



CABINET FOR HEALTH
AND FAMILY SERVICES

Department for Medicaid Services

State University Partnership Program Findings
Medicaid Oversight Advisory Board (MOAB)
September 23, 2026

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State University Partnership (SUP) Project Scope

The State University Partnership (SUP) is a collaboration between the Cabinet for Health and Family Services (CHFS) and state universities designed to create essential state-specific health information and to conduct policy-related projects and programs aimed at improving Medicaid beneficiaries' treatment and health and reducing per capita healthcare costs.

The Office of Data Analytics (ODA) leads communication and collaboration between the Principal Investigators and CHFS agencies to develop a comprehensive research library that aligns with the Cabinet's mission and the citizens it serves. In addition to working collaboratively to determine community needs and goals, the Department for Medicaid Services (DMS) provides subject matter expertise and policy guidance based on the research key findings and recommendations.

Public universities across Kentucky may participate in the SUP program. Participating universities include: Eastern Kentucky University, Kentucky State University, University of Kentucky, University of Louisville, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University.

SUP partnerships are awarded on a biennial cycle. The current SUP cohort includes eight SUP projects with a total contract value of \$1,610,090.07. This group will provide insights and analysis on multiple topics, including environmental exposure and cancer risks, EMS utilization, the evaluation of food-as-health programs, violence data integration, predictive modeling for self-harm and suicide risks, evaluation of peer support services, and workforce capacity and training pipelines.

Data Sharing with University Partners

SUP partnerships are established by a formal funded contract outlining scope of work and reporting requirements, as well as the inclusion of a Business Associates Agreement (BAA) to ensure the data is properly safeguarded. The fully executed contract and BAA function in lieu of a separate Data Sharing Agreement (DSA) to establish the scope of the project and protections around data sharing.

The DMS has also entered into non-funded DSA's with Universities. While these agreements include requirements for data protection, and more recent agreements include a reporting requirement, they do not implement the same level of collaboration as the formalized SUP partnerships and are not considered to be part of the SUP program.

State University Partnership Program Overview

Only data meeting the requirements of HIPAA-defined limited data sets are provided under the terms and conditions of either funded SUP contracts or the non-funded DSA's.

The ODA Analytic team meets with each SUP Partner before the start of the contract to review data needs prior to the provision of Cabinet data. The team remains accessible throughout the contract to provide technical assistance and facilitate communication with DMS subject matter experts.

These meetings may occur with non-funded DSA's but are not required as with the funded SUP contracts.

SUP Partners are permitted access to a secure CHFS data enclave, allowing them to perform their work within a controlled environment while ensuring ongoing collaboration, data protection, and prohibiting removal of data from Cabinet systems.

Additionally, routine meetings are scheduled with each SUP Partner to provide checkpoints and opportunities to address any questions that may arise.

The following meeting schedule is defined in the SUP28 contracts.

1. Data consult meeting before receipt/access of data
2. Status check-in meeting within the first 0-6 months after receipt of data
3. Status check-in meeting within the 6–12-month time frame after receipt of data
4. Status check-in mtg within the 12–18-month time frame after receipt of data
5. Additional meetings may be requested by CHFS or the Vendor as needed

The following are currently active non-funded DSA's between the DMS and a university

A study on the utilization and cost-saving potential of Long-Acting Reversible Contraception (LARC).	UKY
Opioid Use in Cancer Patients (a study to determine if persistent opioid analgesic use results in measurable negative patient health outcomes and higher costs).	UKY
Impact of COVID-19 on diabetes incidence and severity in the United States and Kentucky	UKY

State University Partnership Program Overview

Starting Doses of Buprenorphine to Reduce Non-Fatal Overdoses and Prevent Mortality	UKY
Kentucky Medicaid Members and Bypassing: How do Patients Perceive and Access Care?	Marymount
Kentucky Care Pathways Assessment to Support Technical Assistance for the Youth and Family Service Array	UConn
RADOR-Administrative Claims Data	UKY
Pediatric Emergency Department Pilot	UKY
Rural Health Transformation - Vitality Signs Dashboards	UKY
HEALing Communities Study	UKY
Medicaid Outcomes Distributed Research Network – Opioid Use Disorder Project (MODRN-OUD)	UKY
Medicaid Outcomes Distributed Research Network – PCORI Doula project (MODRN-PCORI)	UKY

Current State University Partnerships

Cohort Timeline: 07/01/2026 – 06/30/2028

Report Submissions:

Biannual report #1: 12/31/2026
Biannual report #2: 06/30/2027
Biannual report #3: 12/31/2027
Biannual report #4: 06/30/2028
End of contract: 06/30/2028

Policy Briefs:

Draft Policy Brief: 06/30/2027
Final Policy Brief: 06/30/2028

SUP Cycle: 2028

University: UKY

Project Name: Evaluation Food as Health Statewide Program

Principal Investigator: Alison Gustafson, PhD, MPH, RD

Total Contract Value: \$654,778.51

Data needs: No CHFS data requested

Topic(s): Food as health; Rural health; SDoH; Return on Investment

Project Description:

The team will evaluate how a statewide food-as-health program delivered among Medicaid adults with food insecurity and diet-sensitive chronic disease can improve health outcomes and reduce emergency department (ED) visits, 30-day readmission visits, and healthcare-related costs. The team will investigate the relationship between food security, nutrition security, diet quality, and health among Medicaid adults enrolled in SNAP who participate in this program relative to those not enrolled in SNAP who participate. Adults will enroll in a tailored food is medicine program for 12 weeks across various managed care organizations (MCOs). Members enrolled in this program will receive either medically tailored meals or a grocery prescription program tailored for their specific diet-sensitive chronic disease. The analysis will compare those enrolled compared to adults who have not enrolled but would have been eligible, as a comparison group using a difference-in-difference model.

SUP Cycle: 2028

University: WKU

Project Name: Bridging the Gap: Workforce for Kentucky Medicaid

Principal Investigator: Kara Haughtigan, DNP

Total Contract Value: \$290,005.83

Data Needs: Medicaid Claims, Health Facilities and Services Data (HFSD)

State University Partnership Program Overview

Topic(s): Access to Care; Workforce Development; Health Equity; Rural Health

Project Description:

This project will deliver a comprehensive analysis of Kentucky's healthcare workforce capacity, distribution, and training pipelines for Medicaid beneficiaries. Building on the 2023 CHFS Workforce Report, it will integrate Medicaid claims, Health Facilities and Services Data (HFSD), and Council on Postsecondary Education (CPE) data from KCTCS and public universities. Data will be standardized, geocoded, and linked to quantify provider supply and distribution, highlighting shortages in chronic health services. Pipeline analyses will assess enrollment, graduation, and completion trends. HRSA shortage designations, U.S. Census data, and USDA Rural-Urban Continuum Codes will provide denominators, rurality, and equity context. Findings will be synthesized into maps, reports, and briefs with recommendations to strengthen healthcare access statewide.

SUP Cycle: 2028

University: UKY

Project Name: EMS Utilization Study

Principal Investigator: Dana Quesinberry, JD, DrPH

Total Contract Value: \$192,800.05

Data Needs: Medicaid Claims, Emergency Medical Services (EMS)

Topic(s): Efficiency, cost containment, and innovation in Medicaid service delivery; Cost of Care; Rural Health

Project Description:

The Emergency Medical Services Utilization Study seeks to assess emergency medical services utilization among Medicaid beneficiaries, including the cost by mode of transportation (air, ground, or transfer), by diagnosis (motor vehicle crash, firearm injury, stroke, heart attack, maternal/fetal distress, etc.), by type of transfer (emergency, interfacility to another hospital, or transport to home or long-term care), and by rurality of the place-of-incident. Controlling for community and individual factors, this study will perform a cost-benefit analysis of emergency air transportation and the cost-effectiveness of interfacility transfers.

