	• Promote early screening of women of childbearing age. • Create an Enhanced Annual Wellness Visit (EAWV) code for women of childbearing age who are covered by Medicaid. • The proposed EAWV would be based on Early and Periodic Screening, Diagnostic and Treatment (EPSDT). • Encourage value-based reimbursement strategies, adjusted by downstream quality outcomes.
Obesity and Diabetes	• Include Community Health Workers (CHWs) on the care team to better address the social determinants of health (SDOH) burden Medicaid recipients face. • Embed the Biopsychosocial Obesity Treatment model within Primary Care Health Homes (PCHHs). • Automated enrollment of high-risk people for obesity and diabetes, who entered health homes, into the BPS and use PCHH for extended maintenance.

Introduction

In April 2022, the Center for Health Economics and Policy of Washington University's Institute for Public Health hosted *Transforming Healthcare in Missouri: Policy and Community Strategies to Improve Outcomes for Diabetes and Obesity*. The event was the sixth in the Transforming Healthcare in Missouri (THM) series of stakeholder events designed to generate policy dialogue and solutions. Participants included clinicians, researchers, policymakers, managed care organizations, health foundation leaders, and community organizations active in food, nutrition education, and related work.

This meeting focused on innovative approaches to improving outcomes for Missouri Medicaid beneficiaries with diabetes and obesity. Participants across stakeholder groups leveraged their expertise to discuss policy solutions. These solutions encouraged widespread adoption of evidence-based clinical models, incorporated community partnerships to promote solutions outside the clinical setting, and identified key unanswered research questions. These solutions can inform future policies related to equitable diabetes and obesity prevention and treatment for all Medicaid families.

Attendees were provided background materials before the event. After panelist presentations, attendees were divided into four facilitated breakout groups, provided with a grid of policy solutions, and asked to evaluate policy solutions based on feasibility, effectiveness, and cost. Each group worked through a series of targeted questions aiming to identify additional key information that is needed, innovative models that may involve new partnerships, and barriers that may need to be overcome through creative yet evidence-based policies to address their groups' issues, listed below:

- Childhood and Intergenerational Obesity
- Gestational Diabetes
- Weight Management and Diabetes Prevention
- Obesity Treatment and Diabetes Management.

The goal of the event was to enhance collaboration across these various stakeholder groups and potentially find common ground in discussing policies, identifying barriers, and suggesting solutions to decrease the negative consequences of obesity and diabetes in Missouri. The innovative ideas discussed by stakeholders are described below. The priorities identified at this convening may be considered for implementation to improve outcomes for Medicaid participants with diabetes and obesity in the future.

Bridging the Rural-Urban Divide: Leveraging Common Bonds to Impact Obesity and Diabetes Outcomes

Nancy Schoenberg, PhD

Marion Pearsall Professor Director of Center for Health Equity Transformation

Associate Vice President for Research, University of Kentucky

Dr. Schoenberg is a medical anthropologist and gerontologist by background. Dr. Schoenberg and her academic and community partners focus on the prevention and control of diabetes, cancer, cardiovascular disease, respiratory disease, and other chronic conditions. Dr. Schoenberg is the director of the new Center for Health Equity Transformation (CHET), a member of the Executive Committee for the Markey Cancer Center Cancer's Prevention and Control Program and serves on the internal advisory board for the Sanders-Brown Center on Aging. She currently serves as the co-director of the Community Engagement Core in the UK Center for Clinical and Translational Research. She served as Associate Dean for Research in the College of Public Health from 2014-to 2017.

Rural settings across the country have several distinctive features compared to urban areas. Rural areas are defined as any population, housing, or territory not in an urban area (Population of 50,000 or more) or in an urban cluster (population of at least 2,500 and fewer than 50,000). Rural populations are declining as people move to urban areas. Rural areas have a higher percentage of counties that are persistently in poverty, leading to higher unemployment, lower average socioeconomic status, and greater difficulty finding a job. Rural populations are in poorer health, have greater rates of disability, and lower life expectancy than their urban counterparts. Rural communities are less likely to have health insurance and transportation to accessible healthcare clinics.

On the other hand, there are some surprising similarities between rural and urban areas. Both urban and rural areas are becoming increasingly diverse. Rates of diabetes and obesity are consistently rising in both urban and rural areas. Both urban and rural areas have a growing older population. In a survey on attitudes towards their environment and culture, 65% of urban and 70% of rural residents say that "most people who live in different types of communities don't understand the problems they face." In addition, 50% of urban and 46% of rural people say drug addiction is a major problem in their communities. Family ties are the main reasons why 50% of rural and 40% of urban residents never left or have moved back. A roughly equal percentage of people across urban and rural settings note that they communicate regularly with neighbors. Further, the same percentage say that are optimistic about their lives (42%), too busy to enjoy life (12%), and feel lonely or isolated from those around them (11%).

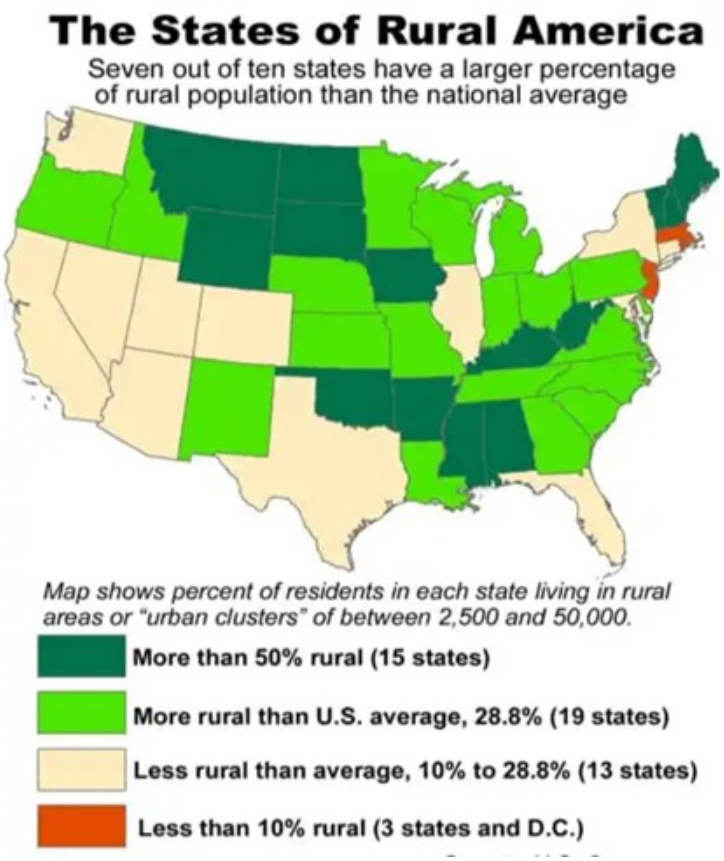


Figure 1. Source: U.S. Census

Two Community-Engaged Research Programs Improving Rural Obesity and Diabetes Outcomes:

Dr. Schoenberg's team collaborated with the communities they serve to identify challenges that were common across communities. She discussed two innovative methods where her research collaborated with the communities they were serving to improve diabetes-related health status: mobile health (mHealth) programming, and faith-based programming. Table (1) describes the challenge that was identified and how the team intervened to lessen the burden of that challenge for the rural community being served.

> "We need to stop considering ourselves at a divide and leverage the amazing lessons that we have learned from all contexts to improve population."
>
> – Nancy Schoenberg

Table 1.

Common Challenges	Intervention Characteristic	Intervention Approach	
		mHealth	Faith-based
Inadequate community development	Increases community capacity and employment opportunities	√	√
Infrastructural challenges: Limited access to safe sidewalks, exercise facilities, and grocery stores with affordable produce	Overcomes limited community resources by expanding to technology-based approaches	√	√
Health care professional shortages: especially limited access to specialists such as endocrinologists and dieticians	Provides access to trained personnel with health expertise	√	√
Social norms and cultural preferences	Honors local social norms, values, and practices by engaging community experts	√	√
Minimal exposure to diabetes education.	Tailors content to resources available in that community to ensure appropriate knowledge level and cultural preferences	√	√

mHealth Programming: A Mobile App That Helps You Make Healthy Choices

> "There are persistent poverty counties when it comes to I internet access, but contrary to what one might think, a lot of rural residents do have good internet. On the other hand, it is obvious from pandemic that we have seen remarkably creative ways trying to achieve equity with internet among students who do non-traditional education."

Make Better Choices 2 (MBC2) aims to improve health among Eastern Kentuckians by promoting healthy living using a mobile phone app. The goal of the app is to improve fruit and vegetable intake, decrease screen time, and increase physical activity. The app has several components: an interactive app, personalized health coaching, an accelerometer, and financial incentives. This program was initially developed by Bonnie Spring at Northwestern University and used to promote health in an urban community. Dr. Schoenberg's team has adapted it for use in rural environments. The MBC2 program was previously shown to create lasting behavioral changes, which is often a challenge in diabetes programming.

To adapt the program. Dr. Schoenberg and her colleagues spent time in rural community forums, focus groups, and front porches asking community members to identify challenges in adapting the program from its urban design for the intended rural setting. Using the input from the rural communities where the program would be rolled out, the research team made adaptations to the MBC2 program to make it

Table 2.

