Missouri’s Efforts to Expand System Based Supports for Childhood Obesity Treatment
Today’s Objectives

- Understand factors that lead to 5 overarching recommendations to prevent and treat childhood obesity
- Review evidence for supporting treatment for childhood obesity.
- Review Missouri HealthNet Division’s actions to expand Medicaid coverage.
- Review steps to expand and support Missouri’s health care workforce capacity.
- Describe Missouri’s long view to—
  - Integrate prevention and treatment through Missouri Council on Activity and Nutrition
  - Establish community capacity supports through Centers of Excellence
Background

How did we get to this juncture?
The problem

State
- Relevant child care standards have not been updated since 1993
- Limited supports for school health and wellness standards
- Limited capacity and access to obesity treatment
- Lack of connections between prevention and treatment

Broader
- Health Inequities
- Food insecurity
- Social Determinants
- Obesogenic environment

- 1 in 3 US children and teens have overweight or obesity
- 29% of MO 10-17 year olds have overweight or obesity
- 13% of MO 2-5 year olds have obesity
- Higher risk for chronic diseases
- National costs of childhood obesity are estimated at $14 billion
MO Children’s Service Commission (CSC) Establishes Childhood Obesity Subcommittee

- Invited broad group of stakeholders
  - State agencies (education, health, MHD), academic healthcare institutions, MO AAP, lead child care agency, funders
- Secured facilitator and report writer
  - Small grants from:
    - Health Care Foundation of Greater Kansas City
    - Missouri Foundation for Health
- Convened Subcommittee monthly in 2014
- Drafted recommendations
- Conducted 4 public forums for community input
Subcommittee recommendations to address the problem

Criteria for recommendations:

- Actionable by state legislature/government
- Feasible--able to be implemented within 2 years
- Evidence-based
- Potential for a statewide impact
Critical to the Health of Our Children: Missouri’s Actions for Addressing Childhood Obesity

- December 2014: Revised and presented to CSC
- April 2015:
  - Presented at statewide conference
  - Compiled publication with recommendations and rationale
    http://extension.missouri.edu/mocan/childhoodobesity/
Denise E. Wilfley, PhD
Washington University
St. Louis, Missouri

How did evidence lead us to this juncture?
Subcommittee recommendations to address the problem

Focus Areas for Priority Actions

- Child Care
- Community
- Child Health & Wellness Commission Aligns Actions
- Schools
- Treatment
Subcommittee’s Recommendation - Treatment

Reimburse licensed professionals with specialized training in family-centered, evidence-based, multi-component weight reduction programs through all Medicaid plans. Reimburse services provided in health care or community settings for children who have overweight or obesity.
RECOMMENDATION: The USPSTF recommends that clinicians screen for obesity in children and adolescents 6 years and older and offer or refer them to comprehensive, intensive behavioral interventions to promote improvements in weight status. (Grade B).

Recommended Interventions
Provide or refer patients to comprehensive behavioral interventions (≥26 contact hours) over a period of up to 12 months to improve weight status.

Height and weight, from which BMI is calculated, are routinely measured during health maintenance visits.
<table>
<thead>
<tr>
<th>Source</th>
<th>Estimated Contact Hours Through 12 mo</th>
<th>Months Since Randomization (Month Since End of Treatment)</th>
<th>Intervention</th>
<th>Change From Baseline, Mean (SD)</th>
<th>Control</th>
<th>Change From Baseline, Mean (SD)</th>
<th>Standardized Mean Difference in Change From Baseline (95% CI)</th>
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<td>van Grieken et al. 2013</td>
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Mounting Evidence for Treatment
Support for Higher Dose

- Meta-analyses and systematic reviews demonstrate the positive effects of comprehensive, family-based interventions on child weight and cardiometabolic outcomes.
- Dose, such as duration, number of sessions, and time in treatment, has been found to be positively related to outcome.