SUP Cycle: 2028

University: UofL

Project Name: Environment and Cancer

Principal Investigator: Maiying Kong, PhD

Total Contract Value: \$649,274.98

Data Needs: Medicaid Claims

Additional Non-CHFS Data Sets: Kentucky Cancer Registry (2000-2020); U.S. EPA's Toxics Release Inventory (TRI) (2020-2020); Risk-Screening Environmental Indicators Geographic Microdata (RSEI-GM)

Topic(s): Quality of Care; Access to Care; Beneficiary Experience; Prevention; Health Equity; Rural Health; Medicaid Policy

State University Partnership Program Overview

Project Description:

This project will assemble a census tract and ZIP code-level dataset that links the Kentucky Cancer Registry (KCR) with environmental exposure indicators from the U.S. EPA's Toxics Release Inventory, Risk-Screening Environmental Indicators, and AirToxScreen. Key carcinogens (e.g., benzene, formaldehyde, ethylene oxide) will be incorporated to characterize community exposures. Using these integrated data, this project will map cancer incidence in relation to industrial emissions, identify geographic and demographic hotspots, and estimate associations between residential proximity to emitting facilities and incidence of lung, colorectal, breast, and prostate cancers. This study will also assess how the timing and duration of early-life exposures contribute to later-life cancer risk, including early-onset colorectal cancer. A novel contribution is the integration of Medicaid claims with KCR and environmental data to evaluate disparities in cancer screening, early detection, and stage at diagnosis among adults ages 20–65.

SUP Cycle: 2028

University: UKY

Project Name: KY SHIELD

Principal Investigator: Jacqueline Seals, PhD

Total Contract Value: \$63,106.54

Data Needs: Emergency Medical Services (EMS), ESSENCE

Topic(s): Predictive analysis of syndromic surveillance data; Prevention; Behavioral Health; Mental Health

Project Description:

This project will assess whether ESSENCE syndromic surveillance and EMS electronic patient care report (ePCR) data can be used to develop predictive models to temporally and spatially detect emerging suicide risks. This project will validate existing and proposed self-harm-related case definitions created for ESSENCE and EMS data, then develop and test flexible predictive models using both datasets and compare the accuracy of both ESSENCE-only and a combined ESSENCE and EMS model. This project aims to 1) determine if ESSENCE can effectively be used to predict increased suicide risk or suicide clusters and 2) determine whether additional datasets are needed to mitigate limitations and improve the predictive accuracy of the models.

SUP Cycle: 2028

University: UKY

Project Name: Peer support services to improve engagement

Principal Investigator: Lynden Bond, PhD, MSW

Total Contract Value: \$127,362.01

Data Needs: No CHFS data requested

Topic(s): Access to Care; Beneficiary Experience; Behavioral Health; Mental Health; Substance Use Disorder

Project Description:

Peer support services are a growing strategy to increase engagement and retention in health services and have been used in a wide range of settings. This study uses community-engaged qualitative methods to examine how treatment team members, including agency leaders, staff, and peer providers, and Medicaid beneficiaries view the role of peer support in behavioral health services. Drawing from in-depth interviews

State University Partnership Program Overview

and focus groups, this project will describe perceived facilitators and barriers to engaging and retaining individuals in services. In collaboration with CHFS, the university team will identify up to 12 sites across the Commonwealth, including at least one site in each of CHFS's nine service regions, to conduct research activities. Qualitative findings will inform the development of proposed strategies for engagement and retention in peer support services shown to improve patient outcomes and expenditures. Through a community feedback process, the new strategies will be shared with community members through workshops for refinement.

SUP Cycle: 2028

University: UKY

Project Name: Rapid & Actionable KY Injury Data Insights

Principal Investigator: Peter Rock, PhD, MPH

Total Contract Value: \$768,902.21

Data Needs: Vital Statistics, Emergency Medical Services (EMS), Health Facilities and Services Data (HFSD)

IMPORTANT NOTE: This project will leverage stakeholders' and internal prior established access to required data sources. No new anticipated data extracts, analytic datasets, virtual instances, or secured data transfers, thereby reducing administrative overhead and project startup timing.

Topic(s): Quality of Care; Cost of Care; Prevention; Child Abuse and Neglect; Health Equity, Rural Health

Project Description:

This project will develop an automated unintentional injury, self-harm, abuse, and violence data integration dashboard platform that converts complex multi-source health datasets into actionable intelligence for KY decision-makers and public health practitioners. Building on proven dashboard infrastructure, the work will establish data pipelines that harmonize information from multiple sources while developing user-friendly interfaces tailored to support Kentucky public health efforts. Deliverables include automated extraction and transformation processes, interactive dashboard modules for different user roles, and standardized reporting capabilities. The system will enable rapid visualization of trends and geographic patterns. Quality assurance will ensure data reliability. This approach maximizes existing open-source dashboard investments while reducing barriers to integrated public health intelligence for timely decision-making by both public health professionals and policymakers.

SUP Cycle: 2028

University: UKY

Project Name: AHEAD: AI for Health Engagement and Detection

Principal Investigator: Tama Thé, MD

Total Contract Value: \$473,949.75

Data Needs: Medicaid Claims, Kentucky Cancer Registry (KCR), Kentucky Immunization Registry (KYIR)

Topic(s): Quality of Care; Access to Care; Cost of Care; Return on Investment; Beneficiary Experience; Prevention; Immunizations; Social Drivers of Health; Health Equity; Rural Health; Medicaid Policy

State University Partnership Program Overview

Project Description:

This project will analyze state Medicaid claims data to identify beneficiaries overdue for HPV, cervical, and colorectal cancer screening using both a deterministic, clinical rules-based approach and a machine-learning model approach. This foundational data will inform state public health strategies to proactively identify, educate, and engage at-risk populations. As a second phase, institutionally supported by the University of Kentucky, the University of Kentucky Health Care system will use this information to conduct a targeted outreach campaign to connect with University of Kentucky Health Care patients, educate them about screening, and facilitate access to care using UK Health Care's AI-powered outreach system.

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Previously completed State University Partnerships

SUP Cycle: 2026

University: UofL

Project Name: Mental Health Services for Youth in Out-of-Home Care

Principal Investigator: Andrew Winters; Camie Tomlinson

Project Description: Assess the extent to which youth in OOHC are actually receiving needed behavioral health services.

Key findings: This project concluded in June 2026. Review of the final report is in progress.

Recommendations: This project concluded in June 2026. Review of the final report is in progress.

SUP Cycle: 2026

University: UofL

Project Name: The quality of care in behavioral health

Principal Investigator: Qi Zheng; Wei Fu

Project Description: Evaluate behavioral health HEDIS metrics, telehealth effectiveness, and disparities across geographic, demographic, and clinical dimensions.

Key findings: This project concluded in June 2026. Review of the final report is in progress.

Recommendations: This project concluded in June 2026. Review of the final report is in progress.

SUP Cycle:2026

University: UofL

Project Name: Treatment for Opioid Use Among Pregnant Women

Principal Investigator: Jovito Murillo; Seyed Karimi

Project Description: Evaluate behavioral health HEDIS metrics, telehealth effectiveness, and disparities across geographic, demographic, and clinical dimensions.

Key findings: This project concluded in June 2026. Review of the final report is in progress.

Recommendations: This project concluded in June 2026. Review of the final report is in progress.

SUP Cycle: 2026

University: UofL

Project Name: Combined Maternal and Infant Health

Principal Investigator: Melissa Eggen; Jeremy Gaskins

State University Partnership Program Overview

Project Description: Assess perinatal care and outcomes for women and infants covered by Medicaid.

Key findings: This project concluded in June 2026. Review of the final report is in progress.

Recommendations: This project concluded in June 2026. Review of the final report is in progress.

SUP Cycle: 2026

University: UofL

Project Name: Different Services for Alcohol Use Disorder

Principal Investigator: Maiying Kong; Qi Zheng

Project Description: Investigate whether the utilization of different services (i.e., telehealth, BT, PS, and TCM) reduces utilization of emergency room (ER) visits, hospitalizations, Medicaid costs, and mental illness.

Key findings: This project concluded in June 2026. Review of the final report is in progress.

Recommendations: This project concluded in June 2026. Review of the final report is in progress.

SUP Cycle: 2026

University: UofL

Project Name: Bridging Healthcare Disparities in Rural Health

Principal Investigator: Bakeerathan Gunaratnam

Project Description: Examine disparities in healthcare access and treatment for HCV, diabetes, and prenatal care.

Key findings: This project concluded in June 2026. Review of the final report is in progress.

Recommendations: This project concluded in June 2026. Review of the final report is in progress.

