

1. Health Care Payment Reform in Tennessee: Episodes of Care

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With the cost of health care in the U.S. being a major concern, the state of Tennessee has implemented a value-based health care model that rewards health care providers for high quality and cost-efficient care. TennCare, Tennessee's Medicaid system, received a \$65 million State Innovation Model grant from the Centers of Medicare and Medicaid (CMS) in 2013 that was used to fund three payment reform initiatives: primary care transformation, episodes of care (EOC) and long-term services and supports. EOC is a specific type of payment reform that seeks to align provider and patient incentives to produce high-quality, low-cost care for chronic and acute conditions. EOC works in tandem with the Managed Medicaid system to increase accountability and transparency for providers by rewarding quality care and sending personalized quarterly reports. The EOC program results are measured both qualitatively and quantitatively. Stakeholder feedback sessions are held to discuss what is working well and what needs improvement for each episode. For episodes in the financial accountability period, the cost savings are measured. For the first three episodes, the state saved over \$11 million in one year due to the program. The program plans to implement more than 70 episodes by 2019.

2. Attitudes toward addiction as a disease in a southeastern rural county with high prevalence of illicit drug use

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The American Society of Addiction Medicine (ASAM) defines addiction as a primary, chronic disease that is progressive and without treatment or engagement in recovery, can lead to disability or death. Despite acceptance of this definition in the medical field, community-dwelling individuals continue to harbor bias against individuals struggling with addiction, which can lead to stigma and discrimination. The purpose of this study is to examine the extent to which individuals living within a county with reported high levels of illicit drug use acknowledge addiction as a disease. The Perceived Stigma of Substance Abuse Scale is a 4-point Likert scale that measures participant views on addiction. It was adapted into an online survey and distributed in Grundy County, TN. The responses will be analyzed on an item by item basis using SPSS statistical software and descriptive statistics will be reported. Preliminary statistics show that the drug mortality rate of Grundy County, TN was 35/100,000 in comparison to the overall state which was 18/100,000. Additionally, 81% of admissions to a drug treatment facility involved an addiction to opioid prescriptions. We predict that individuals from Grundy County

will exhibit bias against individuals struggling with addiction and not recognize addiction as a disease.

3. Evolution of the Home Health Market: The Role of Chains and the Association of Chain Status with Quality Care

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Home health accounted for about \$17.7 billion of Medicare spending in 2014 and has been one of the fastest growing service categories over the last decade. Surprisingly, there is limited research characterizing the home health market and factors that impact quality care. To inform policy and increase transparency, this study focuses on the evolution of home health industry. We used Medicare cost reports to analyze the home health market from 2005 to 2014 in terms of agencies' profit and chain status. We also assess the relationship between profit and chain status with quality of care using CMS' Home Health Star Rating data. The Medicare home health market is dominated by for-profit agencies (2014: 80.5%). For-profit chains showed the fastest rate of growth increasing from serving 13.0% of the all home health enrollees in 2005 to 26.6% in 2014 (Exhibit I). After controlling for enrollee age, sex, case mix, dual beneficiaries and profit-status, chain status was found to be significantly associated with approximately a 0.5 star increase in quality star ratings. Chains are playing a more prominent role in the home health sector and although this growth has spurred concerns in other sectors, chain status is associated with better quality outcomes.

4. Taking Action to Prevent Prediabetes

Dorothy E. Simmons, M.A.Ed.

Background

Diabetes increased in Tennessee due to overweight status and limited physical activity. A nutrition education/cooking school called "Taking Action to Prevent Prediabetes (TAPP)" is designed as primary prevention for people who are likely to be diagnosed with Type 2 diabetes. When funded, TAPP will be offered in two Tennessee Counties for people who are overweight, family history of diabetes or gestational diabetes.

Objectives

TAPP's program objectives are to provide nutrition education for least 300 people and to provide information about physical activity for caloric balancing.