MBC2 Component	Local Challenges/Preference	Adaptation
Eligibility criterion: age	Rural communities have older populations	Open to all eligible people 18+ No upper age limits
Recruitment	Lack of urban recruitment sites (e.g; public transit)	Use social media, community locations (church, centers)
Smartphone	Concern about data cost; less tech experience	Special health coach training on data use/cost
Health coaching	Sparse personal &local resources undermine behavior change	Local coaches have inventory to local food and activity resources, informed by community needs assessment.
Individual-level intervention	Tight Knit communities like group gatherings	Quarterly group events
App messaging	Fit Appalachian context	Highlight success stories, fun activities

Furthermore, the mobile app was reconfigured to use sliding scales to measure screen time rather than numbers, as the rural participants she served were more comfortable with the sliding scales. The pictures used in the app were re-designed to be pictures of behaviors and settings recognizable by the community. Lastly, the program website was generated via a Facebook site because rural participants identified Facebook to be the most accessible way to communicate program information. To learn more about MBC2, visit MakeBetterChoices2.com

Faith Moves Mountains: Faith-Based Diabetes and Obesity Prevention Programming:

The Faith Moves Mountains initiative aims to target specific health behaviors through "faith-based" interventions, by building relationships with churches within Appalachian communities. It emphasizes the importance of helping individuals navigate “from community to clinic” to improve diabetes outcomes. The faith-based programming utilizes several approaches to improve health in collaboration with faith communities: motivational interviewing, counseling, group education sessions, and church-level activities. Working directly with faith leaders, the research team is also able to integrate health messages into the sermon or into printed church bulletins. In addition, working with faith leaders allowed researchers to offer cooking classes in church kitchens and change communal meals to be more nutritious. Churches also serve as important physical locations to host health screenings in rural communities.

Lessons Learned On Community-Engaged Research:

These two approaches aim to promote health and decrease health disparities. There has been an amazing community response to mHealth programming (MBC2), captured by high traffic on Facebook, despite very little advertising. Moreover, leveraging the knowledge and wisdom of faith partners in rural environments has proven to be an effective strategy, as they act as community-based facilitators to help community members and coordinate health care services.

There are several essential lessons that community-engaged public health researchers in rural settings must consider. For instance, church leadership buy-in is necessary to make an impact when working with the faith communities. The pastor or head of women’s ministry needs to be closely involved with program design and implementation if the program is going to be effective. Importantly, these faith leaders are often very busy, so finding liaisons to communicate program information to the community is important, especially for low-resource communities. The research team paid these liaisons for their time and effort in promoting the program within the church. It is important to understand the mutual interests of the church. Spending a lot of time at the church helps to build trust and cultural appropriateness of programming. Understanding appropriate dress, for example, is important if the program is being delivered in a church. Mid-course corrections are important in program delivery, despite the fact that these corrections may make the research component of the program less methodically sound. Lastly, the research team must be consistently listening for the next concern from the church, as that can be the beginning of a new phase in the partnership.

Other Evidence-Based Approaches Discussed by Dr. Schoenberg

Access to Care	Diet and Physical Activity
Federally qualified health centers (SS) • Support the non-profit health care organization that receives federal funding and ensures delivering comprehensive care to uninsured, underinsured, and vulnerable patients regardless of ability to pay. **Higher education financial incentives for health professionals serving underserved (SE)** • Expand incentives such as scholarships and loans with service requirements and loan repayment or forgiveness programs for health care providers who practice in rural or other underserved areas. **Rural training in medical education (SS)** • Expand medical school training and learning experience focused on the skills necessary to practice successfully in rural areas. **School dental program (SS)** • Provide sealants, fluoride treatment, screening, and other basic dental care on school grounds via partnerships with dental professionals. **Telemedicine (SS)** • Deliver consultative, diagnostic, and treatment services remotely for patients who live in areas with limited access to care or would benefit from frequent monitoring; also called telehealth. **Tele-mental health services (SE)** • Provide mental health care services (e.g., psychotherapy or counseling) via telephone or videoconference.	**Activity programs for older adults (SS)** • Offer group educational, social, or physical activities that promote social interactions, regular attendance, and community involvement among older adults. **Farmers' markets/stands (SE)** • Support multiple or single-vendor markets where producers sell goods such as fresh fruits and vegetables, meat, dairy items, and prepared foods directly to consumers. **Healthy food initiatives in food banks (SS)** • Combine hunger relief efforts with nutrition information and healthy eating opportunities, often with on-site cooking demonstrations, recipe tastings, produce display stands, etc. **Places for physical activity (SS)** • Modify the local environment to support physical activity, increase access to new or existing facilities for physical activity, or build new facilities. **Prescription for physical activity (SS)** • Provide prescription with individually tailored exercise plans, often accompanied by progress checks at office visits, counseling, activity logs, and exercise testing.

*Scientifically Supported (SS): Strategies with this rating are more likely to make a difference. These strategies have been tested in multiple robust studies with consistently positive results.

*Some Evidence (SE): Strategies with this rating are likely to work, but further research is needed to confirm the effects. These strategies have been tested more than once and results in a trend positive overall.

A National Community-Academic Partnership to Prevent Intergenerational Obesity

Debra Haire-Joshu, PhD

Joyce and Chauncy Buchheit Professorship in Public Health, Washington University

Director, Center for Diabetes Translation Research

Dr. Haire-Joshu is a public health scientist with over 25 years of experience developing and leading large-scale, population-wide NIH research trials to reduce obesity and prevent diabetes, particularly among underserved women and children. Haire-Joshu is a member of the NIH-NIDDK Advisory Council and co-chair of the NIH committee addressing diabetes health equity research. She has published extensively in peer-reviewed literature and has authored textbooks addressing diabetes management across the lifespan and transdisciplinary public health.

Dr. Haire-Joshu's work has aspired to redefine scientific success in the context of community partnerships to ensure reach and sustainable impact that can last for years. These partnerships identify how academic research needs to be adapted to work as intended for the communities where public health programs are implemented. This work is especially important for diabetes and obesity prevention due to the epidemic nature of these health issues.

About 230 million adults in the USA are overweight or obese and 29.5 million have Type 2 Diabetes. Furthermore, 137.8 million Americans are pre-diabetic, many of whom don't even know that they are at high risk of becoming diabetic. Evidence suggests that young women are more prone than men to develop obesity and diabetes. Further, overweight and obesity are intergenerational problems, where a parent's development of the disease can lead to a child's disease development. Among females, there is a two-fold obesity increase from childhood (19.3%) to young adulthood (39.7%). Women aged 20-40 years have the greatest increase in obesity prevalence in the past 45 years compared to all other demographic groups. To address this issue, Dr. Haire-Joshu's research team prioritizes weight gain prevention in young women of childbearing age.

There are large disparities in young adulthood obesity. Black women are most strongly affected by the obesity epidemic (Figure 2). This is important in the context of community-engaged research because diabetes and obesity prevention programs must be adapted to work for a particular community in order for equity to be achieved.

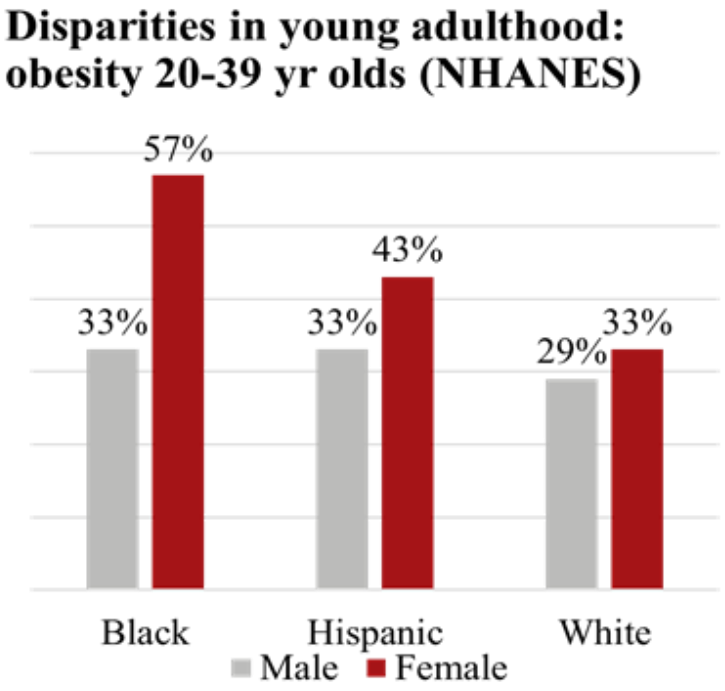


Figure 2. Hales CM, Carroll MD, Fryar CD, Ogden CL. Prevalence of obesity and severe obesity among adults: United States, 2017-2018. NCHS Data Brief, no 360. Hyattsville, MD: National Center for Health Statistics. 2020

Intergenerational Approaches Addressing Diabetes and Obesity in Young Women and Children

Diabetes Prevention Program

In 2002, an intervention known as the Diabetes Prevention Program (DPP) was provided via clinical trials at multiple sites, including Haire-Joshu's site at Washington University. Over the course of 16 sessions that occurred at regular periodic intervals, participants received ongoing nutrition or behavioral counseling focusing on weight reduction, lifestyle changes, physical activity, and fitness assessments.