SUP Cycle:2026

University: UofL

Project Name: An Economic Impact Analysis of HPV Vaccination

Principal Investigator: Seyed Karimi; Michael Egger

Project Description: Assess patterns of HPV vaccination and HPV-associated cancers in Kentucky.

Key findings: This project concluded June 2026 the review of the final report is in progress.

Recommendations: This project concluded in June 2026 the review of the final report is in progress.

State University Partnership Program Overview

SUP Cycle: 2026

University: UKY

Project Name: Changes in Healthcare Access in Kentucky Medicaid

Principal Investigator: Joseph Benitez

Project Description: Generate new insights regarding healthcare accessibility in the Medicaid program with respect to provider access.

Key findings: This project concluded in June 2026; the review of the final report is in progress.

Recommendations: This project concluded in June 2026; the review of the final report is in progress.

SUP Cycle: 2026

University: KY

Project Name: Medicaid Provider Telemental Health Services

Principal Investigator: Chizimuzo Okoli

Project Description: Examine the effect of telehealth expansion on the ability of children and adult Medicaid beneficiaries to access and maintain continuity of care, comparing rural and urban settings, and diversifying the current portfolio of Medicaid providers.

Key findings: This project concluded in June 2026; the review of the final report is in progress.

Recommendations: This project concluded in June 2026; the review of the final report is in progress.

SUP Cycle: 2026

University: UKY

Project Name: Costs of Maternal Violence, Substance Use & Mental Health

Principal Investigator: Joshua L. Bush

Project Description: Study the costs related to maternal injuries arising from intimate partner violence, substance use disorder, and mental health conditions.

Key findings: This project concluded in June 2026; the review of the final report is in progress.

Recommendations: This project concluded in June 2026; the review of the final report is in progress.

SUP Cycle: 2026

University: UKY

Project Name: Food Insecurity and Medicaid Spending

State University Partnership Program Overview

Principal Investigator: Joseph Benitez

Project Description: Determine whether alleviating food insecurity and inequalities in access to food is associated with reductions in avoidable or excess Medicaid spending.

Key Findings: This project concluded in June 2026; the review of the final report is in progress.

Recommendations: This project concluded in June 2026; the review of the final report is in progress.

SUP Cycle:2026

University: NKU

Project Name: The Benefits of Kentucky Certified Peer Support Specialists for Medicaid Beneficiaries with SUD

Principal Investigator: Valerie Gray Hardcastle

Project Description: Evaluate and identify specific policy recommendations for Kentucky Peer Support Services.

Key findings: *This project is currently in progress. The analysis is ongoing, and the results are not final.* Analysis showed that successful Kentucky Peer Support (KPS) trainees demonstrated superior ability to reflect on experiences, articulate meaningful goals, and express alignment with peer support values. KPS specialists report being busy with diverse responsibilities and struggling with employer understanding of appropriate PS roles/being asked to work outside their scope, including case documentation and intake paperwork, which are outside their scope of training. Quantitative analysis demonstrated dramatic improvement in treatment service utilization among Medicaid members engaging in KPS services, including medication for opioid use disorder (MOUD) utilization, improvement in long-term continuous pharmacotherapy, and enhanced post-emergency department treatment engagement. No statistically significant relationships were found between PS services and ED visits, hospital admissions, or readmissions. Parallel initiatives, including the 1115 Demonstration Waiver for SUD may be impacting these measures.

Recommendations: Focus group and survey participants identified additional critical training needs: crisis and trauma training (highest priority), more effective helping skills, expanded mental health topics, and ethics training.

Recommended Regulatory Changes

- 908 KAR 2:220 §3(1)(g): Add trauma-informed care training module requirement
 - 908 KAR 2:220 §2(2): Require one year of continuous sobriety as certification prerequisite
 - 908 KAR 2:230 §4: Include prohibited activities list, excluding crisis de-escalation, intake, case management, and case documentation
 - KRS 309.0836: Revise to require a trauma-informed care training module as a subsection.
- The new Alcohol and Drug Peer Support Specialist position under KRS 309.0836 addresses previous concerns about group work inclusion in 908 KAR 2:220 functions.
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State University Partnership Program Overview

SUP Cycle: 2024

University: UofL

Project Name: The Impact of CHFS Programs on Cancer Screening in the Rural and Underserved Medicaid Populations

Principal Investigator: Michael Egger

Project Description: Evaluated cancer screening utilization among rural and underserved Medicaid populations and assessed differences following Medicaid expansion and CHFS-related programs.

Key findings: Screening increased over time, especially after Medicaid expansion, but screening rates remained below desired levels; Eastern Kentucky and disadvantaged areas had lower utilization, and based on this analysis, the Kentucky Colon Cancer Screening Prevention Program had minimal county-level impact on colorectal screening in the targeted counties.

Recommendations: Screening rates increased over time, most significantly in response to expansion of Medicaid eligibility. Minority groups, those living in disadvantaged/underserved communities, and those residing in Eastern Kentucky are less likely to utilize cancer screenings. This study recommends that these groups should be considered for increased funding and resources or alternative means of improving cancer screening uptake.

SUP Cycle: 2024

University: NKU

Project Name: The Benefits of Kentucky Certified Peer Support Specialists for Medicaid Beneficiaries

Principal Investigator: Valerie Gray Hardcastle

Project Description: Evaluate the benefits and shortcomings of Kentucky peer support specialists, their training, and role in the care team.

Key findings: Medication for opioid use disorder (MOUD) utilization was significantly higher among members who utilized peer support (18%) when compared to peers who did not utilize peer support (1%). Beneficiaries using peer support also have fewer hospital admissions. Peer support specialists are often asked to perform work that exceeds their scope of training.

Recommendations: This study recommends redefining self-help groups as a function of peer support, clearly defining the appropriate job functions for peer support workers, and requiring or strongly recommending trauma management continuing education for certified peer support specialists.

SUP Cycle: 2024

University: UofL

Project Name: Racial and Geographic Disparities in Maternal Outcomes during Covid-19

Principal Investigator: Jeremy Gaskins

State University Partnership Program Overview

Project Description: Used Medicaid claims from 2012–2021 to examine racial and geographic disparities in maternal mortality, postpartum hemorrhage, and ICU admission among pregnant Medicaid beneficiaries.

Key findings: This study found that all-cause maternal mortality rates nearly doubled between 2012 and 2020. Residing in rural Appalachia, advanced maternal age, and cesarean delivery, were associated with increased rates of maternal mortality. Postpartum hemorrhage and ICU admission showed racial, geographic, and delivery-mode disparities. This study found pregnant Black women in Kentucky to be at twice the risk of ICU admission when compared to White women. Cesarean deliveries were associated with three times higher rate of ICU admission at delivery and 50% increase in ICU admissions during two months after delivery.

Recommendations: This study recommends that additional demographic and socioeconomic data are needed alongside Medicaid claims information to identify root causes of maternal mortality; this study used all-cause maternal mortality, which may differ from other national definitions of maternal mortality; linking claims data to death certificates would allow clear indication of death and more information to help identify root causes of maternal mortality. This study recommends additional research to better understand factors contributing to poor maternal outcomes.

SUP Cycle: 2024

University: UofL

Project Name: Quantifying Medicaid Policies Aimed at Increasing Health Equity: A Comparative Study Over Time

Principal Investigator: Michael Sekula

Project Description: Assessed changes in healthcare service utilization before and during the COVID-19 public health emergency, focusing on telehealth and continuous enrollment policies.

Key findings: Telehealth increased sharply at the start of the Public Health Emergency (PHE), and many services exceeded pre-PHE utilization during the intra-PHE period, but utilization changes varied across Medicaid regions.

Recommendations: Medicaid policies during the COVID-19 PHE provide a unique opportunity to examine the impact of expanded health care coverage and improve accessibility. This study suggests that telehealth policies, including parity payments, effectively increase access to health care services and resources. However, geographic variability in utilization suggests that areas with lower-than-average utilization rates may face barriers to implementation/uptake (knowledge, access to technology, proper workflows). Medicaid Regions 1 and 2 had the smallest increases in telehealth utilization, whereas Regions 5, 7, and 8 had the largest increases. Black beneficiaries and those aged 50-60 had the smallest increase in telehealth utilization. This study also suggests that continuous enrollment may have played some role in increasing access to health services. Despite a decrease in office utilization during the PHE, most services considered in this study had overall increases in utilization.