Method

A kick-off event will initiate the TAPP program. Participants will attend one 2-hour nutrition education and cooking session monthly for 3 months. Program participants will complete

lessons on a website (being developed) the next 3 months. TAPP will conclude, after 6 months, with an evaluation and awards' session.

Expected Results

Three hundred participants completed the TAPP program. Fifty percent of participants attended the cooking school. The posttest showed at least a ten percent increase from baseline of enrollees who reported 150 minutes of physical activity weekly.

Conclusion

TAPP can be cost-effective by reducing prediabetes. This will help decrease health care cost.

5. HUMAN MILK BACTERIAL LEVELS IN RESPONSE TO YOGURT SUPPLEMENTATION

Laura L. Schmutzer, MS, RD, LDN; Autumn Marshall, PhD, RD; and Bonnie Millimaki, PhD

Breast milk is known to be the perfect food for most babies. Human milk has essential nutrients, of course, but the role of prebiotics and innate live bacteria within breast milk is only beginning to be understood. The goal of this research is to explore and raise awareness of this little-understood area of breastfeeding in order to inform and inspire parents and caregivers who, when educated about breastfeeding, can take away these simple facts: breast is best and eating yogurt is beneficial for both you and your baby. Recent advances in science tell us that infants depend on microorganisms for proper immune system development. Breast milk is an excellent source of endogenous and probiotic bacteria for the baby from his or her mother. In breast milk, there is a diverse network of living organisms. This exploratory study examined whether or not it is possible to alter the bacteria present in a mother's breast milk by ingesting yogurt. We attempted to determine via DNA extraction and subsequent PCR identification whether or not probiotic bacteria, delivered via yogurt supplementation in the diet, can alter bacterial species in breast milk. The examination of bacterial species present in breast milk of supplemented mothers indicated that the probiotic microorganisms could have enhanced the mother's milk. The results of this descriptive study indicate a trend toward probiotic change, although the difference was nonsignificant.

6. DESCRIPTIVE STATISTICS FOR STRATEGIES USED BY HEALTHCARE FACILITIES IN TENNESSEE TO ACHIEVE 90% INFLUENZA VACCINATION AMONG HEALTHCARE PERSONNEL

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Background: National survey data has shown the rate of influenza vaccinations among healthcare personnel (HCP) to be 70%; the Healthy People 2020 goal is 90%. The National Healthcare Safety Network (NHSN) allows healthcare facilities to track influenza vaccination of HCP and methods/strategies used to promote vaccination.

Objective: This study investigated which strategies were associated with healthcare facilities in Tennessee reaching the goal of 90% influenza vaccination among HCP.

Methods: NHSN data from the 2015/2016 flu season were used to compare HCP vaccination rates among different types of healthcare facilities in Tennessee: Long Term Acute Care (LTAC), Acute Care Hospitals (ACH), Outpatient Dialysis (OD), Inpatient Psychiatric Facilities (IPF), Inpatient Rehab Facilities (IRF) and Ambulatory Surgery Centers (ASC).

Results: ACHs were more likely than other facility types to reach the 90% goal by using strategies including, requiring receipt of vaccination as a condition of employment (Relative Risk (RR):2.85;95% Confidence Interval (CI):1.80-4.50) and sending reminders through mail, E-mail, and/or paper (RR:3.22;95%CI:0.88-11.86). IRFs were more likely to reach the 90% goal compared to other facility types by requiring receipt of vaccination for credentialing (RR:2.5;95%CI:0.45-13.91).

Conclusion: Healthcare facilities requiring flu vaccinations as employment conditions and credentialing are more likely to reach 90% vaccination among HCP.

7. Reducing Premature Births: A 17P pilot project

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Evidence has shown 17-alpha hydroxyprogesterone caproate (17-P) can significantly reduce the chance of preterm birth in a woman that has had a previous preterm birth. The goal of this project was to screen and refer eligible women for 17P to prevent preterm birth. Four pilot sites were utilized in Tennessee to educate, screen and refer women, if appropriate, as possible candidates for 17P. Pilot sites were provided a toolkit including a screening tool, informational handout and a tracking tool. The tracking tool was utilized to track the number of women screened, number potentially eligible and number that actually received 17P.

