



Kansas's Efforts to Address Preterm Birth Rates

*A Case Study Developed from NICHQ's Exploring State-Level
Strategies to Improve Maternal Health and Birth Outcomes Initiative*

Introduction to Kansas

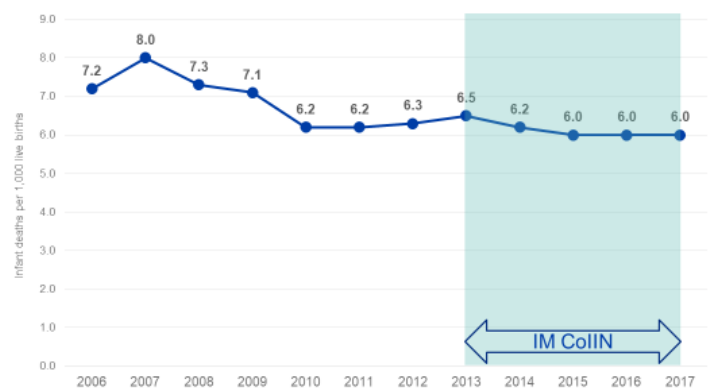
With the introduction of the Infant Mortality Collaborative Improvement and Innovation Network (IM CoIIN) in 2014, Kansas launched a series of collaborative and coordinated initiatives to address infant mortality, including focused work on reducing preterm (less than 37 weeks gestation) and early term (37-38 weeks gestation) birth and leveraging existing partnerships and statewide stakeholders. Kansas was highly engaged in both program activities and data submission during IM CoIIN and focused their preterm birth reduction activities on increasing access to interventions such as progesterone and smoking cessation.

Case Study Background

Throughout the IM CoIIN years, Kansas's infant mortality rate fell from 6.5 per 1,000 live births in 2013 to 6.0 per 1,000 live births in 2017. In contrast, the preterm birth rate increased from 8.7 percent of live births in 2014 to decade high 9.6% in 2017. This is in comparison to preterm birth rates in the United States, which increased from 9.6% of live births in 2014 to 9.9 % in 2017.¹

As with national trends in disparities in infant mortality, non-Hispanic Black mothers in Kansas experienced a disproportionately high burden of infant mortality compared to white mothers. Infants born to non-Hispanic Black mothers had a mortality rate of 15.0 per 1,000 live births in 2013, falling to 11.4 per 1,000 live births in 2017.¹ Infants born to non-Hispanic white mothers, by contrast, had a mortality rate of 5.6 per 1,000 live births in 2017, narrowing the gap

Infant Mortality Rates Kansas, 2006-2017

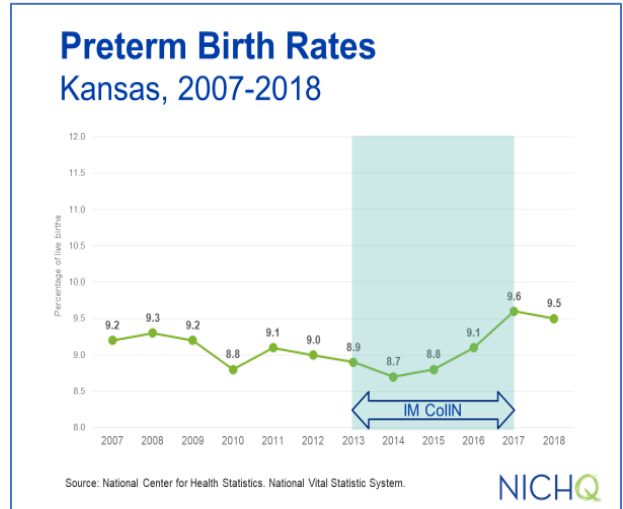


Source: National Center for Health Statistics. National Vital Statistics System.

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only slightly as infants born to non-Hispanic white mothers had an average mortality rate of 5.9 per 1,000 live births in 2013.¹

Similar disparities exist among mothers delivering preterm babies. Between 2013-2015, Black mothers had a preterm birth rate of 12.3% of live births compared to white mothers, whose preterm birth rate was 8.5%.² However, between 2015-2017, preterm birth rates remained relatively stable for both Black and white mothers, increasing slightly to 8.8% of live births for white mothers and to 12.6% for Black mothers.²



Population Characteristics

Compared with the rest of the United States, Kansas is one of the least densely populated states, particularly in the northwestern corner of the state.² With a population of more than 2.9 million people spread over 82,278 square miles, the state is largely rural. This lower population density leads to challenges in accessing medical services, where residents of many counties must travel several hours to access a hospital for care.³ Kansas has a unique geographic layout, ranging from urban to frontier counties. Within each of its regions, there are a few populous cities and multiple rural areas. For example, the South-Central region includes Wichita, with a population of 389,255. Within that same region also lies Pratt, with a population of 6,630 — a good example of Kansas's population diversity, where rural communities and mid-sized cities are influenced by each other.