State University Partnership Program Overview

SUP Cycle:2024

University: MSU

Project Name: Program for Long-Term Caregivers in Eastern Kentucky

Principal Investigator: Lisun M White

Project Description: Assessed the needs of long-term family caregivers in Eastern Kentucky and the effectiveness of a systematic caregiver training program which provided strategies and resources to help caregivers cope with challenges of long-term caregiving.

Key findings: Of the 459 survey respondents, 30% had family members with long-term care needs. The most commonly reported condition of the care-receiver was cognitive impairment (60%). Caregivers reported greatest challenges included: emotional/psychological burden (36%), social isolation (25%), financial difficulty (19%), lack of resources (13%), and need for physical support (9%). Caregiver training programs were well-received among participants.

Recommendations: Caregiving courses offered in diverse formats to suit participants' needs and availability were rated as effective in this project. In-home caregiving is expected to increase as the population ages and the cost of residential elderly care increases. Financial limitations prevented caregivers from participating in caregiver programs in this sample. Programs such as the Home and Community-Based (HCB) waiver and the Michelle P. Waiver (MPW) could potentially be expanded to enable caregivers to be reimbursed for the costs of participating in caregiver classes.

SUP Cycle: 2024

University: UofL

Project Name: Understanding the Behavioral Health Landscape and Feasibility of Mobile Crisis Intervention Services (MCIS) in Kentucky

Principal Investigator: Brian Schaefer

Project Description: Analyzed behavioral health utilization, costs, and needs while supporting the development of mobile crisis intervention metrics and local implementation strategies.

Key findings: This study found that behavioral health diagnoses among adult Medicaid beneficiaries and all adult hospital utilizers increased between 2016 to 2022 and were present in 4.3%–14.6% of hospitalizations when measured as primary diagnoses. Mental and behavioral disorders due to psychoactive substance use accounted for the highest utilization for adult Medicaid beneficiaries and for all adult hospital utilizers. This study also convened a Technical Expert Panel to specify a novel behavioral health specific preventable hospitalization quality measure. Accurately capturing potentially avoidable behavioral health emergency department visits and hospitalizations can enable cost-benefit analysis of mobile crisis intervention and similar behavioral health initiatives. This study provided system capacity support in Jefferson, Fayette, Floyd, and Daviess counties, and disseminated case studies and peer-learning opportunities to support other communities in using implementation science to assess mobile crisis intervention deployment.

State University Partnership Program Overview

Recommendations: This study focused on the State's expansion of mobile crisis intervention services under Crisis Continuum of Care (907 KAR 15:100). This study recommends the establishment of formal local learning collaboratives to enable communities to learn from each other and accelerate implementation of new interventions. Interviews with local community stakeholders identified the need for greater support and technical assistance at the local level to transition crisis response systems. This study recommends that communities receive evaluation and implementation science support to guide planning, implementation, monitoring, and sustainability of interventions that capture the unique local conditions of communities across the Commonwealth.

This study identified that support for BH conditions is limited and often frustrated by inadequate insurance coverage and lack of reliable transportation. Criminal justice systems and emergency departments are often the systems of last resort that respond to BH needs, despite lacking the capacity to do so, and often result in worsened outcomes for BH patients and costly care. This study finds that the implementation of the Kentucky Mobile Crisis Intervention Commonwealth Model and other broadened BH services are a promising approach to provide access to quality care for Kentuckians in need of such support.

SUP Cycle: 2024

University: UKY

Project Name: Patterns of Medicaid Claims for Three High-Risk Infant Populations Through the Pandemic in Kentucky, 2017-2021

Principal Investigator: John Bauer

Project Description: Investigate healthcare utilization patterns for three specifics but overlapping high-risk infant groups: those born prematurely, those born after prenatal drug exposure(s), and those with congenital heart abnormalities/birth defects.

Key findings: Medicaid-covered births have increased, while neonatal abstinence syndrome (NAS) exposures have declined. Healthcare costs are significantly higher for premature (4 to 26 times higher healthcare costs within the first 6 months following birth when compared to term births) and NAS births and infants, with significant geographical prevalence of NAS births in Cumberland and Eastern Mountain Regions.

Recommendations: Addressing drivers of premature and extremely premature birth may lead to important cost savings. This analysis identified illicit and licit drug use, including nicotine, as variables linked to premature birth, along with obesity, cardiovascular status, and hypertension. Programs aimed at reducing substance use, including nicotine, and controlling blood pressure may provide improved outcomes and considerable cost savings.

SUP Cycle: 2024

University: KY

Project Name: Exploring the Dynamics of Access to Care in Kentucky's Medicaid Managed Care Networks

Principal Investigator: Joseph Benitez

State University Partnership Program Overview

Project Description: Generate new insights regarding healthcare accessibility in the Medicaid program with respect to provider access.

Key findings: This work is ongoing and related to SUP26 project C5540 “Changes in Healthcare Access in Kentucky Medicaid.” Geocoded qualifying providers to calculate driving distance and straight-line distance to all Census tracts and ZIP code tabulation areas within Kentucky.

Recommendations: SUP26 project C5540 “Changes in Healthcare Access in Kentucky Medicaid” continues this work, assessing changes in accessibility over time with a focus on accessibility in networks following the COVID-19 Public Health Emergency (PHE).

SUP Cycle: 2024

University: KY

Project Name: Expanded Tele-Mental Health Services in Kentucky Behavioral Health Settings: Impact on Beneficiaries with Mental and Behavioral Health Challenges

Principal Investigator: Chizimuzo Okoli

Project Description: Examined how tele-mental health expansion affected treatment adherence, utilization, costs, and beneficiary/provider satisfaction among Medicaid beneficiaries with psychiatric diagnoses.

Key findings: Found significant decreases in treatment adherence from pre-COVID compared to during COVID, with 41.8% treatment adherence pre-COVID, 29.0% during COVID, and 23.8% post-COVID. Also found significant decreases in both emergency department (ED) and outpatient visits from 2018 to 2022, but little change in inpatient hospitalizations. Significant increase in the usage of telehealth codes post-COVID compared to pre-COVID. This study also surveyed Medicaid beneficiaries and providers at community mental health organizations and within Managed Care Organization networks. Results from 73 beneficiaries indicate that 57% receive half or more of their mental healthcare through telehealth services. A greater proportion of those in rural areas received mental health services through telehealth half or more of the time compared to those in urban areas (68% vs. 51%). Telehealth usability was most influenced by greater trust in healthcare providers. Results from 176 providers indicate that providers with majority telehealth patient encounters are more likely to reside in urban areas than rural.

Recommendations: Telehealth codes/billing are inconsistent, making it difficult to identify the full use of tele-mental health services. Specifically, this study found that there is confusion among providers over when to use G codes or other visit codes, and when and how to modify place of service codes when billing for telehealth services. Discrepancies in billing practices for telehealth services are currently limiting the ability to identify the full use of telehealth services. Formal education, guidance, training, or other corrective action to standardize or improve coding practices for telehealth services is needed. Finally, the impact of telehealth for mental health services suggests the need for continued telehealth options for Medicaid beneficiaries.

SUP Cycle: 2024

University: UKY

Project Name: Economic Impact of CHFS on Local Economies

Principal Investigator: Teresa Waters

State University Partnership Program Overview

Project Description: Used multiplier-effect and IMPLAN economic modeling to estimate how CHFS spending through Medicaid and SNAP impacts jobs, income, and local economic activity.

Key findings: In 2019, the economic impact of payments to local Medicaid providers (both MCO and FFS) was nearly \$20 billion, leading to an \$8.8 billion impact on labor income. The total employment impact from Medicaid was 131,000 jobs in KY. In 2019, SNAP spending led to a \$947 million impact and \$340 million in labor income. The total employment impact from SNAP was 8,589 jobs in KY.

Recommendations: This research underscores the impact of Medicaid payments on the healthcare system in Kentucky, particularly in areas with a large proportion of Medicaid patients. Further analysis is needed to evaluate to what extent different sectors and entities within the healthcare system in Kentucky are critically reliant on Medicaid payments. This study also recommends CHFS to identify and prioritize funding for programs with demonstrated positive impacts on both health and economic outcomes, considering the Medicaid 1115 Demonstration Waiver as a mechanism for generating significant economic impact in local communities while also improving the health and wellbeing of families.