After completion of the program, the analysis showed that people lost on average 5 % of their body weight, which could delay or prevent diabetes incidence by 71% among people aged 60 and over [5]. This lifestyle intervention was so successful that the study was ended early so that the control group could have access to the intervention. The box at the right (Figure 3) describes the topics that were discussed in the week-by-week lifestyle intervention training[6]. In the follow-up nationalization of this program, there were 581 organizations that implemented the program across the country. The loss-to-follow-up was nearly half of those recruited into the program (6963 recruited vs. 3644 retained). This loss-to-follow-up is the subject of Dr. Haire-Joshu's research: how do we adapt the program to retain young women?

Session topics, weeks 1-16

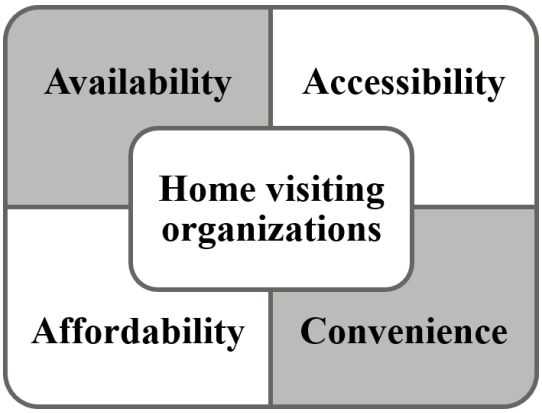
1. Being Active - A Way of Life
2. Move Those Muscles
3. Be a Fat and Calorie Detective
4. 3 Ways to Eat Less Fat, Fewer Calories
5. Jump Start Your Activity Plan
6. Tip the Calorie Balance
7. Healthy Eating
8. You Can Manage Stress
9. The Slippery Slope of Lifestyle Change
10. Make Social Cues Work for You
11. Talk Back to Negative Thoughts
12. Can use Heart Health from months 7-12
13. Problem Solving
14. Take Charge of What's Around You
15. Four Keys to Healthy Eating Out
16. Ways to Stay Motivated

Figure 3. Diabetes prevention program research group, Diabetes Care, 2002

When working with young women, the team identified several barriers to session attendance. Lack of childcare led many women to be unable to attend the sessions. Parenting responsibilities, family priorities, and the amount of time required by programs led many women to be unable to attend. Inflexible and low-paying jobs meant that women could not get time off work to attend. For some women, diabetes and obesity were not the issues of utmost relevance to their current life and environment. For instance, if women were worried about being able to pay the utility bill, that concern may have trumped their health concerns. Lastly, the cost of the program was prohibitive for many women.

> "Community-Academic Partnership is a great model moving forward for translate science to practice."
>
> – Debra Haire-Joshu

To address these barriers, researchers looked at home-visiting organizations to reach young women where they reside because these organizations provided services that were available, affordable, accessible, and convenient. The implementation of a program using home visiting means that women did not need to find childcare and had no transportation time to the program. Further, placing the intervention in the context of the home means that the program could be adapted directly to the context where the young women would use it. Ongoing support to reinforce positive behavioral change was also possible due to the home visiting program retaining more young women over time.



There were several challenges associated with home-visiting program implementation. First, home visiting organizations are not healthcare organizations, meaning that these organizations often have goals that are not directly associated with a health outcome. Further, the criteria for reimbursement through health insurance does not pay for these programs. Lastly, content delivery needed to be adapted for the home, which presented the challenge of identifying the content that needed to be included and how it would best be conveyed.

Leveraging Existing Home Visiting Structures to Promote Health

Parents as Teachers (PAT), a national home-visiting program, began in Missouri in 1981 with the aim of promoting optimal early child development by supporting and engaging parents through home visitation. They serve over 220,000 across the country annually. The program includes up to 24 home visits per year and is free to parents, as it is funded through state and federal appropriations. Dr. Haire-Joshu's team trained PAT parents in an obesity and diabetes prevention program.

Parents as Teachers.

> "We did the science, PAT did the practice…they could take almost anything and integrate it into practice…they could teach the parent, make a toy…it was really amazing."
>
> – Debra Haire-Joshu

The Healthy Eating & Active Living Taught at Home (HEALTH) randomized control trial ran from 2012 to 2018 using PAT routine home visits to deliver an adapted DPP. The partnership between the research team and PAT allowed research to be translated into the pre-build PAT curriculum that was effective in participants' homes.

In the first 12 months of the HEALTH trial, there was a 6-pound difference in weight between the control group and the intervention group. At 24 months, there was a 10-pound difference between the two groups (Figure 4). Thus, utilizing PAT partners to implement DPP through home visiting created lasting change in obesity among the young women in the HEALTH randomized control trial.

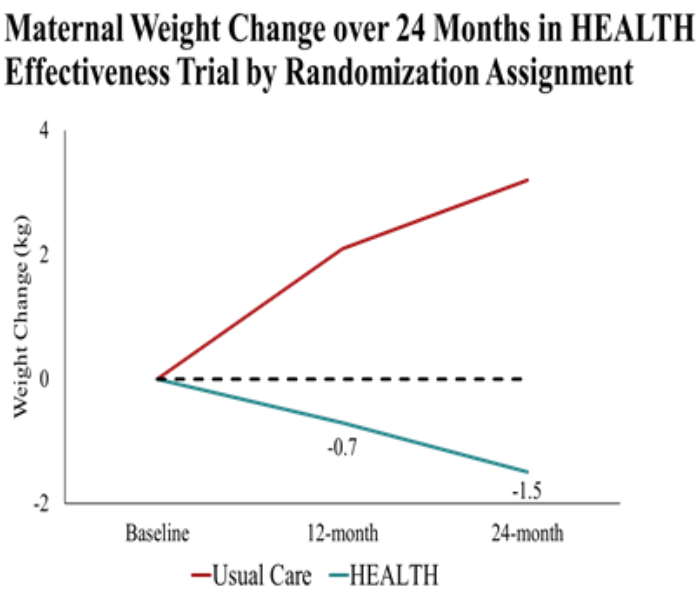


Figure 4. R18DK089461, Haire-Joshu (PI), Haire –Joshu et al., AJPM. 54.3 (2018):341-351.

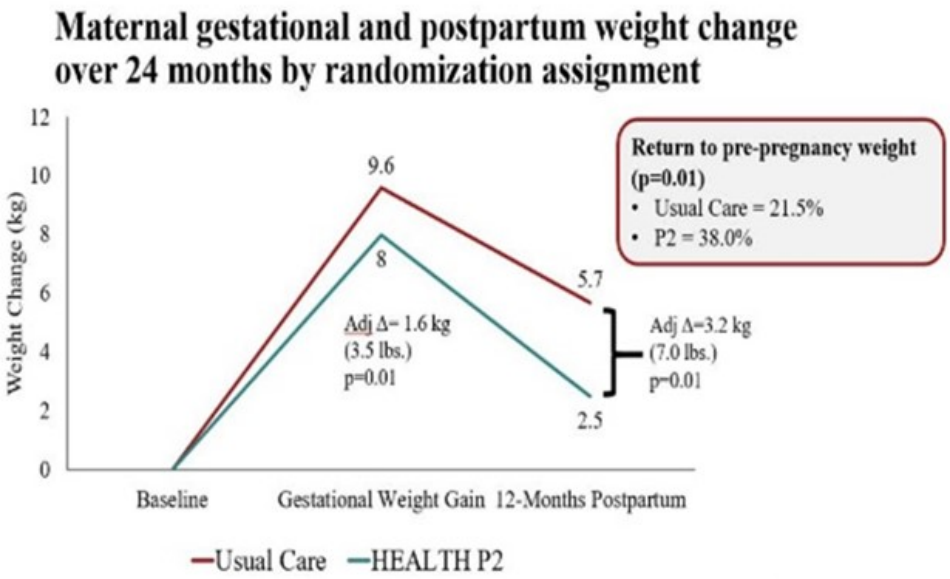


Figure 5. Haire-Joshu et al, AM J Prev Med 2018; 54 (3): 341

In another community-engaged research project entitled Health P2 (prenatal and postpartum) Dr. Haire-Joshu's research team and their PAT colleagues worked with low-income Black women in the St. Louis region to control post-partum weight gain. Women in the study all received prenatal care and were randomized to either PAT standard curriculum or the HEALTH curriculum with 10 prenatal and 12 postpartum visits to embed the curriculum into their lifestyle. This program was also successful, (Figure 5) showing that young women in the intervention group gained 7 fewer pounds than women receiving usual care. Currently, this HEALTH P2 study is undergoing a national trial across 36 sites.

Haire-Joshu's Research Partnership with PAT

High 5 Low Fat **1997-2002**	Aimed to increase fruit and vegetable consumption and improve dietary habits among African Americans parents of infants, H5LF consists of five home visits to promote modeling of healthy dietary behaviors.
High 5 for Kids **2002-2007**	Home based intervention for rural preschool Kids. H5-KIDS improved the fruit intake of parents, and fruits- vegetables (FV) knowledge and availability in the home.
BALANCE **2007-2012**	The BALANCE study was done with postpartum women and teenagers, done in such a way that the grant would pay for extra visits.
HEALTH **2012-2017**	Healthy Eating and Active Living Taught at Home was: • Funded through NIH • NIH-NIDDK Randomized control trial • St. Louis regional sites DPP-adapted/embedded within routine PAT home visits • OW/OB women (18-20 years) with preschoolers Women on HEALTH intervention was more likely to achieve more weight loss than usual care (PAT).
HEALTH **D&I** **2018-2023**	• National PAT infrastructure • 28 sites (532 moms) nationwide • Randomized: HEALTH or usual care • Effectiveness on weight and behaviors' change • Reduce cardiovascular and diabetes risk
(Life Moms) **HEALTH P2** **2013-2018**	Aimed to deliver maternal gestational and postpartum care to women to make sure that they could have healthier baby outcomes and control gestational awakening. Funded by NIH.
HEALTH P2 **D&I** **2019-2024**	• 36 sites (468 pregnant women) nationwide. • Effectiveness on GWG and 12-month postpartum weight retention. • Reduce obesity and diabetes risk.
ENRICH Study **Multisite clinical centers (2022-2029)**	Early Intervention to promote Cardiovascular Health of Mothers and Children (ENRICH): The ENRICH study aims to demonstrate a lasting impact on the cardiovascular health of women and children; it includes a three-year follow-up period. After a two-year planning period in which a common protocol is being developed in partnership with organizations that use evidence-based home visiting models (HRSA, HOMVEE), a common intervention will be studied across seven sites for seven years.