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Kansas is an agricultural powerhouse of the United States. In 2017, there were more than 58,500 farms in Kansas, generating \$18.7 billion in agricultural output. Family-owned farms and ranches are central to Kansas's farm infrastructure, accounting for 84.6% of farms.⁸

Racial/Ethnic and Socioeconomic Factors

Of Kansas's almost three million residents, 80.8% are white and 8.9% are Black.⁴ Black Kansans are more than twice as likely to be unemployed than non-Hispanic whites and account for 25.3% of those in the state who live in poverty.⁵ Hispanics, a growing population in the state,⁶ account for approximately one quarter of those living in poverty (25.3%).⁴ Educational attainment plays a

crucial role in employment status and poverty, and both Black and Hispanic Kansans were less likely to graduate or receive a GED than white residents. Nearly four in ten (38.7%) Hispanic Kansans age 25 or older did not have a high school diploma or GED as of 2015. Black Kansans (12.6%) were nearly twice as likely as white Kansans (6.4%) to not have a high school diploma or GED.⁴

Health Care Access

Kansas is one of 14 states that have not adopted Medicaid expansion. However, legislation has recently been introduced that could lead to an estimated enrollment of nearly 132,000 additional Kansans to KanCare, the Kansas equivalent to Medicaid.⁷ In early 2020, Senate Bill 252 to expand medical assistance eligibility and implement a health insurance plan reinsurance program was introduced, but work on the bipartisan legislation was suspended and the bill died in the Senate Public Health & Welfare Committee without receiving final action.¹⁷



Maternal Risk Factors for Infant Prematurity

Women in Kansas have higher incidence of risk factors for preterm birth and infant mortality than women nationally.

- **Smoking:** Although the rate of smoking among childbearing women in Kansas dropped from 21.1% to 19.5% between 2013 and 2017, it still is higher than national rates (16.9% in 2017).⁹
- **Obesity:** Between 2013-2017, the number of women among childbearing age who reported a body mass index (BMI) of 30 or more rose from 28.3% to 31.8%, a steeper rise than the national obesity rate increase from 25.2% (2013) to 27.6% (2017).¹



Targeted Programs and Interventions to Reduce Preterm Birth

awareness and engage with local stakeholders.

1. Increase Availability of Progesterone Statewide

As part of their work in the IM CoIN preterm and early term birth workgroup, Kansas chose to focus on increasing the use of progesterone in their state plan. To mitigate any potential provider resistance, their strategies included provider education around the use of 17 alpha-hydroxyprogesterone caproate (also called 17P), which has been shown to decrease preterm birth among women with a prior preterm birth. The Kansas Department of Health and Environment (KDHE) collaborated with in-state managed care organizations to increase utilization and created co-branded materials to address provider and patient education.

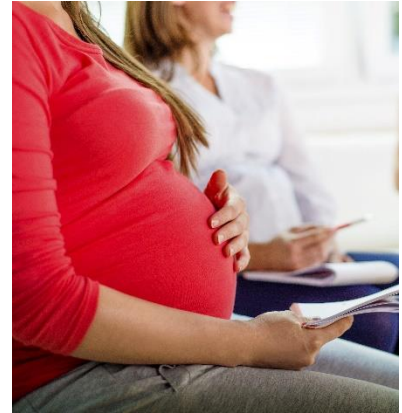
Kansas has identified several barriers to 17P utilization, including the willingness of eligible women to accept the injections, issues with coding and billing, and transportation to clinics for the weekly injection administration. KDHE has worked to address these issues, including managed care coverage of in-home administration of injections.

As with many states, Kansas recently began to limit its work to increase progesterone access and use after conflicting trial results (see sidebar). While the Society of Maternal-Fetal Medicine released new guidelines suggesting that doctors assess the patient's level of risk before recommending hydroxyprogesterone shots, the American College of Obstetricians and Gynecologists (ACOG) said it had reviewed the results and was not changing its guidance.¹² Until the FDA resolves the efficacy of 17P in reducing preterm deliveries, Kansas has put promoting 17P utilization on hold.