Family-Based Treatment (FBT): A Time-Tested Approach

- Active Parent Involvement: Epstein et al., 1980
- Behavior Change > Education
- Lifestyle or Aerobic Activity > Calisthenics
- 5 and 10-year outcomes: Epstein et al., 1990; 1994
- Reducing Sedentary or Increase Activity
- Stimulus Control or Reinforce Reduced Sedentary: Epstein et al., 2000; 2004
- Increase Healthy Eating and Decrease Variety of HED Foods
- Maintenance Sessions Focused on Socio-environmental Context: Wilfley et al., 2007; 2017
Childhood Obesity Requires Sustainable, Long-lasting Treatments

• Family-based intervention
• First large-scale weight loss maintenance study in children
• Social facilitation approach produced significantly greater:
  – Weight loss maintenance
  – Psychosocial improvements
• Parent success is associated with child long-term success

Wilfley et al., 2007, JAMA; Goldschmidt et al., 2011, Pediatr
Dose, Content, and Mediators of FBT

- SFM⁺ High greater weight loss maintenance than SFM⁺ Low ($p=.02$)
- SFM⁺ High and Low both yielded significantly greater weight loss maintenance than Control ($p<.001$ and $p=.02$, respectively)
- Behavioral and socio-environmental components mediated outcomes

Wilfley et al., 2017, *JAMA Pediatr*
SFM\(^+\) Produces Higher Rates of Clinically Significant Outcomes

- A reduction of $\geq 9$ units in percent overweight improves body composition and metabolic risk factors
- SFM\(^+\) High yielded significantly greater achievement of clinically significant reductions in %OW than SFM\(^+\) Low (NNT = 5.56; $p = .03$) and Control (NNT = 2.94; $p < .001$)

Wilfley et al., 2017, *JAMA Pediatr*
Benefits of Family-Based Behavioral Treatment

- Demonstrated effectiveness for youth with obesity
- Provides concurrent treatment for parent with obesity and can generalize to other family members
- More cost effective than separate treatment of parent and child with obesity
- Can be individualized and produces positive psychosocial benefits
- Can be implemented with 2-18 years of age and in diverse settings like primary care
- Family-based interventions could be used to treat: obesity in multiple family members, obesity and comorbidities in multiple family members, and obesity in the parent and prevention of obesity in youth
Expanding the Reach of FBT

PLAN (Primary Care Pediatrics, Learning, Activity, and Nutrition) with Families

- First large scale trial of FBT as compared to usual care in primary care settings
- Over 500 families will participate from Buffalo, Columbus, Rochester, and St. Louis
- Evaluation of generalization of effects in family members & delayed discounting as a moderator
- NHLBI #1U01HL131552-01

PCORI-funded FBT Trial

- A Pragmatic-Family Centered Approach to Childhood Obesity Treatment
- Comparing American Medical Association enhanced standard of care (eSOC) vs. eSOC + FBT and treatment moderators (i.e., race, sex)
- Over 1200 families will participate (Baton Rouge, Rochester, St. Louis)
- Inclusion of multiple stakeholders (e.g., families, providers, payers)

https://www.pcori.org/research-results/2018/pragmatic-family-centered-approach-childhood-obesity-treatment
Obesity in Childhood Tracks into Adulthood

Adult Obesity Rate by State, 2015

Select years with the slider to see historical data. Hover over states for more information. Click a state to lock the selection. Click again to unlock.

Percent of obese adults (Body Mass Index of 30+)

Target our Resources to Areas of High Disease Prevalence

Midwest has the highest prevalence of adult metabolic syndrome, obesity, and diabetes

- Targeting of prevention and treatment for children with obesity could decrease future health risks and associated costs
- Institute of Medicine has suggested targeting of resources to geographical locations with high prevalence

Fig. 1: Prevalence of obesity, metabolic syndrome, and diabetes by US census division. Data shown for prevalence of a) obesity, b) metabolic syndrome, and c) diabetes among US adults aged 20–65 years, from the National Health and Nutrition Examination Survey, 1999–2014.

Gurka, 2018, Nutr Diabetes
Evidence Builds* Systems of Care Model for Obesity Prevention and Treatment

Dietz et al., 2015, Health Affairs

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1 Established through supports for the treatment component
2 Strengthened through actions taken on treatment component and establishment of regional centers of excellence
3 Strengthened through actions taken outlined in proposal recommendations (i.e., child care, schools, centers of excellence, treatment) and establishment of regional centers of excellence to enhance community capacity
4 Functions and role for Commission on Children’s Health and Wellness
5 Mo HealthNet changing state regulations to allow coverage for obesity treatment.
Innovations In Missouri Medicaid and the Translation of Research into Policy: Considerations for Childhood and Adult Obesity Evidence-Based Intervention
Innovations In Missouri Medicaid and the Translation of Research into Policy: Considerations for Childhood and Adult Obesity Evidence-Based Intervention

Samar Muzaffar, MD MPH
Missouri Department of Social Services
MO HealthNet Division
Medical Director
MHD Population