Increasing Access to USPSTF-Recommended Care for Obesity: The Journey to Change Reimbursement Policy and Build a Multidisciplinary Workforce

Denise Wilfley, PhD

Scott Rudolph University Professor of Psychiatry, Medicine, Pediatrics, and Psychology, Department of Psychiatry, School of Medicine

Dr. Wilfley's research centers on the causes, prevention, and treatment of eating disorders and obesity among children, adolescents, and adults. Her current research programs include the classification, characterization, assessment, and risk factors of eating and weight disorders, the development of effective treatments for individuals suffering from eating disorders and obesity, and the development of innovative and cost-effective methods for early intervention and prevention of eating disorders and

The rate of childhood obesity has been increasing in the United States over the past decades. 19.7% of children have obesity. Without immediate action, by 2050, the majority of today's children (57.3%) will have obesity by age 35. Childhood obesity has many immediate and future negative impacts, such as low self-esteem, anxiety, depression, high blood pressure, type 2 diabetes, and musculoskeletal problems, among other health issues.

There are large racial, economic, and urban/rural disparities in childhood obesity. In terms of race and ethnicity, 26.2% of Hispanic and 22% of non-Hispanic Black youth aged 2-19 have obesity, compared to 16.6% of White children (Figure 6). By household income, 19-20% of those below 350% FPL have obesity, compared to 11% of those above 350% FPL. By metropolitan status, 21.7% of rural residents have obesity (9.4% severe) compared to 17.1% of urban residents who have obesity (5.1% severe). CDC findings are based on a longitudinal dataset of 432,302 children 2-19 years with ³ 3 BMI measurements (Figure 6).

Among children and adolescents (≤ 18 years) with COVID-19, underlying medical conditions, including obesity, increased the likelihood of hospitalization and severe COVID-19 illness (ICU admission, IMV, or death).

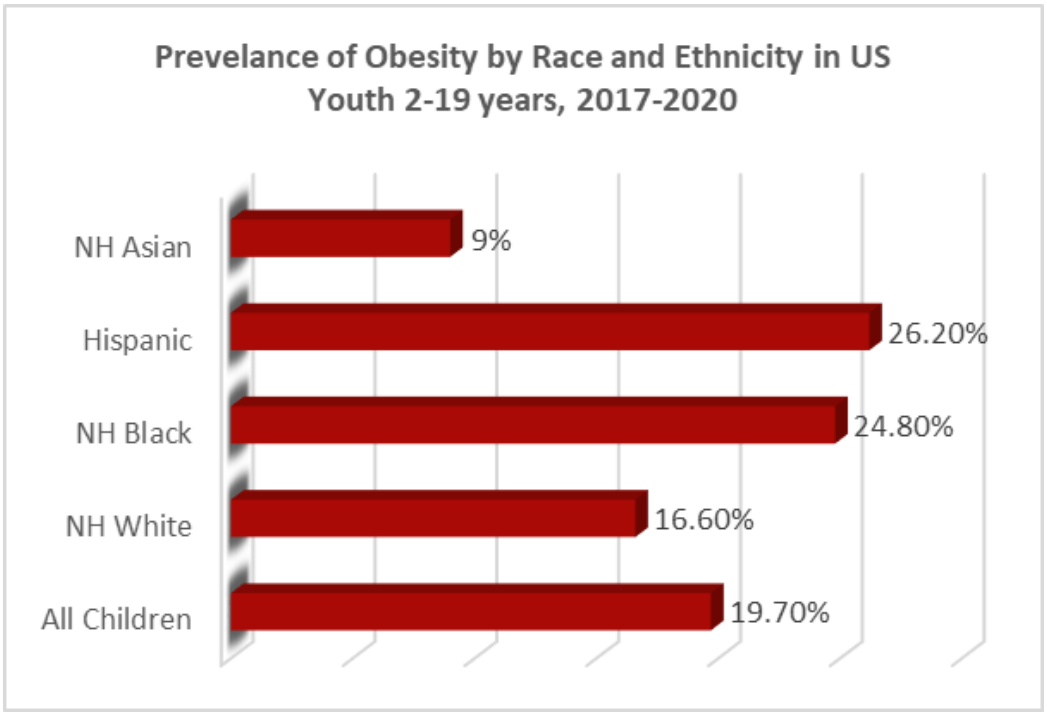


Figure 6. Source: CDC.

Table 3. Monthly Rate of Charge in Children's Weight in Pounds Before and During the COVID-19 Pandemic &Expected Weight Gain Over Time						
	Pre-Pandemic			During Pandemic		
		Estimated Wt. Gain			Estimated Wt. Gain	
	Slope	6 mos	12 mos	Slope	6 mos	12 mos
Overall	0.36	2.1	4.3	0.6	3.6	7.1
BMI Category						
Underweight	0.21	1.3	2.5	0.29	1.7	3.5
Healthy Weight	0.28	1.7	3.4	0.45	2.7	5.4
Overweight	0.41	2.5	4.9	0.73	4.4	8.7
Moderate Obesity	0.54	3.3	6.5	1.01	6.1	12.1
Severe Obesity	0.74	4.4	8.8	1.22	7.3	14.6

Table 3. Source: CDC/NCHS, National Health, and Nutrition Examination Survey

Family-Based Treatment: A Time-Tested Approach

Over 60 randomized controlled trials show that family-centered pediatric weight management interventions (PWMI) can result in a 5-20% reduction in excess weight, leading to a 2017 Grade B recommendation that physicians screen children ages 6 and up and refer them to such family-based treatment (FBT) when indicated.

FBT is designed to help parents and children establish sustainable eating and physical activity changes across multiple socio-environmental contexts (e.g., home, school, community, and work). Primary care is an optimal setting for FBT delivery, as it capitalizes on the established relationship between primary care providers (PCPs) and families. This approach was first shown to be effective in 1980 and has been developing since.

FBT targets behaviors in both youth and caregivers to create lasting change. The caregiver commits to make diet, behavioral, and weight changes alongside the child. Evidence dating back to 1980 shows that education alone is not sufficient to improve health, so FBT focuses on successive, positively supported behavioral changes to create a home environment that promotes healthy behaviors. Positive support comes from the core parenting strategies in the program: positive parenting, self-monitoring, reinforcement, and stimulus control. This method has been shown to improve overweight, mental, and physical health and is more cost-effective than treating children and their parents separately.

> "There is an urgent need to translate robust, evidence-based interventions like FBT into routine clinical care. FBT provides concurrent treatment for youth and parents with obesity and can generalize to other family members."
>
> – Denise Wilfley

In order to maintain behaviors that lead to better weight outcomes, the social facilitation maintenance treatment (SFM) stresses parental facilitation of children's peer networks, the enhancement of children's body image, as well as their responses to teasing.

SFM can be added to FBT to further improve childhood weight outcomes. Adding BSM to SFM makes it SFM+. The goal of enhanced social facilitation maintenance (SFM+) is to maximize the generalizability and durability of eating and physical activity improvements made as a result of FBT through practice in a variety of social and environmental circumstances. Additionally, SFM+ strengthened strategies taught in FBT to deal with unfavorable peer interactions (such as teasing) that prevent healthy behaviors and concentrated on creating peer and family contexts that are supportive of healthy weight-controlling behaviors.[7]