In October 2019 amid conflicting new study results, the FDA Advisory Board recommended withdrawal of approval for 17P, with seven of the committee's members voting to leave the product under accelerated approval and to require a new confirmatory trial. Although both the 2003 and 2019 trials had the same eligibility criteria, women in the original government-sponsored trial had more risk factors for preterm birth, including smoking, being unmarried, being Black, and having multiple previous preterm deliveries. Some panel members who voted to order a new trial said 17P helps a subset of women that has yet to be defined.¹²

2. Increase Smoking Cessation Programs

Kansas has realized some success in reducing smoking rates among women of childbearing age. IM CoIIN participants noted that CoIIN tobacco cessation initiatives were effective in encouraging women to stop smoking while supporting them during pregnancy and beyond. From a state-level strategy perspective, the state strengthened collaboration between the Maternal and Child Health (MCH) and Chronic Disease bureaus in order to support multiple evidence-based programs: Baby and Me – Tobacco Free™ (BMTF) and Smoking Cessation and Reduction in Pregnancy Treatment Program (SCRIPT®), from the Society for Public Health Education), in addition to partnering with other programs to leverage messages and resources, such as KanQuit, the state tobacco Quitline.



- **Baby and Me – Tobacco Free™:** One of the strongest tobacco cessation programs in the state can be found in Crawford County, where the county health department has implemented *Baby and Me – Tobacco Free™*, which includes incentives for women who quit smoking and continue to remain smoke free up to 12 months after the baby is born. However, these incentives can often become costly, so the program in Crawford County partnered with a local community foundation for a grant, and the Kansas Title V Maternal and Child Health Program provided a 40% match in order to ensure its success.
- **SCRIPT®:** Shown to be effective in helping pregnant women stop smoking through a train-the-trainer model and patient guides, the MCH program in Kansas worked with the March of Dimes and the Special Supplemental Nutrition Program for Women Infants and Children (WIC program) to fund the trainings across the state. More information on the SCRIPT® program can be found here: <https://www.sophe.org/focus-areas/script/>.
- **Partnering with managed care organizations:** In partnership with the Kansas Infant Death and SIDS Network, tobacco cessation messages and education were incorporated as a required part of community baby showers and health fairs.
- While underutilized, there is a **Quitline available** to all Kansans across the state. Kansas has designated the Quitline as a cognitive behavioral intervention, which qualifies the program to pay for 10 Quitline calls with a social worker for pregnant women. In collaboration with the Statewide Breastfeeding Coalition, the KDHE is working to improve prioritizing pregnant women for entry into the Quitline program and follow up.

3. Support Prenatal Education Engagement

Through a targeted, evidence-based approach, the Kansas Title V MCH division, in collaboration with March of Dimes, developed and implemented the Kansas Perinatal Community Collaborative (KPCC) birth outcomes model throughout the state. Now serving 16 communities with 30 more

sites pending implementation, KPCC utilizes the March of Dimes Becoming a Mom®/Comenzando bien® (BaM/Cb) prenatal education curriculum.

Becoming a Mom/Comenzando bien has been utilized in Kansas as a collaborative model focusing on prenatal care and education, with particular emphasis on addressing disparities in birth outcomes, including preterm birth. The program collects data from participants by utilizing surveys, and has collected pre-surveys (n=1,116), post surveys (n=827), and outcomes surveys (n=685).¹³ Additional evaluation data from 2018 also show success in reaching target audiences of at-risk mothers, including those who are from low socioeconomic status who are eligible for Medicaid. Mothers receiving prenatal education through BaM/Cb were more likely to be racial/ethnic minorities than mothers giving birth in the state, especially Hispanics and non-Hispanic Blacks. In 2018, attendance of non-Hispanic Black mothers in Kansas's BaM/Cb was 8.9%, compared to their percent of overall Kansas births at 6.9%. Attendance of Hispanic mothers in BaM/Cb was 28.8%, compared to their percent of overall Kansas births at 16.5%.¹³

“While improving birth outcomes remains a top priority, the sense of community and support this program provides offer families a lifelong lifeline.” - Stephanie Wolf, RN, BSN/Perinatal Health Consultant

Read more about the Kansas Perinatal Community Collaborative in the “Spotlight” Section, as well as [here](#).

4. Foster Data Collection and Tracking Systems

Recognizing the need for reliable data to help inform policies, evaluate programs, and provide accountability, KDHE prioritized the development of data systems to assist with data collection on outcomes and tracking of referrals during IM ColIN and in the years since it ended.

- **Data Application and Integration Solutions for the Early Years (DAISEY):** Beginning in 2014, KDHE and the University of Kansas Center for Public Partnerships and Research (KU-CPPR) partnered to build a shared data infrastructure to measure health outcomes for children and families.¹¹ <https://kdhe.daiseysolutions.org/>
- **Integrated Referral and Intake System (IRIS):** Spearheaded by the University of Kansas Center for Public Partnerships and Research, IRIS is an integrated system to link service agencies and community organizations, allowing for increased communication across entities and better connections for individuals and families. This online referral system closes the loop for families served by multiple agencies. See <https://connectwithiris.org/> for more information and short video.



Policy Efforts

In Kansas, directives set forth by the local and federal government guide the success of health care policies. Establishing grassroots support and having federal directives or guidance can help garner state-level support and eventually, more policy successes.