- Roughly 900,000 MHD participants
- Roughly 3/4 in Managed Care
- Roughly 1/4 in Fee-For-Service
- Roughly 1/3 Adults
- Roughly 2/3 Children
Overview

• MHD Obesity Rates
  – System Limitations
    • MHD uses a claims based system
    • BMI not reported to the MHD system unless part of a claim
  – Data Sources for Modelling
    • Adults:
      – MHD Primary Care Health Home
        » 74% BMI>25 in 2013; 83% 2017 (eligibility change)
        » 50% with Obesity in 2013; 60% in 2017 (eligibility change)
      – CDC 2010 National obesity prevalence 36%
      – MO BRFSS obesity prevalence ~30%
    • Pediatric, low-income (<130%)
      – CDC/NCHS prevalence 21.1% boys 2-19; 19.3% girls 2-19
Clinical Correlations

• 1% point decrease in HbA1c yields:
  o 21% decrease in Diabetes related deaths
  o 14% decrease in Heart Attacks
  o 37% decrease in micro-vascular complications

• A 10% Cholesterol Reduction yields:
  o 30% reduction in Coronary Heart Disease

• A 6 point reduction in Blood Pressure yields:
  o 16% reduction in Coronary Heart Disease
  o 42% reduction in Stroke

• Hennekens, C. Circulation 1998; 97:1095-1102
Overview

• Impacts
  – Financial
    • Each Medicaid beneficiary with obesity on average costs $1,021 more than normal weight beneficiaries (Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: Payer-and service-specific estimates. Health Affairs. September/October 2009;28(5):w822-w831. doi: 10.1377/hlthaff.28.5.w822.)
    • Pediatric: Missouri will expend $12 billion annually on obesity-related health care costs by 2030 (CSC Childhood Obesity Task Force Report, 2014)
Policy Considerations

• Goals
  – Follow evidence-based guidelines and standards
  – Positively impact morbidity, mortality, quality of life
  – Maintain cost-effectiveness; awareness of budget limitations and potential impacts
  – Develop models for different methods of implementing a service
    • Assess fiscal impact of the conditions
    • Assess fiscal impact of proposed interventions
      – Cost-neutral or cost-saving? Budget impacts generally require appropriations authority
      – Assess short- and long-term impacts- clinical, fiscal
    • Mechanism to evaluate outcomes
  – Attain approval or appropriations authority to implement the policy change
Policy Considerations

• Resources and Reference Points include:
  – National Programs (example Medicare)
  – Other State Programs
  – National and State bodies of expertise (ex. ACOG for EED, USPSTF, etc)
  – Academics/Research
  – National Guidelines and Literature
    – Application of Evidence-Based Treatment Guidelines for Pediatric and Adult Obesity
      – United States Preventive Services Task Force (USPSTF) Recommendations
        » Adults: Screen all adults (18 and older); refer to intensive, multi-component behavioral therapy for BMI 30 or greater
        » Pediatric: Screen all children 6 years and older; offer comprehensive, intensive behavioral intervention
MHD convened subject matter experts work group to provide input to the process

Work group includes individuals from pediatric hospitals and academic centers

Consensus process for building evidence-based program

Modeling Process
- Identify Services
- Identify Population
- Identify Provider Requirements
- Identify Codes
- Identify Costs/Projected Savings
Services, Population, and Coding

• Services
  – Intensive Behavioral Therapy
  – Mix of individual, family, and group sessions
  – Frequency in current modeling (USPSTF recommendations as base)
    • Minimum 12 hours for adults (following Medicare program)
    • Minimum 26 hours for children
  – Opportunity to continue for additional 6 months if benchmarks met

• Population
  – Adults
    • BMI 30 or greater
  – Children
    • Ages 6-18
    • Age and gender-specific BMI greater than or equal to 95th%

• Coding
  – In initial modeling, have identified a starter set of codes
  – Additional discussion pending as model continues in development
Provider Requirements

• Provider Types
  – Registered Dieticians
  – Behavioral Health Specialists
  – Others under consideration

• Certification Requirements
  – State Process?
  – National certification?
  – A state process and certification should be on par with a national option (ex. Asthma Educator Certification)
  – Consider continuing education requirements, hours of work experience, mentoring relationships
Developing Models