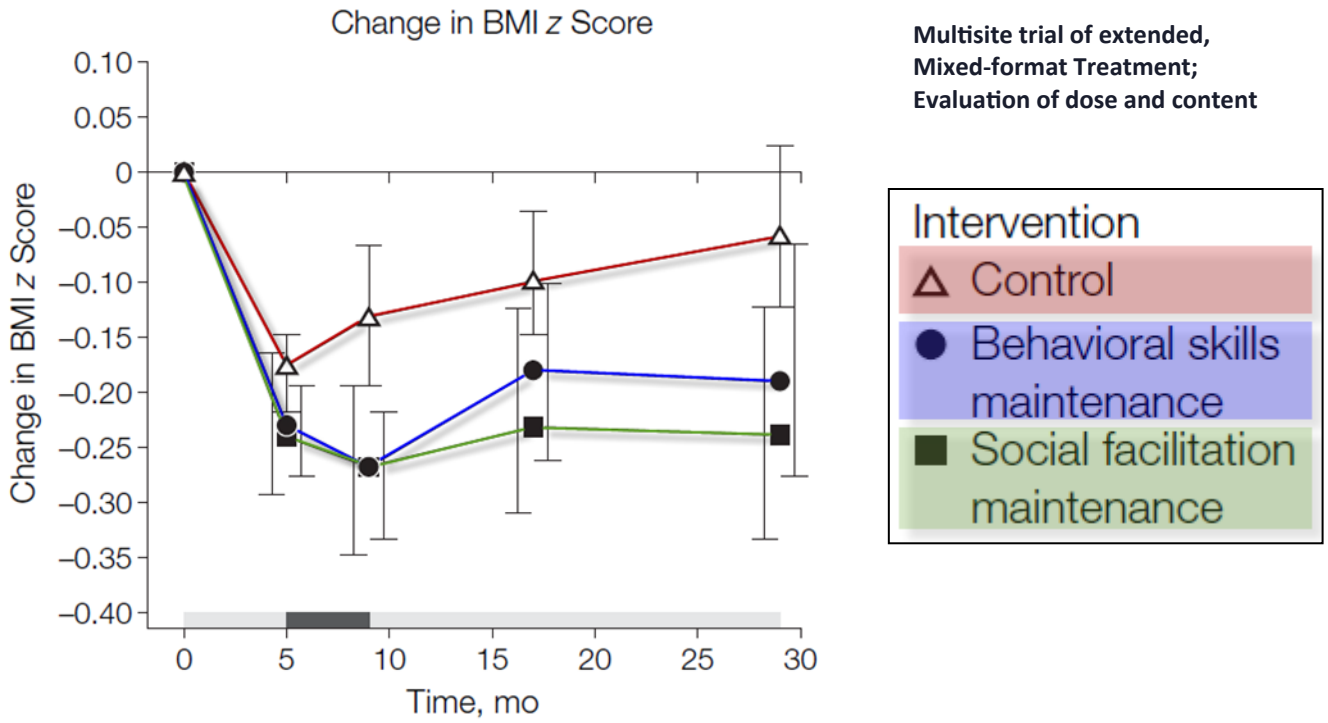


Figure 7. Source: Dose, Content, and Mediators for Treatment of Childhood Obesity. Wilfley et al., 2017.

Overcoming Implementation Challenges with Pragmatic Research Approaches

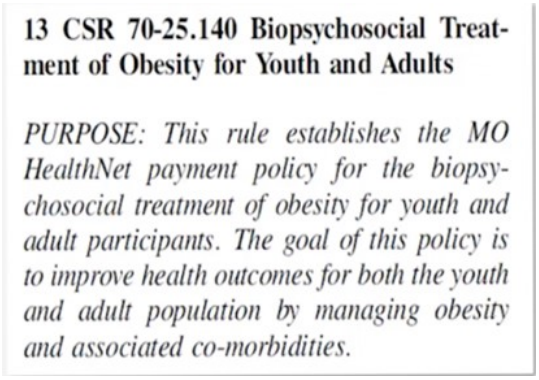
Although Wilfley and her team have established the success of enhanced FBT clinically, they recognize that most children do not receive adequate care for obesity despite national recommendations. Since most health insurance coverage excludes coverage of healthcare services related to addressing weight and/or obesity in children, many successful programs rely on national research grant funding for support. Therefore, pragmatic research is being undertaken to demonstrate efficacy in a real-world environment, with potential payers being directly involved as stakeholders. The PLAN (Primary care pediatrics, Learning, Activity, and Nutrition) study is the first large-scale trial of FBT as compared to usual care and involves 452 families in 36 practices in three cities. The Pragmatic-Family Centered Approach to Childhood Obesity Treatment grant involves 728 families in three states.

The COVID-19 pandemic has had a strong impact on children's health as it has affected children's lives through disrupted routines such as remote learning, increasing stress in the home, irregular mealtimes, fewer physical activity opportunities, and food insecurity. It translated into unhealthy behaviors such as consumption of sugary drinks and processed foods, less physical activity, increased screen time, and disrupted sleep. Among the consequences of these results are weight changes and mental health concerns. To overcome these barriers, obesity prevention programs have had to transition to a telehealth implementation style.

Missouri Policy Initiative to Insure BPS Treatment for Obesity for Youth and Adults

Wilfley and her team have worked with MO HealthNet Division (Missouri Medicaid) to develop a Biopsychosocial Obesity Treatment benefit that incorporates the core elements of the evidence-based approaches discussed above for children (i.e., FBT-style approaches) as well as similar evidence-based approaches for adults. Highlights of the benefit include a 6-month intervention period with continuation criteria, 26 hours of FBT for children, 12 hours of Intensive Behavioral Therapy for adults, 1.75 hours of Medical Nutrition Therapy for all participants, and program delivery through individual and group sessions with psychiatrists, clinical social workers, nurses, and dietitians. To be eligible, children must be at or above the 95th percentile for age- and sex-specific BMI, while adults must have a BMI of 30 or greater.

The introduction of this benefit for Medicaid families depended in part on financial cost-benefit analysis. Each Medicaid beneficiary with obesity on average costs 1.021$ more than normal-weight beneficiaries. Furthermore, it is estimated that Missouri will expend $12 billion annually on childhood obesity-related healthcare costs by 2030.[8] The MO Medicaid obesity treatment benefit became effective September 1, 2021, in the fee-for-service program, with managed care services to follow in the summer of 2022. The reimbursement matches the USPSTF recommendations.



13 CSR 70-25.140 Biopsychosocial Treatment of Obesity for Youth and Adults

PURPOSE: This rule establishes the MO HealthNet payment policy for the biopsychosocial treatment of obesity for youth and adult participants. The goal of this policy is to improve health outcomes for both the youth and adult population by managing obesity and associated co-morbidities.

Provider Types and Training

A psychiatrist, clinical social worker, psychologist, professional counselor, marriage and family therapist, psychiatric advanced practice registered, nurse dietitian, and nutritionist are examples of FBT and IBT provider types for individual and group sessions. All provider types need to be certified as specialists, have licenses, or meet certain requirements for experience and training.

A major obstacle to the effective implementation of these initiatives in Missouri is a lack of providers. There have been a number of initiatives to date in Missouri to train more providers including:

- **2016-2019:** training of behavioral health professionals to provide FBT and RDs/RDNs to provide medical nutrition therapy for children in the Kansas City area.
- **2018-present:** training of behavioral health professionals in pediatric primary care clinics in FBT in St. Louis and mid-MO areas.
- **2019-present:** training behavioral health professionals in primary care clinics in Joplin and Kansas City, in partnership with the Missouri chapters of the American Academy of Pediatrics and the Academy of Nutrition and Dietetics, to provide training for pediatricians and RD/RDNs seeing children. Partnership with Show-Me Telehealth Network in pediatric weight management.

BREAKOUT SESSION DISCUSSION SUMMARIES

Participants were provided background materials before the event. After panelist presentations, attendees were divided into four breakout groups with a facilitator, provided with a grid of policy solutions, and asked to evaluate policy solutions based on feasibility, effectiveness, and cost. Furthermore, each group was asked to identify and elaborate on one solution that they identified as key to solving their chosen issue. This section highlights the ideas and solutions that attendees discussed in their breakout groups.

Each breakout group focused on one of the four following topics: childhood obesity, weight management and diabetes prevention, gestational diabetes, and obesity and diabetes treatment.

Childhood Obesity Breakout Session

An estimated 19.3% of U.S. children and adolescents aged 2-19 have obesity. Several factors put children at increased risk for obesity. Sociodemographic factors, prenatal and genetic factors, early weight gain trajectory, and medical risk factors are all important contributors to the development of severe obesity among children. The higher rate of severe obesity in preschool-aged children is associated with several social determinants of health including lower caregiver educational attainment, living in a single-parent household, and living below the poverty line.[9]

Obesity Rates in Children in the US over Time

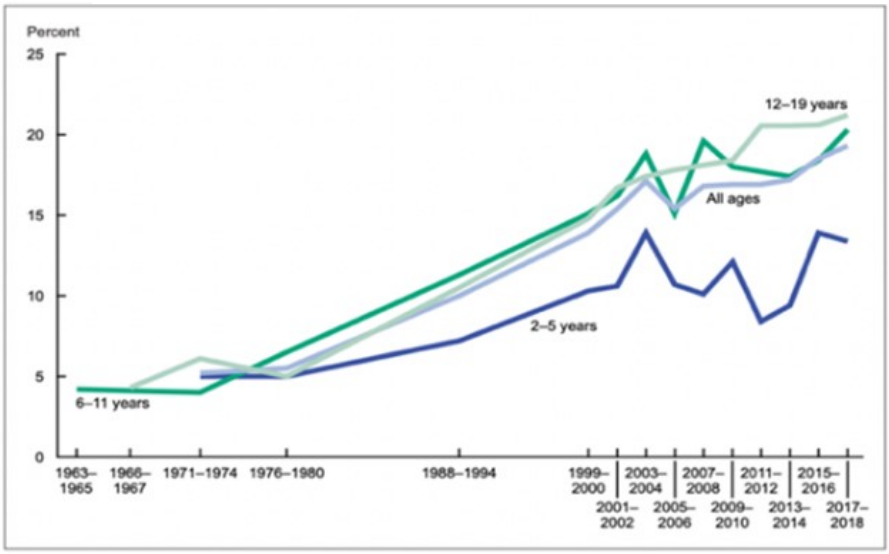


Figure 8. Source: National Center for Health Statistics, National Health Examination Surveys

Children covered by Medicaid are nearly six times more likely to be treated for obesity than those who are privately insured.[10] The average costs of healthcare for obese children covered by Medicaid were over $6,700, compared to $2,400 for normal-weight children covered by Medicaid, showing that there is a financial incentive for programs that can reduce the rate of obesity in children.[10]

Childhood Obesity Group Discussion

Participants in the childhood obesity breakout group identified several issues related to the delivery of successful programming.