SUP Cycle: 2024

University: UofL

Project Name: Different services for patients diagnosed with alcohol use disorder: telemedicine, certified peer support services, and targeted case management

Principal Investigator: Maiying Kong

Project Description: Analyzed telehealth, behavioral therapy, and certified peer support service use among Medicaid beneficiaries with alcohol use disorder and their association with ER visits, hospitalizations, and costs.

Key findings: This study finds that overall, the median cost for patients with alcohol use disorder (AUD) was greater than double the median cost for the general Medicaid population. Between 2016 and 2022, hospitalization and ER visits have decreased among patients diagnosed with AUD while telehealth utilization has increased. This study reported highest AUD prevalence in KIPDA and Northern Kentucky Regions. ER visits were reduced among patients diagnosed with AUD who received behavior therapy when compared to those who did not, however median costs were higher among patients who received behavior therapy or peer support compared to those who did not.

Recommendations: This study identifies higher AUD associated median costs in Big Sandy, Lincoln Trail, Gateway, and Kentucky River, and the greatest increase in the rate of AUD prevalence in Gateway and Lincoln Trail during the study window and recommends exploring opportunities for intervention in these regions.

SUP Cycle: 2024

University: UofL

Project Name: Assessing Policies and Systems to Improve Maternal and Infant Health in Kentucky

Principal Investigator: Katherine G. Yewell, Melissa Eggen

State University Partnership Program Overview

Project Description: Used claims, PRAMS, inpatient, hospital, and survey data to examine maternal and infant morbidity trends and access issues, including VBAC-related barriers.

Key findings: Women with Medicaid coverage were less likely than those with private insurance to have a visit with a healthcare provider in the year before pregnancy. Identified an increasing trend of pre-pregnancy and gestational hypertension among women with Medicaid coverage. Finds additional evidence of previously established findings that women living in non-metro areas of the state experience higher rates of maternal death than those living in metro areas of the state. Cesarean rates are high in Kentucky, and VBAC rates are low compared to other states.

Recommendations: First, this study recommends additional research to identify root causes of adverse and optimal outcomes for infants and mothers in Kentucky, including the impact of the 2022 postpartum Medicaid extension. Second, support additional capacity to increase the PRAMS response rate, linkages with Medicaid claims data, and public availability of the data, including expanding the existing PRAMS dashboard. Third, implement data linkages between Medicaid claims, PRAMS, Vital Statistics, and other sources of data (for example, death certificates). Fourth, pilot interventions and programs to improve outcomes for mothers and infants in Kentucky, increase VBAC rates, and increase utilization of prenatal and pre-conception healthcare among Medicaid-enrolled women.

SUP Cycle: 2024

University: UKY

Project Name: Accessibility of MCO-Listed Primary Care Providers

Principal Investigator: Julia Field Costich

Project Description: This study planned to conduct and analyze two secret shopper surveys of community-based primary care providers listed in Medicaid managed care organizations' provider directories to determine appointment availability and wait time for the next available appointment, identify strengths, weaknesses, and gaps in PCP availability for each MCO and provide supplementary information.

Key findings: PI withdrew and project was discontinued on 09/20/2023. This section intentionally left blank.

Recommendations: PI withdrew and project was discontinued on 9/20/2023. This section intentionally left blank.

SUP Cycle: 2022

University: UKY

Project Name: Using Data Science Tools to Analyze Medicaid Claims Data and Better Understand Cardiovascular Disease

Principal Investigator: Katherine Thompson

Brief Description: Used Medicaid claims and statistical/data science methods to examine cardiovascular disease patterns, especially hypertension and heart failure, across demographic and geographic groups.

State University Partnership Program Overview

Key findings: Built predictive models for heart failure and hypertension diagnosis using 2019 Medicaid claims data. Rates for heart failure among Medicaid beneficiaries dropped following expansion in 2014. Rates for hypertension among Medicaid beneficiaries dropped following expansion in 2014. Risk for heart failure and hypertension is greater among males, older individuals, and counties with RUC codes corresponding to 8 or 9 (rural non-metropolitan).

Recommendations: Education and earlier intervention for heart disease problems should be focused in rural areas where the prevalence is higher and on easily identifiable at-risk subgroups within the Medicaid population. Getting healthcare resources to individuals with limited access could help reduce the burden of heart disease.

SUP Cycle: 2022

University: KY

Project Name: Tobacco Use Documentation with Medicaid Recipients: A Quality Improvement Project

Principal Investigator: Ellen Hahn

Project Description: Worked with MCOs and claims data to evaluate tobacco-use identification, documentation, treatment workflows, and best-practice recommendations. Examined geographic groups.

Key findings: Documented a decline in tobacco use prevalence and an increase in counseling and treatment for tobacco use following KRS 304.17A-168. Tobacco use prevalence, defined by ICD dx codes, demonstrated a slight but significant decline. Decline in tobacco use was not consistent: a decrease in some ADDs, an increase in others. 30% average increase in counseling for tobacco use statewide.

Recommendations: Systematic and standardized training on the use of tobacco-related diagnosis, procedural, and billing codes. Training in evidence-based tobacco treatment, particularly in ADDs with worse outcomes. This study recommends expanding annual HRA questions to identify all Medicaid recipients who use tobacco, connect tobacco users with evidence-based treatments, and evaluate services to determine the effectiveness of treatments.

SUP Cycle: 2022

University: UofL

Project Name: The Effect of Market Changes in Kentucky Medicaid: Utilization and Cost Savings for Three Chronic Diseases - Cardiovascular Disease, Cancer, And Type 2 Diabetes

Principal Investigator: Seyed Karimi

Project Description: Compared utilization and costs before and after Kentucky Medicaid managed care implementation among beneficiaries with cancer, diabetes, and cardiovascular disease.

Key findings: The implementation of Medicaid Market Change (MMC) was associated with a decrease in utilization of most types of care, including care in hospital settings, laboratory services, medical transportation services, office-based physician visits, and primary and preventive care. Conversely, a marginal increase in utilization of services such as office-based physician assistant and nurse visits was

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observed following MMC implementation. These combined utilization changes resulted in short-term decreased overall cost of care for the Medicaid program.

Recommendation: A protracted decrease in utilization for preventative care services following MMC implementation suggests a need to develop ways to encourage MCOs to increase preventative care, perhaps by expanding networks and decreasing waiting times. Managing the supply-side of Medicaid-provided care can influence utilization by affecting the price of care. Examples include changing the number of MCOs to influence provider-MCO negotiating power, as well as structuring contracts that promote prevention. Investigate whether the sustained reduction in utilization of preventive care following MMC is associated with observable declines in population health and well-being.

SUP Cycle: 2022

University: UofL

Project Name: Study On Systemic Complications of Oral Diseases Among Medicaid Beneficiaries with Type 2 Diabetes in Kentucky

Principal Investigator: Bert Little

Project Description: Examined whether dental prophylaxis was associated with a lower risk of systemic complications among Medicaid beneficiaries with and without type 2 diabetes.

Key findings: For all systemic health complications studied (myocardial infarction, pneumonia, asthma, chronic kidney disease, rheumatoid arthritis, and hepatitis C), individuals who received dental prophylaxis (regardless of having Type 2 diabetes or not) were associated with a lower risk of diagnosis. Type 2 diabetes was associated with a higher risk of all complications except rheumatoid arthritis (not statistically significant) and hepatitis C (lower risk)

Recommendations: Expanding availability of augmented dental services (e.g., sealants, twice yearly oral exams, and prophylaxis) to dental benefits would decrease the chronic diseases highlighted in this study roughly 25% in the Kentucky Medicaid population, resulting in substantial savings to the Kentucky Medicaid program. Treatment of dental problems before they become emergencies is recommended to improve the health of the Kentucky Medicaid population. Encourage Medicaid beneficiaries to use their dental benefits via incentive plans or educational messages.

SUP Cycle: 2022

University: UofL

Project Name: Predictive Analytics for Type 2 Diabetes with Social Determinants of Health In Medicaid Beneficiaries

Principal Investigator: Bert Little

Project Description: Used Medicaid claims and SDOH-linked data to examine risk factors for type 2 diabetes and related complications among Kentucky Medicaid beneficiaries.