• Steps (often in parallel, not sequential):
  – Define the issue; garner support
  – Modeling
  – Approval and appropriations authority
  – State Plan Amendment
  – Regulation development
  – Systems work
  – Provider Enrollment systems work
  – Provider recruitment
  – Outcomes evaluation
Developing Models

• Partner Programs: Diabetes Prevention Program
Preparing the workforce

Sarah Hampl, MD
General Pediatrics and Weight Management
Children’s Mercy Kansas City
Center for Children’s Healthy Lifestyles & Nutrition
Professor of Pediatrics
University of MO-Kansas City School of Medicine
Solving the treatment gap
A few MO challenges and strengths

- Largely rural state with few treatment options
- Limited national models specific to how states address childhood obesity treatment
- No existing partnership for childhood obesity treatment between state professional organizations
- Underdiagnosis of obesity
- No national certification for family-based behavioral treatment
- Strong state-level professional organizations interested in doing more for childhood obesity
- MO Council on Activity and Nutrition—established coalition
- Existing statewide care model—Autism Centers
- Committed partners in multiple sectors
- Wash U team recognized as FBT experts, experienced in FBT training
Nuts and bolts

This Photo by Unknown Author is licensed under CC BY-NC-SA
MHD’s Pediatric Obesity Treatment: How might it work?

PCP sees patient with obesity, begins recommended assessment/management and screens for eligibility, interest in family-based program

PCP refers to registered dietitian and behavioral therapist for initial individual evaluations, arranges for follow-up visit

Patient/family see RD and behavioral therapist, recommendations are shared with family and PCP

Patient/family begin group family-based behavioral therapy

Patient/family have individual re-evaluations by RD and behavioral therapist at mid- and/or end of treatment, progress is shared with PCP

PCP visits with patient/family and decides on continued family-based behavioral therapy and medical nutrition therapy

baseline

6 months

12 months
Filling the Gap

• Prepared medical providers to diagnose, treat and refer
• Established training and certification processes for behavior interventionists to provide FBT
• Prepared licensed dietitians
• FBT and MNT referral and care coordination system
• Strategic and consistent messaging
Pilot grant to build capacity

- Convene a healthcare advisory group
- Develop MO-specific best practices for treatment training for key healthcare professional stakeholders
  - Medical Providers
  - RDs
  - Behavioral Health Providers
- Modify training after pilot
- Create sustainability plan to reach more providers
Established Health Care Advisory Group

Member Roles

• Provide input on pilot, from recruitment to delivery methods to evaluation
• Represent varying perspectives--professional and safety net organizations, universities, obesity treatment providers, state agencies, MOCAN, other key stakeholders
• Create plan for replication and sustainability
• Inform broader plans for obesity treatment and prevention
Medical training curriculum components

- Overview of obesity treatment package
- National and state obesity epidemiology
- Current evidence-based best practices in obesity assessment and management
  - American Academy of Pediatrics Institute for Healthy Childhood Weight
  - Person-first language, awareness of bias
  - Motivational interviewing
- Treatment package details
- PCP role in patient identification, referral and care coordination, solicit ideas
- Training outcomes
- Treatment resources (AAP, CME/MOC, others)
- Continuing medical education credit for training
Medical training recruitment partners and targets

Recruitment partners

- CMH Integrated Care Systems and Pediatric Care Network
  - Existing learning collaborative
- Health Care Advisory Group members
  - MU Health Communications Dept.
  - MO AAP

Target medical providers

- Large portion of population insured by Medicaid
- Settings where pediatric PCP is likely co-located with RD and/or behavioral health provider
- FQHCs and Safety Net clinics
- MHD Health Homes
- PCMH
Medical provider training status

- 3 trainings held, 49 medical providers
- Have videotaped training for which medical providers can receive CME
- Future plans made for presenting
  - MO AAP conference in Columbia on September 14, 2018
  - Clinical Advances in Pediatrics in KC on September 26, 2018
Dietitian training status

- Existing AND-CDR Certifications
- MOAND membership needs assessment conducted
- MOAND partnership for recruitment
- Curriculum/ Resources developed
- 2 trainings with ~50 RDs
- In-person and videotaped training
- Treatment scope of practice issues
FBT Provider training status

- Providers eligible to be reimbursed by MO HealthNet: Licensed psychologists, professional counselors, clinical social workers
- Need for Certification Process
- Plans for Curriculum/ Resources
- Longer in-person training and follow-up supervision
- Recruitment through state professional associations, local provider groups
- Initial trainings planned for September and December
Engaging other insurers