- Schools do not always provide healthy options for children to choose.
- Transportation to a source of healthy food is difficult for some families.
- Cooking nutritious meals can be more laborious than unhealthy meals.

Primarily, the group focused their ideal intervention on making healthy food accessible to low-income families. Participants stated that nutritious food needs to be available to families near where they live, and families need the knowledge on how to prepare meals with healthy foods.

The participants encouraged several approaches to achieve greater nutrition among children. They mentioned several upstream factors that would promote this goal, such as:

- raising wages
- improving government income-support programs for struggling families
- improving access to and strengthening nutrition programs.

They were interested in programs that provided family-based treatment (FBT), a teaching kitchen for parents and children to learn hands-on. Financially, this group was in favor of distributing the child tax credit as a monthly payment to encourage families to spend the money on healthy foods. This group discussed disincentives to purchase unhealthy foods, which may steer families toward healthier choices and thereby decrease obesity and diabetes. This group wanted to see greater development of community-based partnerships with state-level social service agencies and organizations to enhance the well-being of children, which was viewed as inseparable from the well-being of their families and the economic stability of the communities where they live. Examples of such partnerships which could be enhanced include Family Support Division, other Department of Social Services agencies, Department of Mental Health, MPCA's Missouri Health Professional Placement Services, and FQHCs. Lastly, this group was interested in encouraging corporations to take steps to solve food insecurity by offering to promote their role in helping communities to build their reputation and strengthen people's perceptions of their brand.

Weight Management and Diabetes Prevention

In the United States, 11.3% of the population has diabetes (37.3 million people)[11.] Over time, diabetes leads to damage of the heart, blood vessels, eyes, kidneys, and nerves. This lowers individuals' quality of life and leads to many medical expenditures. Those diagnosed with diabetes incur an average of $16,750 in medical expenditures a year, of which $9,600 is directly attributed to diabetes.[12] Those with diabetes are more likely to miss work or be less productive at work, costing tens of billions of dollars in lost productivity.

There are several risk factors for type 2 diabetes. High body mass index, older age, a family history, physical inactivity, giving birth to a baby over 9 pounds, and being diabetic while pregnant can lead to an increased risk of diabetes. Further, there are racial disparities in diabetes development. Black, Hispanic, and Indigenous individuals are at increased risk of developing diabetes.

The Diabetes Prevention Program (DPP) is a national partnership of public and private organizations to prevent or delay type 2 diabetes. As of September 1, 2020, Missouri HealthNet Division implemented a Diabetes Prevention Program (DPP) for eligible adult Medicaid participants. In Missouri, DPP has been implemented through sessions that occur at regular intervals for one year. If an individual is eligible, sessions can continue for an additional year. DPP services include ongoing nutrition or behavioral counseling focusing on weight reduction and lifestyle changes and physical activity and fitness assessments. A recent randomized control trial in Nebraska showed that digital implementation of DPP (d-DPP) is effective in reducing blood sugar levels, body weight, and cardiovascular risk factors. Individuals in the d-DPP group were 61% more likely to lose clinically meaningful body weight than those in the control group who received education only. This suggests that remote delivery of DPP can continue to improve health after the COVID-19 pandemic.

Weight Management and Diabetes Prevention Group Discussion

Participants in the weight management break-out group session discussed many innovative programs and initiatives such as Diabetes Prevention Programs (DPPs), SNAP at Farmers' Markets (including FoodRx), food prescription programs ("Farmacy"), faith-based and other social group initiatives, and Parents as Teachers (PAT) and home visits for nutrition education. The participants were in favor of focusing on extending the reach and impact of DPPs, as it was agreed that the model has a high potential for success within Missouri Medicaid. A system is already in place for DPPs to collect critical outcome data to measure effects, track payments, and report to the Centers for Disease Control (CDC).

Group participants discussed several barriers to the broader adoption of DPPs in Missouri.

- First, providers and patients lack knowledge of the DPP services that are available to them. Many providers and patients do not know how or where DPP services are delivered or how much those services cost. This lack of knowledge can lead providers to be concerned and unwilling to refer a patient to a DPP program, possibly in fear that the program will cost their patient money.
- Additionally, group members discussed the barrier of maintaining patient motivation. DPPs last a year or more and are focused on preventing diabetes. Patients may lose motivation due to the unobservable outcome of not developing diabetes, and that loss of motivation may lead to their departure from the program.
- Finally, group members discussed the implications of the social determinants of health and how the DPP may not fully address these determinants.

To address these barriers, the group came up with policies to enact within DPP with the goal of extending the reach and impact of DPP.

- First, the participants recommended expanding the program framing to emphasize health and wellness, not just diabetes.
- In addition, the availability and accessibility of nutritious foods is considered a key challenge to overcome, so integrating the wellness-focused DPP with existing programs and funding that address food security is important.
- Regarding eligibility and reimbursement, group participants agreed that the model could be more impactful if Medicaid patients could opt into the wellness-focused "pre-DPP" without a diagnosed condition by screening for risk due to nutrition concerns, physical inactivity, or family history. Some group members noted that providers could be better incentivized to address outcomes through adjustment of payment methodologies, i.e. a move toward more value-based payment strategies. Some participants noted that partnership with MCOs could help in such efforts.
- In addition, reimbursing school-based clinics (SBCs) for adult care, e.g., parents of children attending the school, could increase the program's reach. In general, participants recommended leveraging SBCs and other neutral/social locations, including faith-based communities, as a way to raise awareness and motivate program participation at an earlier stage of health risk. Some noted that there might be credentialing and licensing concerns with providing care in non-clinical settings.
- Finally, attendees were in favor of expanding the community health worker (CHW) model, as CHWs can serve as a bridge between the formal health system and the community. In terms of DPP expansion, including CHW training focused on nutrition and developing a network of local experts that CHWs can help DPP participants navigate could add significantly to the potential for success at the population level.

Gestational Diabetes Breakout Session

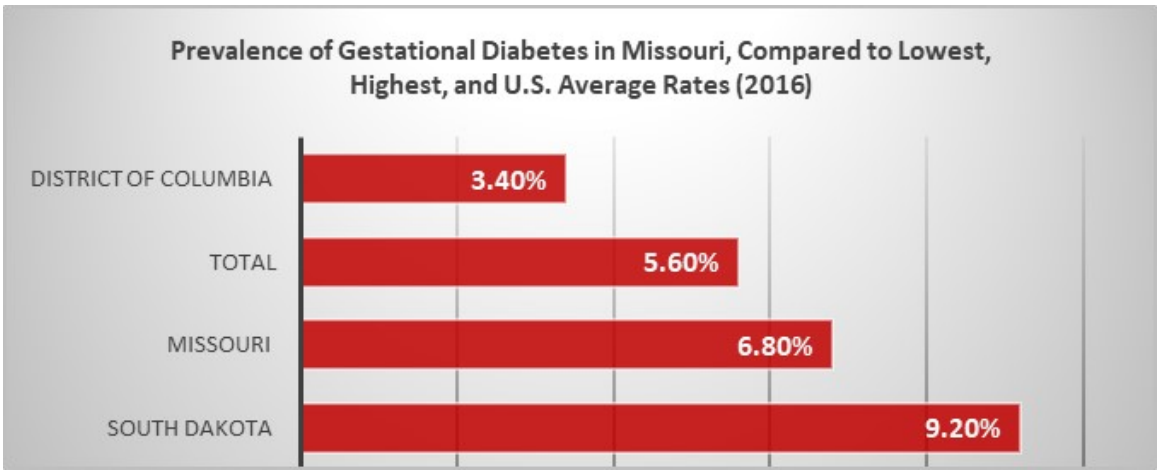


Figure 9. Recourses, MMWR; CDC-Statista 2020

As obesity prevalence has increased worldwide, more women are entering pregnancy overweight or obese.[13-14] Obesity and insulin resistance during pregnancy influence the risk of long-term obesity in children.[15] This leads to a higher risk of having a large-for-gestational-age (LGA) baby, and such children have an increased risk for obesity and diabetes in later life. In the United States, about 1% to 2% of pregnant women have type 1 or type 2 diabetes and about 4% to 9% of pregnant women develop gestational diabetes.[16] Missouri is ranked 38th in the prevalence of gestational diabetes among U.S. states and the District of Columbia for women with live births in 2016 (Figure 10). Missouri's prevalence of 6.8% is higher than the national average of 5.8%.