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Key findings: This study's results suggest that T2DM and its associated complications are influenced uniquely by various environmental, medical, and SDOH factors. Classic risk factors of T2DM and its complications were generally affirmed (i.e., low educational attainment and poverty). T2DM was strongly associated with poverty, less than high school education, and obesity. There were notable exceptions to this, however, such as the finding that obesity was a protective factor against five T2DM co-morbidities that were studied (attributed to lack of physical frailty among obese patients). Likewise, the presence of "blue-collar" industries such as agriculture, fishing, and mining within a community was protective against peripheral artery disease among its residents with T2DM.

Recommendations: The authors specifically recommend supporting efforts to improve beneficiary education regarding T2DM. Taking action to increase T2DM medication adherence/compliance. Promoting use of existing benefits for diabetic retinopathy screening. Instituting programs to increase T2DM patient use of cardiac screening procedures and providing aggressive heart disease management and patient adherence/compliance to medical recommendations for cardiovascular health.

SUP Cycle: 2022

University: UKY

Project Name: Patterns Of Healthcare Utilization on Two High-Risk Infant Groups in Kentucky

Principal Investigator: John Bauer

Project Description: Examined healthcare utilization, Medicaid costs, and regional patterns among preterm and substance-exposed infants in Kentucky Medicaid.

Key findings: Within the 104,000 Medicaid-supported births in Kentucky during 2017-2019: The total incidence of substance-exposed neonatal abstinence syndrome (NAS) births was 4.1% and increased over the period. The total incidence of preterm births was 11.5% and decreased over the period.

Recommendations: Increased coordination between specialized neonatal care providers and academic institutions could reduce the need for costly emergency transportation services. Alignment of vital statewide resources. Organized strategy to address preterm birth and NAS. Enhance access to and quality of care for high-risk infant populations. Address regional disparities, specifically, via initiatives to address prenatal drug exposures in the Eastern KY region.

SUP Cycle: 2022

University Name: UKY

Project Name: Pathways To Residential Treatment for Children and Youth in the Commonwealth of Kentucky

Principal Investigator: John Lyons

Project Description: Used machine learning on Medicaid data to identify service and medication patterns before admission to psychiatric residential treatment facilities and after discharge.

Key findings: Youth admitted to Psychiatric Residential Treatment Facility (PRTF) were significantly more likely, before admission, to undergo a diagnostic psychiatric evaluation, to have some psychotherapy service utilization, and to have at least one psychotropic drug prescription. Prior receipt of psychotherapy and crisis

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intervention mental health services was consistently predictive of PRTF entry, as was polypharmacy (multiple prescriptions). Claims for antipsychotic, ADHD, and antidepressant medications were all associated with elevated risk of PRTF readmission. In light of these findings, it is worth noting that PRTF admission is, overall, exceedingly rare in Kentucky.

Recommendations: Despite being rare, admission to a PRTF is relatively predictable among Kentucky youth, suggesting proactive intervention can prevent its utilization as a “last resort”. Receipt of follow-up care was found to be uncommon following PRTF discharge, suggesting the need for measures that promote continuity of care. Generally, the adoption of more expansion datasets and statistical methodologies can be useful in identifying predictive factors in this domain, as well as others.

SUP Cycle: 2022

University Name: UKY

Project Name: Opioid Use in Patients with Cancer: Developing and Implementing an Evidence-Based Strategy

Principal Investigator: Doug Olyer

Project Description: Examined persistent opioid use after colorectal surgery, stratified by cancer status, and assessed the effect of a UK HealthCare prescribing protocol.

Key findings: Cancer patients appear more likely to develop persistent opioid use following colorectal surgery compared to non-cancer patients. 1 out of 4 beneficiaries in the study did not meet the network adequacy requirements for MCOs, which was associated with persistent opioid use. Travel distance greater than 30 miles for treatment was associated with persistent opioid use. Implementation of prescribing protocols by UK HealthCare was associated with stronger reductions in persistent opioid use as well as opioid prescribing at discharge.

Recommendations: 201 KAR 9:260 separately exempts both patients undergoing major surgery and patients with cancer from initial Schedule-II analgesic days’ supply limitations, potentially creating an exceptionally high risk for developing long-term opioid use in patients undergoing surgery for cancer. The findings from this study suggest that protocolized postoperative pain management may be an effective means to reduce persistent opioid use in the Kentucky Medicaid Population. This study recommends reconsidering the extended 1-year prior authorization for short-acting opioid analgesics for patients with cancer in favor of shorter periods and/or non-opioid treatment plans. Reduce travel distance for beneficiaries. Support opioid stewardship through protocolized care.

SUP Cycle: 2022

University: UKY

Project Name: Medicaid Managed Care Organizational Strategies to Address Enrollee Unmet Social Needs Using Community Partnerships

Principal Investigator: Teresa Waters

State University Partnership Program Overview

Project Description: Studied how Kentucky Medicaid MCOs partner with community-based organizations to address unmet social needs and support enrollee health.

Key findings: Partnerships between managed care organizations and community-based organizations have been successfully evolving in response to changing needs and resources (e.g., the COVID-19 pandemic), highlighting the critical role of innovation and flexibility in effectively meeting the needs of Kentucky Medicaid enrollees. Community-based organizations consistently rank higher in trust and value scores among enrollees and may be a more effective healthcare and social needs delivery method than managed care organizations.

Recommendations: Continue to foster multisector partnerships (e.g., managed care organizations and local community-based care organizations) to address unmet social needs of enrollees.

SUP Cycle: 2022

University: WKU

Project Name: Kentucky Child Welfare Workforce Wellness Initiative

Principal Investigator: Austin Griffiths

Project description: Used bioindicator data to assess physiological stress and recovery among Kentucky child welfare workers.

Key findings: The main takeaway, as defined by the authors, was “indisputable evidence of prolonged and significant physiological stress associated with working in child welfare”. Child welfare workers (CWWs) in the study faced high rates of elevated physiological stress and low rates of RMSSD during sleep (RMSSD is a measure of recovery from stress). Self-reported measures of health generally aligned with the negative indicators recorded from biomarkers. A custom-designed mindfulness-based intervention undertaken by study participants did not show significant improvement in these measures, though a low sample size and other factors may have confounded these results.

Recommendations: Budget Increases for state workers to align salaries and benefits with the taxing demands of their positions. Pay raises, student loan forgiveness, expansion of workforce, etc.

SUP Cycle: 2022

University: UofL L

Project Name: Improving Care Quality for Children

Principal Investigator: Deborah Davis

Project Description: Combined psychotropic medication deprescribing work with antibiotic stewardship and vaccine-related interventions to improve medication quality and safety for children receiving Kentucky Medicaid.

Key findings: Developed resources and pilot interventions to promote “deprescribing” of psychotropic medication in children. PM use was highest in Green River district and lowest in Barren River and Lake

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Cumberland areas. Children aged 0-5 years and those over 18 years were less likely to receive concurrent psychotherapy. Piloted interventions to improve antibiotic use and vaccine administration in Kentucky Medicaid children. 20% of Medicaid antibiotic prescriptions were deemed inappropriate. High-volume prescribers represent 43% of all antibiotic prescriptions. Antibiotic prescription rates were highest in South and South-Eastern KY. Provider education on Human Papillomavirus (HPV) vaccination. HPV vaccination missed opportunities were highest in Eastern KY.

Recommendations: Implement retrospective drug utilization review processes within the Medicaid program. Establish payment models that tie reimbursement to achievement of quality outcomes. Require MCOs to support local quality improvement efforts to encourage adoption and implementation of evidence-based antibiotic stewardship. Encourage antibiotic stewardship by requiring public reporting of quality outcomes by each MCO and action plans when metrics are not met.

SUP Cycle: 2022

University: UofL

Project Name: Identifying and Removing Barriers to Treatment of Hepatitis C Infections in KY Medicaid

Principal Investigator: Bert Little

Project Description: Analyzed hepatitis C screening, treatment barriers, risk factors, and direct-acting antiviral use among Kentucky Medicaid beneficiaries.

Key findings: Overall, screening rates for HCV increased from around 2% in 2010 to slightly under 6% in 2019, although rates varied by region. From 2014 moving forward, screening rates among pregnant women trended upward. Pregnant women who identified their race as white went from a 16% screening rate to 37% in 2019, while those who identified their race as black went from a 10% screening rate to 44%.