Each pilot site conducted screenings through family planning, WIC and clinic visits at the health departments. Women were asked a series of questions to determine if they were eligible for the injections. Of women that screened potentially eligible, further follow-up was conducted to learn about treatment, barriers and facilitators.

The poster will highlight data from the four pilot sites including the number of women screened, number eligible, number that actually received 17P and barriers to receiving 17P.

8. 2016 Tennessee Older Adult Food Insecurity Study

Hannah Weber

More than twenty-four percent of Tennessee's population will be 60 and older by the year 2030. This changing demographic will have a profound impact on the demand for social services, especially the need for adequate and culturally appropriate nutrition assistance, as Tennessee boasts the second highest senior food insecurity rate in the U.S. The 2016 Tennessee Older Adult Food Insecurity Study sought to assess the population's food security level and potential relationship to overall health status through a random sample of 434 lower income older Tennesseans. Each participant completed a telephone questionnaire that gathered basic demographic information, health information, and household income levels. Descriptive analyses of food security level and health status were used to assess any potential relationship between nutritional risk and health outcomes. Among this population, food insecure older adults posed an increased risk for chronic disease. Additionally, a significant number reported health-related issues as barriers to purchasing and/or preparing food. These results support previous findings that older adults in Tennessee are vulnerable to nutritional risk and suggest that food insecurity poses a variety of risks for the future of Tennessee.

9. FRESHMAN FIT & STUDENTS' PERCEPTIONS OF THEIR HEALTH BEHAVIORS

Courtney Pruitt and Michael Rankins, Middle Tennessee State University

Over the past few years student engagement has been a major area of assessment for many universities due to its correlation to effectiveness. By focusing on student engagement, universities hope to increase students' retention and graduation rates and many universities are focusing their programming around this idea. Campus recreation programs play a vital role in involving and incorporating students in campus life, and it aids in the development of well-rounded students, while aligning with the model of student engagement.

The purpose of this proposed study is to explore the way in which college freshman that participate in the Freshman Fit program make meaning of their behaviors, specifically risky behaviors such as binge drinking and eating, in relation to their health, at Middle Tennessee State University.

Methodology

This study will use focus groups, as it's main method to collect data from the participants. In attempt to examine the relationship with campus recreation, health values, student engagement, and alcohol consumption, I will interview college students and work to interpret the information they share.

Future Implications

University administrators and staff across campus need to work together to create a comprehensive approach to increase student engagement with the well-being of the student at the forefront. The results of this research will be used to develop a campus recreation program that will be implemented

with the purpose of increasing student engagement while addressing the common health-risk behaviors of college freshman.

10. A local Salvation Army chapter's experience with the Cooking Matters at the Store program

Jennifer Kelton, MA and Sarah Murfree, MS, Middle Tennessee State University

The Cooking Matters at the Store Program is part of Share our Strength's No Kid Hungry campaign. No Kid Hungry campaign's mission is to end hunger for children in the United States by ensuring healthy foods are available to children every day. The Cooking Matters at the Store program provides instructional material for guided grocery store tours for low socioeconomic status adults with a priority population of mothers with children. During the tours, the participants learn how to purchase nutritious meals on a budget, read nutrition labels, and compare foods.

A local chapter of the Salvation Army received grant funding to implement the Cooking Matters at the Store program. Three hundred individuals participated in the program between June 2016 and April 2017. The program participants ranged in age from 25 to 45 and 97% were female. The Salvation Army chose to conduct both tours at the grocery store and pop-up tours. The purpose of this project is to assess the experience of implementing the Cooking Matters at the Store program at a local Salvation Army.