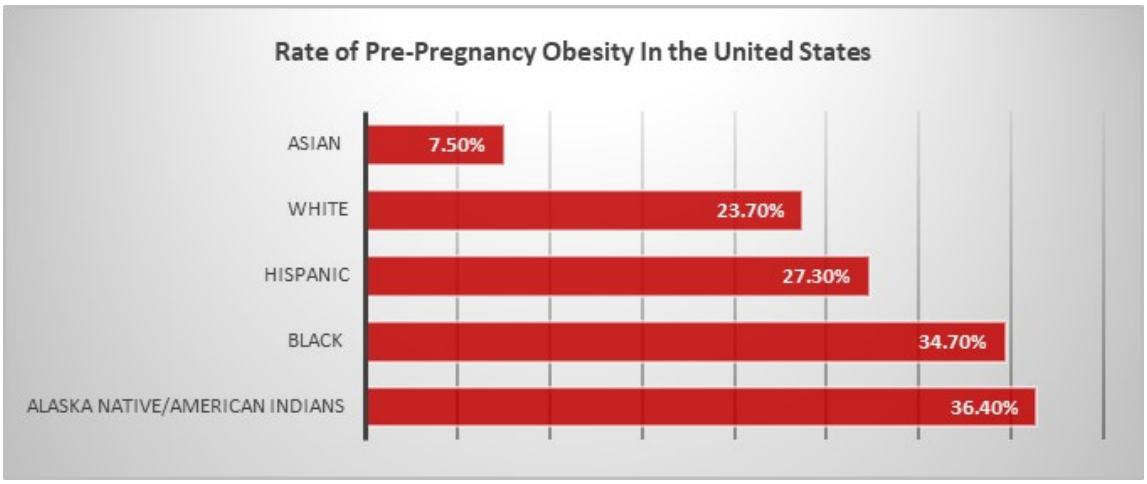


Figure 10. Resource, National Vital Statistics Report

Social determinants of health (SDOHs) have a large impact on vulnerable populations, and they play a crucial role in maternal and infant health outcomes.[17] The pathways between SDOHs and birth outcomes have contributed to pervasive racial/ethnic disparities in maternal health and health care. Maternal obesity is an important risk factor for gestational diabetes mellitus. Obesity rates during pregnancy increased from 13% in 1993 to 24% in 2015. Rates of pre-pregnancy obesity are higher among some racial and ethnic subgroups, particularly among Alaska Native/American Indians and

Gestational diabetes poses several health risks to both the mother and the baby (Table 4). The Lifecourse Model of pregnancy highlights that pregnancy can magnify pre-existing health risks which increase the rate of adverse outcomes during and after birth (Figure 3). Through the lens of the Lifecourse Model, we understand that chronic diabetes risk increases when mothers enter pregnancy with diabetes or develop diabetes while pregnant. If unaddressed, gestational diabetes exacerbates post-pregnancy risks of cardiovascular disease and chronic kidney disease.

Gestational diabetes has a high economic burden in the United States. Birth-related health expenditures can be up to $9,000 during the first year of life [19],when complications occur. Nationally, Medicaid insures 45% of births and 66% of births to Black mothers. Pregnant women on Medicaid in Missouri are four times more likely to die than those on private insurance [20]. Therefore, transforming Medicaid policy on how births are paid for has a significant potential to impact pregnancy outcomes, including gestational diabetes outcomes.

Currently in Missouri, there are several programs aiming to reduce the impact of gestational diabetes. Operation Food Search has run a pilot program entitled “Fresh Rx” which provides healthy food, nutritional counseling, and other services to pregnant mothers. Evaluation of this pilot program showed that food insecurity decreased, babies were born healthier, costs decreased, and mothers had better well-being. Specifically, their analysis found that if the FreshRx program was covered by Medicaid, 118 babies in St. Louis City would be born healthier, saving $5.3 million annually.

Table 4. Gestational Diabetes Associated Risks

To the Mother
Caesarean birth (C-section) if the baby is too big
Hypoglycemia (low blood sugar)
Preeclampsia (high blood pressure during pregnancy)
Type 2 diabetes
Cardiovascular disease
Chronic kidney disease
To the Baby
Premature birth
High birth weight
Shoulder dystocia
Breathing problems
Hypoglycemia
Type 2 diabetes

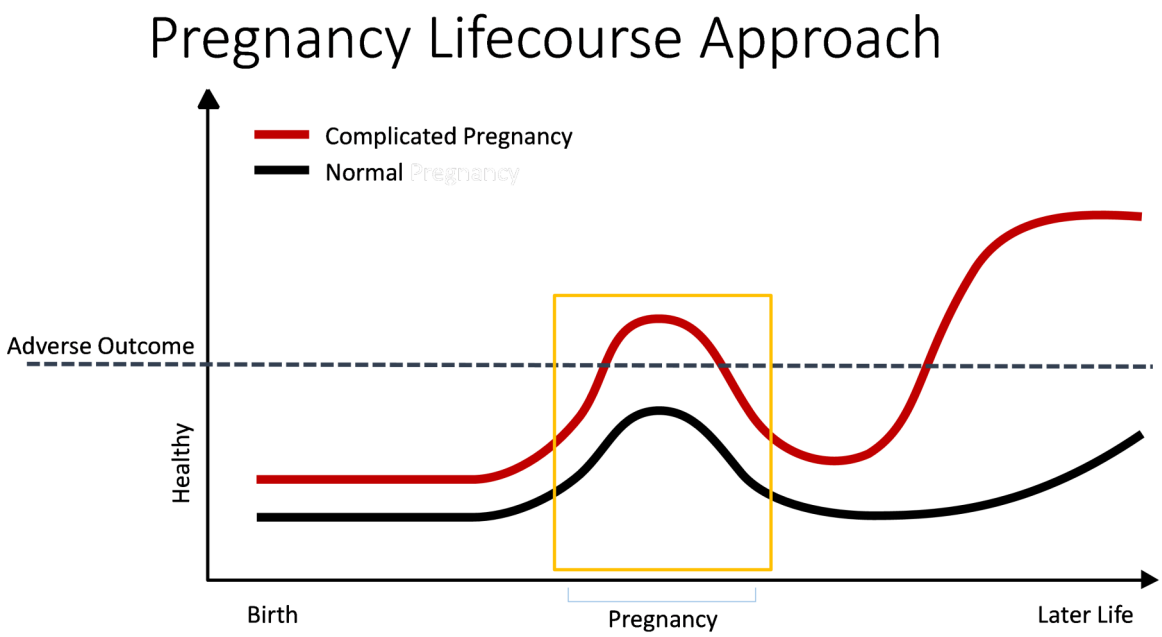


Figure 11. Source: Courtesy of Ebony B. Carter, MD, MPH.

In addition, there is growing interest in the doula model to promote healthy birth outcomes particularly among marginalized populations. Doulas are trained professionals who provide continuous support to mothers and families before, during, and after childbirth. Some MCOs are partnering with doula organizations in Missouri, such as Jamaa Birth Village in St. Louis, Uzazi Village in Kansas City, and The Doula Foundation in Springfield to reimburse their services for pregnant Medicaid beneficiaries. Doulas can improve the health of the mother and the baby through the life-course approach to childbirth. This is an emerging field of research, however doula services may help reduce the rates of gestational diabetes.

Gestational Diabetes Group Discussion

Participants in the gestational diabetes group were in favor of the Lifecourse approach to pregnancy. Moreover, they viewed reproductive-aged women as a population that should be targeted for preventative care to prolong wellness and prevent the development of health complications. This is in accordance with the Lifecourse model which suggests that attention and resources should be invested in the time periods before and after pregnancy to address pregnancy-related health disparities. Group participants agreed that expanding the insurance coverage associated with pregnancy care is a priority. However, the participants also felt that increasing the current eligibility for pregnant women from 60 days to one year postpartum, as has been proposed, is not sufficient on its own to eliminate adverse health outcomes contributing to maternal mortality. The participants felt that comprehensive Medicaid coverage should be available for all low-income women of childbearing age and that MCOs should invest in wellness and good health outcomes before pregnancy occurs.

Gestational Diabetes Group Discussion (Continued)

Attendees highlighted that those women who are at heightened risk of adverse outcomes prior to becoming pregnant can have those risks exacerbated by their pregnancy. They may then experience conditions such as gestational diabetes and other difficulties during their pregnancy. Stakeholders shared the importance of a proactive role for clinicians in conducting screenings to prevent gestational diabetes and thought that screening services for diabetes and obesity prevention should be incorporated into preconception care. They endorsed increasing access and reimbursement for community health workers and doulas. Further, this group believed that MCOs had a central role to play because they could reimburse for these services even when the Medicaid program does not explicitly include them as a mandatory covered benefit.

Group participants designed an innovative approach to increasing the care connectivity and early screening of women of childbearing age. Using the Lifecourse approach to pregnancy, the group advocated for the adoption of an enhanced annual wellness visit (EAWV) for women of childbearing age who are covered by the Medicaid program. This wellness visit would focus on identifying medical needs (such as glucose screenings) and social needs (such as housing, transportation, and childcare). In order for the provider to address the SDOH at this wellness visit, the participants suggested that providers form partnerships with other medical or social services that target SDOH in order to increase referrals for social needs among patients who have them. The group suggested that the provider would need to document this partnership with organizations providing for social needs, or show that referrals occurred and were resolved, in order to be reimbursed fully (i.e. for the enhanced wellness visit). Payment to providers could be value-based, adjusted by downstream quality outcomes such as the rate of development of diabetes or average number of NICU days. The proposed EAWV is modeled after the Early and Periodic Screening, Diagnostic and Treatment (EPSDT), which provides comprehensive coverage to kids under 21 in Medicaid. Importantly, every need identified in an EPSDT screen must be paid for, even if it is not coded for or is not normally covered by insurance/Medicaid. This proposed wellness visit program for women on Medicaid builds on the EPSDT to improve pregnancy outcomes before pregnancy occurs.