Recommendations: Ensure Medicaid providers are reimbursed for screenings. Support the adoption of opt-out language.

SUP Cycle: 2022

University: UKY

Project Name: Disparities in the Receipt of Guideline-Compliant Care and Outcomes Among Kentucky Medicaid Enrollees with Diabetes

Principal Investigator: Min-Woong Sohn

Project Description: Examined whether Medicaid beneficiaries with diabetes received recommended A1c testing, statin therapy, and foot exams, and identified variation by geography, enrollment type, and MCO.

Key Findings: Following Medicaid expansion in 2014, utilization of GCC started increasing through 2019. Despite increases, KY's rates of GCC for diabetes are still 16%-18% below the national average. Enrollees residing in rural counties showed lower uptake of GCC compared to those in micropolitan counties. FFS and those with an unknown provider group had lower rates of GCC, and considerable variation existed among MCOs in the provision of GCC services.

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Recommendations: Annual tracking and publishing of guideline-compliant care (GCC) by various demographics on the CHFS website. Require compliance with GCC services as a performance measure for MCOs. Use consistent compliance for three years as an additional performance measure.

SUP Cycle: 2022

University: UofL

Project Name: Disparities In Cancer Screening In the Kentucky Medicaid Population

Principal Investigator: Michael Egger

Project Description: This study evaluated breast, lung, and colorectal cancer screening patterns among Kentucky Medicaid beneficiaries before and after Medicaid expansion.

Key Findings: After Medicaid expansion (in 2014), the number of breast cancer screenings in KY Medicaid enrollees doubled. The number of colorectal cancer screenings tripled after Medicaid expansion. Lung cancer screenings (not available before 2015) have steadily risen during the study.

Recommendations: Breast cancer screening-eligible beneficiaries would benefit from infrastructure improvements (e.g., transportation assistance) to increase access to existing screening facilities. Lung and colorectal cancer screening-eligible beneficiaries would benefit from increased resources (e.g., procedural facilities and proceduralists), specifically in low-resource counties.

SUP Cycle: 2022

University: UofL

Project Name: Disparities In Cancer Screening in the Kentucky Medicaid Population

Principal Investigator: C Tyler Ellis

Project Description: Evaluated whether young adult Medicaid beneficiaries with colorectal cancer received guideline-recommended surveillance after initial surgical treatment.

Key findings: Survey of colorectal cancer surveillance after initial treatment indicated 30% of potentially eligible individuals received all four guideline-recommended surveillance studies. Over 90% of individuals had claims for office visits, suggesting that most individuals were connected to the healthcare system.

Recommendations: Provide financial incentives for providers to improve post-cancer care (i.e., achieving certain rates of quality of care). Ensure that individuals eligible for Medicaid can stay in the system after initial cancer care. Approximately 15% of individuals treated for colorectal cancer left Medicaid. Provide opportunities for PCPs to participate in cancer surveillance to reduce travel burdens.

SUP Cycle: 2022

University: UKY

Project Name: Assessing The Impact of Long-Acting Injectable On Psychiatric Treatment Outcomes Among Medicaid Beneficiaries

Principal Investigator: Chizimuzo Okoli

State University Partnership Program Overview

Project Description: Assessed long-acting injectable antipsychotic use among Medicaid beneficiaries with schizophrenia, including comparative effectiveness and engagement in community mental health services.

Key findings: Review of previous research comparing long-acting injectables to oral antipsychotics showed that, in general, long-acting injectables improve medication adherence and lower healthcare costs. However, long-acting injectables had, in general, higher pharmacy costs. Among Medicaid beneficiaries in Kentucky diagnosed with schizophrenia, only 11% used long-acting injectables.

Recommendations: Improve coverage by listing long-acting injectables on the State Department of Medicaid's formulary. Remove prior authorization requirements for allowing long-acting injectable prescriptions for Medicaid beneficiaries. Improve access by reducing site-of-care classification for Medicaid recipients.

SUP Cycle: 2022

University: UofL

Project Name: Alcohol Use Disorder: Its Risk Factors, Comorbidity, and Long-Term Care Cost

Principal Investigator: Maiying Kong

Project Description: Described alcohol use disorder prevalence, geography, treatment utilization, comorbidities, and healthcare costs among Kentucky Medicaid beneficiaries from 2012–2019.

Key findings: Roughly 3-4% of Kentucky's Medicaid population was diagnosed with alcohol use disorder (between 2012-2019). Of those diagnosed with alcohol use disorder, roughly 25% had alcohol associated organ disease, and 60% also suffered from anxiety and depressive disorders. Patients with organ diseases associated with alcohol use disorder have a median cost for medical care of \$3,000 per person annually, compared to roughly \$1,000 for people without alcohol associated organ diseases. Depressive/anxiety disorder was 30% more prevalent in patients with alcohol use disorder than patients without. While use of treatments (both pharmacological and psychosocial) by patients with alcohol use disorder increased from 2012 to 2019, only 1 in 4 patients are receiving treatment.

Recommendations: Increase use of alcohol counselling (a proven strategy to reduce excessive alcohol consumption) during primary care visits for patients who misuse alcohol to reduce the prevalence of alcohol use disorder. Increase access to treatment in rural areas (e.g., telemedicine for psychotherapy). Coordinate care for patients with alcohol use disorder to improve care of their multiple conditions.

SUP Cycle: 2020

University: UKY

Project Name: Value-Based Payment

Principal Investigator: Teresa Waters

Project Description: This study used KY Medicaid Claims data to construct value-based purchasing quality metrics from the Hospital Readmission Reduction Program (HRRP) and the Hospital Value-Based Purchasing

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Program (HBVP) for Medicaid patients treated at Kentucky hospitals for the most recently available three years. These metrics will be used to prepare hospital-specific reports that compare hospitals to 'peer' organizations and statewide benchmarks.

Key findings: Top 3 barriers to engaging in Value-Based Purchasing, identified in a 2018 survey of hospital leaders: Insufficient patient volume by payer to assume clinical risk; Inability to adequately understand and analyze payment models; lack of interoperable data systems.

Recommendations: This study recommends convening MCOs and Kentucky DMS officials for iterative meetings to discuss Value-Based Purchasing goals. Develop a timeline of gradual core quality measures uptake, 5-8 measures in 1 to 2-year timeframe. Assemble a coalition of similar providers to discuss related interests and needs to be accounted for within a VBP program. Ensure adequate staff and operations. Build collaborative partnerships and community engagement to embrace social determinants of health. Establish a framework for sustainability with clear priorities and business processes.

SUP Cycle: 2020

University: UofL

Project Name: Type 2 Diabetes Study

Principal Investigator: Bert Little

Project Description: This study analyzed longitudinal Medicaid claims data (i.e. joining claims from the same person across time) for 2011-2016 to identify antecedents of the most serious and expensive complications of type 2 diabetes.

Key findings: This project developed an analytic tool to predict diabetes-associated end-stage events from Medicaid claims with 72-83% accuracy at 270-420 days before the condition was diagnosed.

Recommendations: Reliably estimating patient risk allows providers to intervene earlier. This model could be paired with recent clinical insights related to the use of SGLT2 inhibitor drugs to prevent diabetic complications (e.g., nephropathy). This tool could allow for new interventions to significantly reduce disease burden and systemwide healthcare costs.

SUP Cycle: 2020

University: UKY

Project Name: SUD Treatment Beyond Birth

Principal Investigator: Kristin Ashford

Project Description: This project studies the operation of Beyond Birth, an interdisciplinary clinic within University of Kentucky HealthCare for mothers and children affected by SUD and neonatal abstinence syndrome (NAS). A social worker was positioned at Kentucky Children's Hospital to conduct full assessments and complete referrals to treatment.

Key findings: Beyond Birth had more than 4,900 patient encounters related to this project. There were 4 subsequent short-interval substance-exposed pregnancies in the cohort. Return-to-use rates were less than

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5%. Marketed and delivered a training program to MCOs and healthcare providers. Developed peer support training programs for transitioning mothers.