11. TOBACCO RETAILER DENSITY NEAR KNOX COUNTY PUBLIC SCHOOLS BY SOCIODEMOGRAPHIC CHARACTERISTICS

Asra Khalid

Background:

The Tennessee Department of Health identifies tobacco abuse as "the most preventable cause of premature morbidity and mortality". Nearly 90% of adult smokers start smoking before the age of 18 years old.¹ Tobacco products—including cigarettes, smokeless tobacco, hookahs, pipes or e-cigarettes—are commonly used among youth.¹ Tobacco companies target youth through tobacco retail marketing strategies such as outdoor advertisements, product placement at the height of youth, and price promotions for popular youth products like neon-colored e-cigarettes and flavored tobacco. It has been shown that an increased number of tobacco retailers near schools is associated with higher rates of teen smoking initiation.² Sociodemographic disparities are widespread in tobacco use and tobacco-related health complications, and tobacco companies have been shown to target youth and the low-income, minority populations with their marketing strategies.³ A recent survey of 97 counties in the US showed that there were more tobacco outlets near schools with low-income and Hispanic students.⁴ The purpose of this study is to explore the sociodemographic characteristics with tobacco retailers near Knox County Public schools.

Methodology:

A list of tobacco retailers from the 2017 Synar Report were used to map tobacco retailers within 1 mile of public schools in Knox County. U.S census data and school demographics were used to examine the associations between income, race, and ethnicity and tobacco retailers near schools.

Results:

Greater numbers of tobacco retailers surround schools that have a greater population of Black and/or Latino students and were located in census tracts with higher rates of poverty.

Conclusions:

Low-income and Black and/or Latino students are disproportionately exposed to tobacco retailers. Easy access to tobacco products may influence smoking initiation among youth.

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12. EFFECT OF BREASTFEEDING ON MATERNAL BODYFAT MEASURES OF AFRICAN-AMERICAN MOTHERS

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Problem: Pre-pregnancy obesity, pregnancy and childbirth contribute to obesity among African-American women. Breastfeeding can prevent excessive weight gain post-partum.

Background: African-American women record high obesity rates and low breastfeeding rates. Young maternal age, low education, low income, work, obesity, and lack of breastfeeding training contribute to low breastfeeding rates.

Materials and Methods: We utilized data from the "Education Intervention to Prevent Rapid Weight Gain in African-American Infants", (PI: Ukoli, F), a breastfeeding promotion program for pregnant mothers. Participants provided demographic and pre-pregnancy weight information at enrollment. Self-report breastfeeding action, height, weight and body-fat percent were collected at birth, 3-, 6-, and 12-month follow-up. Weight gain by 6-months post-partum was compared between those who breastfed at 3-months/6-months and those who did not breastfeed.

Results: 249 pregnant mothers enrolled into the study, age range 15-42 years, and 161(62.4%) completed follow-up at birth. 35(14.1%) have less than high school, 130(52.2%) receive WIC assistance, and

148(59.4%) work or are in school. Mean pre-pregnancy weight was 170lbs (82-350lbs) and 145(53.0%) were obese. Weight information is available for 126, 95, and 75 women at birth, 3-month and 6-month follow-up. Mean weight within 2 weeks of birth was 189lbs (100-386lbs), at 3-months 188lbs (108-381), and at 6 months 188lbs (104-391lbs). Exclusive breastfeeding rates at birth, 3-months and 6-months was 60.9%, 31.9%, and 18.2%, with equivalent breastfeeding rates of 85.1%, 69.5%, and 57.3%. Weight gain rate 6-months postpartum for non-obese and obese mothers who breastfed or did not breastfeed for at least three months was respectfully 14(56.0%) versus 4(50.0%), ns, and 6(40.0%) versus 0(0.0%), $p < 0.013$. Weight loss was low across all groups.

Conclusion: Breastfeeding education should be integrated into pre-pregnancy, pregnancy, and postpartum obesity prevention interventions that must include dietary and physical activity modifications to appreciably impact obesity status among African-American mothers.

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