Participants mentioned some barriers that might need to be considered in implementing the group's recommendation. Among these barriers is the low reimbursement rate provided by Medicaid. In addition, an efficient way to implement an intervention is through MCO contract language, but contracts vary from state to state. Missouri's current contract was described as "vague" compared to that in other states, where there are often stricter rules and metrics which can guide MCOs towards innovation in a particular direction with the goal of improving a particular health outcome. Metrics for which MCOs are held accountable include NCQA metrics, accreditation metrics, and process-oriented metrics (like timeliness of prenatal care) – vs. outcomes-oriented metrics such as the percentage of babies with low or very low birth weight. One participant commented that there were no immediately obvious rewards for achieving quality outcomes.

Regarding the topic of reimbursement, attendees supported a value-based payment (VBP) system and bundled payments for prenatal care rather than fee-for-service (FFS). VBP systems can support outcome-based payments. Given the ongoing budget concerns of MO HealthNet, one participant noted that VBP could allow the provision of services to women enrolled in Medicaid in MO to be viewed as an opportunity for cost reductions through improved health outcomes rather than a liability with expected future high costs.

Obesity and Diabetes Breakout Session

Obesity can lead to diabetes due to improper insulin regulation as BMI exceeds 30. Diabetes can cause premature death; in a year, 277,000 premature deaths are attributed to diabetes.[21] SDOH burden is strongly associated with obesity through multiple pathways. For example, economic instability is associated with low healthy food spending, poor access to nutritious food, and unhealthy dietary habits [22-24]. Furthermore, individuals living in socioeconomically disadvantaged neighborhoods are more likely to be food insecure. These individuals may lack a grocery store in their neighborhood, transportation, or the knowledge on how to include healthy foods into their diet. These individuals may also be working long hours and resort to fast food due to time constraints. Those who do not have an identified primary care physician are less likely to be screened for diabetes and thus more likely to develop it. These barriers highlight the need for better Medicaid programming to target obesity and diabetes. An increase in access to diabetes care can reduce long-term costs on the Medicaid program because diabetes care is costly. People with diabetes in the U.S. incur an average of $16,750 in medical expenses yearly.[25]

Currently, there are programs in Missouri that aim to reduce the burden of diabetes. Missouri's Primary Care Health Home program (PCHH) is an initiative of the Center for Medicare and Medicaid Services (CMS). The CMS Health Home was designed to specifically target high-cost, high-need Medicaid patients with a focus on providing integrated physical, mental, and behavioral healthcare services, as well as connections to nonclinical services and community support [26]. Obesity and diabetes are each qualifying conditions for participants to be enrolled in a health home, and health homes are assessed in part according to how well they manage chronic conditions. Missouri PCHH teams must consist of a Health Home Director, Care Coordinator, Nurse Care Manager, and Behavioral Health Consultant (BHC);[27] They can include other staff, like pharmacists and nutritionists, according to local need, but their salaries are not included in the per-member per-month (PMPM) health home payment.

Another innovative approach to treating obesity underway in Missouri is the Biopsychosocial (BPS) treatment model. It is based on clinical evidence that suggests that the most effective treatment for obesity uses a multi-factorial approach. Specifically, this treatment is delivered by Registered Dieticians, Registered Dietician Nutritionists, and Behavioral Health Consultants with a specialist certificate in Weight Management. The services can be delivered for up to 12 months, focusing on integrated medical nutrition therapy (MNT) and behavioral health services. New benefit and procedure codes for the BPS treatment became available within MO HealthNet on September 1, 2021.

To date, few providers have completed the specialist training, and the billing code is not widely used. Importantly, the amount of treatment that has been authorized for reimbursement is at the minimum level of the recommended range and is based on studies of individuals in the general population who are of a higher SES than MO Medicaid enrollees and may have access to additional resources that the Medicaid participant does not (e.g., ability to pay for gym memberships, access to higher quality food sources, access to safer environments for exercise). This suggests that for the program to be effective in the Medicaid population, supplemental treatment resources may be needed. Additionally, there may be other barriers to providing this treatment that needs to be identified and addressed.

Obesity and Diabetes Breakout Discussion

Participants in the Obesity and Diabetes Breakout Discussion proposed a strategy of integrating the Biopsychosocial model into the Primary Care Health Home program. This group favored this program because the biopsychosocial treatment model relies on the Medicaid participant to develop healthy behaviors, and behavioral change is best facilitated in the home, which is the direct environment where participants will be creating meals and expressing other healthy behaviors through the program.

The group identified several challenges to the ongoing programs in Missouri.

- First, there are not enough providers to deliver the level of BPS that is needed, due to strict licensing and certification requirements for BPS.
- Furthermore, group participants considered adequate payment for providers to be the main challenge, given that nutritionist or dietician salaries are not included in the per member per month Medicaid PCHH payment.
- Also, patients may not be able to follow the BPS treatment recommendations, such as going to the gym, for a variety of reasons, and there is a lack of incentive for participants to take steps to improve their health in the near term to avoid needing treatment in the long term.
- Finally, several attendees agreed that there is inconsistent data collected on SDOH, leading to issues in how the program meets participants' social needs.

Attendees discussed several ideas to address these barriers.

- Alternative licensing processes can facilitate training other professionals, such as community health workers, to help in delivering the program.
- Community health workers may be more equipped to address the SDOH burden Medicaid recipients face.
- Peers who have been successful in the program could be utilized as coaches and motivators.
- A performance component could be integrated into the combined BPS-PCHH model to help cover additional provider types and services in a flexible manner.
- Compensation and reimbursement need to be better aligned at all levels to ensure flexibility and clarity for providers.
- Attendees discussed automatically enrolling individuals who are diabetic or obese that enter health homes into the BPS treatment and using the PCHH model for extended maintenance.

Missouri Medicaid spending is higher than the national average and its population still has some of the highest rates of diabetes and obesity. Although these issues are not new, the trends of rising prices and deteriorating health rankings are concerning, particularly given that the state's Medicaid program has recently expanded to include all individuals with household incomes below 133% of the Federal Poverty Level. This expansion of the Medicaid program could result in over 250,000 new Medicaid beneficiaries. Given Medicaid expansion and MO HealthNet's commitment to "Medicaid Transformation," now is a good time for the state to reassess how it can better serve this low-income, vulnerable population while keeping costs manageable.

The ever-present challenge for MO HealthNet is to improve the deteriorating health of its Medicaid population while maintaining a manageable budget. The Medicaid expansion population is expected to be generally healthier than the current Medicaid population, but it is still extremely likely that many of them will be dealing with the common chronic diseases of our time, such as obesity, hypertension, and diabetes. Despite the fact that these illnesses have a long latency period, they are risk factors for more severe and expensive conditions, such as cancer, heart attack, and stroke. Nevertheless, with the right medical care, medications, and lifestyle adjustments, many disorders can be effectively treated.

Across the speakers' presentations and breakout discussions, a few key themes emerged. To combat obesity and diabetes, programs and policies must focus more on prevention and early detection.

To counter them within the Medicaid population, innovative approaches centered in the community that identify and address barriers related to the SDOH are needed. The new focus on upstream factors like SDOH will be helpful for preventative efforts by allowing intervention earlier in the disease course. Moreover, effective community partnerships are crucial for improving health outcomes in communities by establishing a shared vision and value, enhancing community influence over outcomes, and encouraging multi-sector collaboration.

Furthermore, new payment strategies need to encourage innovative approaches that focus on upstream causes, provide social support in various forms, and inspire individuals to prioritize their own health. Participants across breakout sessions articulated many versions of the idea that value-based payment is needed to shift the conversation. True value-based payment, which pays for specific, measurable outcomes, can change the incentive structure across Missouri healthcare payers, providers, and patients. Within Missouri Medicaid, this type of shift can direct significant additional resources toward addressing the root causes of poor health in a targeted and measurable way. Within a well-designed value-based payment approach, cost-effectiveness is ensured, and the state can potentially achieve better overall health outcomes and less utilization over the long run than with the current fee-for-service system.

BPS: Biopsychosocial

BSM: Behavioral Skills maintenance

BHC: Behavioral Health Consultant

CHW: Community Health Worker

DPP: Diabetes Prevention Program

d-DPP: Digital Diabetes Prevention Program

DSS: Department of Social Services

DMH: Department of Mental Health

EAWV: Enhanced Annual Wellness Visit

EPSDT: Early and Periodic Screening, Diagnostic and Treatment

FSD: Family Support Division

FQHC: Federally Qualified Health Centers

FBT: Family Based Treatment

FFS: Fee for Service

ICU: Intensive Care Units

IMV: Intermittent Mandatory Ventilation

MNT: Medical Nutrition Therapy

MO AAP: The Missouri Chapter, American Academy of Pediatric

MO AND Missouri, Academy of Nutrition and Dietetics

MPCA: Missouri Primary Care Association

mHealth: mobile health

MBC2: Make Better Choices 2

MCOs: Managed Care Organizations

NICU: Neonatal Intensive Care Unit

N**CQA**: National Committee for Quality Assurance

PAT: Parents as Teachers

PCHH: Primary Care Health Home program

PWMI: Pediatric Weight Management Interventions

PCPs: Primary Care Providers

PLAN: Primary care pediatric, Learning, Activity, and Nutrition

PMPM: per-member per-month

SBCs: School-Based Clinics

SDOH: Social Determinant of Health

SFM: Social Facilitation Maintenance

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AUTHORS

Abigail Barker, PhD;

Hadeer Hegazy, MsC, BCNSP, BS Pharm.;

Ethan Bradley, MPH; Leah Kemper, MPH

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