- Investing now saves healthcare dollars in future
- Hope that coverage can be expanded to children insured commercially
- Alliance for a Healthier Generation
- My Healthy Weight initiative
Donna Mehrle, MPH, RD
University of Missouri-Columbia, MO
Council on Activity and Nutrition

Deborah Markenson
Children’s Mercy
Subcommittee’s Recommendation

Establish a **Commission on Child Health and Wellness**, supported by the Mo Department of Health and Senior Services, to oversee implementation of the subcommittee’s recommended actions, study effectiveness of obesity prevention strategies, and provide an ongoing forum for education and future actions. The commission will include delegates from state agencies and others representing health care professionals, scientists, community-based prevention specialists and families.
Commission’s Mission

Why should this group exist?

- Obesity is a complex medical, social, economic, and environmental problem.
- We need an effective means to foster collaboration on implementation of priority recommendations to address the changing needs of children and families in Missouri.
- Strengthen and align services and policy to support efforts.
Steering Committee Convened to Create Viable Structure

- Review the options
- Analyze and pick best option
- Flesh out details, e.g., guiding principles, functions, mission-vision
Mo Council on Activity and Nutrition (MOCAN) Assuming Commission Functions

- Best option in Missouri at this time - Builds on mature coalition with ten year history
- Adding new coordinator (Summer 2018)
- Formally evaluating MO CAN members’ collaboration (Wilder Inventory Factor Tool) to inform planning (Summer-Fall 2018)
- Fleshing out plans to fulfill commission functions and mobilize MOCAN members (Ongoing)
What are the potential goals

- Improve cross-sector collaboration to innovatively plan and implement successful interventions that improve children’s health. Sample action:
  - Collectively discuss new evidence and best practices and determine translation and adoption strategies and tactics.

- Improve understanding of problem and proven solutions through ongoing forums. Sample actions:
  - Present latest on evidence-based prevention and treatment approaches,
  - Identify best ways to disseminate information about new approaches.
  - Recommend state policy to improve children’s health.
Subcommittee’s Recommendation

Establish **Centers of Excellence across Missouri** to assure regional, coordinated access to treatment: provide evidence-based weight management services; training health care providers; school staff and others about screening, treatment, referral coordination and prevention strategies; and support research to improve approaches.
Centers of Excellence

- Coordinate care
- Train providers in evidence-based obesity treatment
- Train community partners in evidence-based prevention strategies
- Support research and disseminate new findings
- Provide evidence-based obesity treatment
- Build partnerships
- Train providers in screening and referral practices
Models of Care: Missouri ASD Centers (2007–2008)

Child Population Under 18 by County, 2006

Number
- 402 - 5403
- 5,004 - 15,025
- 15,820 - 32,401
- 30,492 - 90,713
- 90,714 - 288,340
- Missouri - 1,416,592

Source: Missouri Department of Health, sheriffs and police
Prepared by: University of Missouri and Children’s Office of Sustained Economic Data Analysis (OSED)
Report generated on 01.01.2008
# Why Consider ASD Models of Care?

<table>
<thead>
<tr>
<th></th>
<th>ASD</th>
<th>Obesity</th>
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<tbody>
<tr>
<td>Effective behavioral treatments have emerged</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Family involvement is critical</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Early intervention is the best approach, but children are often not identified in a timely way</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Inadequate number of providers to meet the need for evidence-based treatment</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Readiness for change in systems of care through collaborative partnerships</td>
<td>✓</td>
<td>✓</td>
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## Outcome Evaluation

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Indicator</th>
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</table>
| 1. Active Health Care Advisory Group & Commission                       | # Meetings  
# members by type                                                                                   |
| 2. Medical Provider training                                            | Curriculum/resources developed  
# reached & trained  
Qualitative feedback  
# and types of clinics participating                                      |
| 3. Compendium of tools & resources                                      | Availability and forms                                                                              |
| 4. Patients receiving covered services from certified providers using Medicaid claims data | # patients receiving FBT and MNT referrals  
# patients receiving obesity dx pre-and post training                                               |
| 5. FBT provider training & certification process                        | # reached & trained  
Certification process trialed  
# certified  
# claims filed                                                            |
| 6. Dietitian training                                                   | # reached & trained  
# claims filed                                                                                     |
| 7. State plan for replication and sustainability                        | Report and plan complete                                                                            |
What Else Do We Need to Discuss?
Grant Team

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