Recommendations: Public health efforts and targeted clinical services can provide a foundation for preventing future NAS cases. Special recovery meetings (12-step approaches and medication-oriented methods) can serve as a beneficial strategy to support this population. This study recommends increased access and expansion of Beyond Birth services for women with SUD by identifying mothers of infants being treated for neonatal abstinence syndrome, coordinating comprehensive substance use treatment and support services, and developing an online Beyond Birth nurse navigation and peer support training program.

SUP Cycle: 2020

University: NKU

Project Name: Poorly Controlled Diabetes Mellitus

Principal Investigator: Gary Ozanich

Project Description: This study evaluated whether a clinical decision support tool combined with pharmacist-supported team-based care could improve A1c outcomes, patient engagement, and costs for Kentucky Medicaid beneficiaries with uncontrolled diabetes.

Key Findings: Patient claims and encounters were substantially lower for the study group compared to the control group, likely as a result of increased patient adherence. The study group had eight unplanned diabetes-related hospitalizations over the study period compared to 28 for the control group. Treatment groups that incorporated CDS-recommended medication changes had statistically significant A1c improvements, while no regimen change had no statistically significant A1c change, and the intervention group had lower preventable hospitalization costs. In this project, pharmacists play a key role in team-based care to improve outcomes and patient engagement for diabetes.

Recommendations: Team-based care and the use of a Clinician Decision Support (CDS) tool for patients with diabetes could result in lower costs of care, as demonstrated in this study. Clinicians will likely require support for implementing new workflows and addressing barriers to adoption.

SUP Cycle: 2020

University: UofL

Project Name: Performance Measures

Principal Investigator: J'aime Jennings

Project Description: Evaluated the readiness of health systems in Kentucky and the Department for Medicaid Services (DMS) to implement core quality measures as outlined by the Performance Measures Alignment Committee (PMAC). The study also analyzed changes to provider readiness and quality reporting after the initial implementation of value-based purchasing incentives within Medicaid Managed Care Organizations (MCO) contracts.

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Key findings: The leading barriers to participating in value-based purchasing as identified in the 2018 provider survey were: 1) insufficient payment volume by payer to take on clinical risk; 2) inability to adequately understand and analyze payment models; and 3) lack of interoperable data systems. Researchers produced a list of 10 suggested actions to address the findings of a SWOT analysis based on interviews with MCO medical directors and associated team members and KY DMS officials.

Recommendations: Assess 2018 provider survey results by region, organization size, and type to determine how to allocate resources to address barriers. This study recommended six strategies for VBP implementation, with specific suggestions to support communication, staffing/resources, and community engagement for successful implementation of VBP.

SUP Cycle: 2020

University: UKY

Project Name: Opioid Stewardship Program

Principal Investigator: Doug Olyer

Project Description: This project supported the creation of an Opioid Stewardship Program at the University of Kentucky: developing patient education materials, delivering education to prescribers, implementing tools to improve safety, promoting increased use of non-opioid analgesics, collaborating with other healthcare systems to incorporate opioid stewardship principles, delivering community education programs regarding safe opioid use, and beginning a program in the ambulatory setting at UK Healthcare.

Key findings: Since the inception of the Opioid Safety Program: inpatient opioid use reduced by >280,000 opioid pills; high-risk prescriptions reduced by over half; improved overall pain ratings from hospitalized patients; decreased opioid prescriptions at hospital discharge by an average of 25 per week; provided naloxone to more than 2,000 patients within the healthcare system. Future Goals: reduce prescription use in Kentucky to the national rate by 2025; achieve 97% participation among hospitals and healthcare systems; develop processes to ensure safe use of chronic opioid therapy when indicated.

Recommendations: Implement strategies that have been determined effective to help reduce instances of OUD and lower related healthcare costs, promote non-opioid analgesics, educate providers on proper opioid usage, implement community-based programs that promote appropriate use of opioids.

SUP Cycle: 2022

University: UofL

Project Name: Improving Quality Care for Children in KY Medicaid

Principal Investigator: Deborah Davis

Project Description: This study sought to guide the design of safeguards that improve the quality of care for children with mental and /or behavioral health issues and advance the health and wellness of children with mental and/or behavioral issues in Kentucky. Analyzed pediatric Medicaid pharmacy and medical claims to describe antibiotic prescribing by MCO and assess appropriateness of prescribing patterns.

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Key findings: Antibiotic prescription rates across all MCOs were considerably higher for females, younger children (ages 0-2), those residing in non-metro areas, and White, Non-Hispanic children. Inappropriate antibiotic prescribing for child beneficiaries was more common among non-metro children and was more frequently authorized by general practitioners compared to specialists.

Recommendation(s): Regularly monitor antibiotic prescription data and share it with providers and MCOs; Increase data insights on prescribing; implement behavioral prompts into daily practices through electronic medical records; provide educational materials and training for providers and communities; establish payment models (value-based) that reimburse providers for quality care outcomes.

SUP Cycle: 2020

University: UKY

Project Name: Enhancing Tobacco Dependence Treatment

Principal Investigator: Ellen Hahn

Project Description: Conducted a study on enhancing tobacco dependence treatment in Medicaid populations in Kentucky and developed a multi-pronged approach to reach Kentucky Medicaid providers who have current training in tobacco dependence, to characterize gaps in treatment approaches and infrastructure, and to brainstorm potential solutions

Key findings: Analysis of results found three major themes to facilitate improved access to treatment: standardized use (Ask, Advise, Assess, Assist, Arrange) and quality reporting (HEDIS); Cessation treatments such as nicotine replacement therapy may have barriers to access; The importance of case management in discussion of cessation medications and strategies during pregnancy, in behavioral health settings, and for members with chronic diseases; Continuing education and provider training related to tobacco dependence and cessation was concentrated around Kentucky's metropolitan areas.

Recommendations: Systematic and standardized training for all Medicaid providers and ancillary staff, using web-based modules; Create and implement a detailed map of best practice strategies to implement all aspects of the 5 A's model for tobacco treatment (Ask, Advise, Assess, Assist, Arrange); Institute an "opt-out" tobacco treatment strategy where treatment is provided to all tobacco users by default; Incorporate tobacco treatment into high-risk case management; Establish a central repository of regularly updated tobacco treatment resources; Create benchmarks to enable practices to measure processes and performance related to the 5 A's.

SUP Cycle: 2020

University: UKY

Project Name: Behavioral Health Tobacco Dependence Treatment

Principal Investigator: Chizimuzo Okoli

Project Description: Piloted and assessed tobacco dependence treatment approaches for Medicaid-enrolled adults with mental illness served by community mental health centers.

State University Partnership Program Overview

Key findings: The CMHC survey identified substantial gaps in written tobacco policies and evidence-based treatment delivery, while the small Quit/Win pilot was interrupted by COVID-19 and enrolled only seven individuals, limiting conclusions about intervention effectiveness.

Recommendation: Provide specialized tobacco treatment training to Medicaid providers; Increase the number of tobacco treatment specialists; Implement tobacco-free policy; Increase the number of community behavioral health partners supporting tobacco-free services for clients and offer community resources; Support and increase capacity of coverage for behavioral health programs and CMHC's ability to bill separately for tobacco treatment services;

SUP Cycle: 2018

University: UofL

Project Name: ICQ for Children receiving KY Medicaid

Principal Investigator: Mike Smith

Project Description: University of Louisville shall guide the design of safeguards that improve the quality of care for children with mental and/or behavioral health issues and advance the health and wellness of children with mental and/or behavioral health issues in Kentucky.

Outcomes: Behavioral Health - MP/SCL Psychotropic Rx/Dx (ODA Dashboard), HEDIS - Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM) (ODA Dashboard), HEDIS - Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (ODA Dashboard)

Recommendation(s): N/A

SUP Cycle: 2018

University: UKY

Project Name: Opioid Use Disorder

Principal Investigator: Ty Borders

Project Description: Provide analysis to DMS about the use and quality of Medication-Assisted Treatment (MAT) for Opioid Use Disorder (OUD) and assist with the development of successful interventions to improve the quality of care and constrain the costs of inappropriate practices among patients receiving Kentucky Medicaid

Outcomes: HEDIS - HEDIS Use of Opioids at High Dosage Rates (ODA Dashboard), KORE - KORE Program Measures (ODA Dashboard), Leadership - Med Insights Opioid Dependence (ODA Dashboard)

Recommendation(s): N/A