1. Presumptive Eligibility for Medicaid

As of October 2020, Kansas is one of 14 states across the country that has not passed Medicaid expansion, leaving many residents without affordable coverage options. Low-income and undocumented residents are at highest risk of forgoing health insurance. In 2016, to fill this gap in care, Kansas successfully adopted presumptive eligibility, which provides coverage for outpatient ambulatory services for women at the point of conception and through 60 days postpartum. Since the policy started, the state has seen an improvement in the percent of pregnant women on Medicaid receiving prenatal care beginning in the first trimester – from 68.6% in 2013 to 72.1% in 2017.

2. Hard Stop Policy on Early Elective Deliveries

The Kansas Healthcare Collaborative, the Kansas Hospital Association, and March of Dimes worked together to implement a “hard stop” policy in hospitals across the state in 2012, to reduce non-medically indicated early elective deliveries (NMI EED) – that is, EEDs without a trial of labor at 37 or 38 weeks – if the mother does not have a medical condition prior to or during pregnancy. Through these efforts, Kansas saw a continuous decline in NMI EED rates, starting at 8% in 2013 down to 1% in 2017.

3. Increasing Access to Long-Acting Reversible Contraception (LARC)

While long-acting reversible contraception (LARC) has been covered by Medicaid, there have also been payment solutions that make it easier for women to access it. In addition, educating providers on billing and payment policies has made LARC more widely accessible. Provider feedback has shown that despite its coverage and inclusion in the payment bundle, providers



often did not realize that this birth control method could be provided *after delivery* as part of the bundled payment. The billing was changed so that providers can now bill separately for LARC, and stakeholders clarified the new billing guidelines with providers. The Kansas Department of Health and Environment has utilized a [LARC Integration Toolkit](#) that includes Medicaid guidelines on this process.

To address the large disparity in pregnancy intention between Black and white mothers, pregnancy intention screening is being encouraged as an upstream approach to reduce unintended pregnancies and poor birth outcomes. Efforts have been made to expand state funding for family planning as well as establish a family planning Medicaid waiver.

4. Smoking-Related Policy Initiatives

In order to address the relatively high adult smoking rates in Kansas (17.4% compared to 17.1% in the U.S.¹⁴), stakeholders worked collaboratively with other partners and coalitions, including the Tobacco Free Kansas Coalition, to develop and promote several policy initiatives:

- **Tobacco Free Workplace:** A study in Kansas examined the relationship between tobacco-free policies at worksites to worksite demographics, such as company size and geographic location. More worksites had tobacco-free policies in place (56.7%) than those that did not (43.3%), lagging behind the percentages in other state-based studies. Worksites in urban counties and worksites with more employees were more likely to have tobacco-free policies in place than worksites in rural areas and worksites with fewer employees. Large worksites in Kansas were nearly three times as likely as small employers to support tobacco-free policies. In a largely rural and geographically large state such as Kansas, it is especially important for rural and smaller employers to more fully embrace tobacco-free policies in the workplace, as the majority of worksites in the sample were located in rural, non-metropolitan communities (76%) and had fewer than 250 employees (76%).¹⁵
- **Tobacco 21:** An initiative to raise the minimum age for legal access to tobacco to 21 years and limit the access of adolescents and teens to tobacco products. Several local ordinances have been adopted by counties across the state. In Kansas, a statewide Tobacco 21 law would have a positive effect among nearly 250,000 Kansans aged 15-20. Young adults age 18-20 would be directly affected, and adolescents age 15-17 might no longer have access to a supply of tobacco products from their peers age 18-20.¹⁶



Looking Forward

Future Policy Priorities

In Kansas, stakeholders identified four policy priorities to address the needs of women and assist in reducing the rising preterm birth rates.

1. **Medicaid Expansion:** Passage of reimbursement for postpartum depression screening in a pediatric setting, as well as coverage to 12 months postpartum.
2. **Reimbursable Prenatal and Perinatal Education:** Although a strong focus of the Kansas Perinatal Community Collaboratives, the prenatal education component of those programs like Becoming a Mom is not currently reimbursable with Medicaid.
3. **Reimbursable Care Coordination:** Many of the Kansas Perinatal Community Collaboratives work with community health workers or navigators to help women as they move through the health care system and outreach with other community-based services (transportation, food, housing), which are often critical to ensuring equity in care to all.
4. **Variable Coverage Options:** Moving beyond essential services with managed care organizations to provide more complete coverage of services that can help improve outcomes for moms and babies.

Spotlight On: Kansas Perinatal Community Collaborative

Developing widespread and sustainable improvements in perinatal outcomes, specifically preterm birth and infant mortality, is a top priority for the Kansas Department of Health and Environment. Using a [collective impact framework](#), the Kansas Perinatal Community Collaborative (KPCC) launched and has successfully enhanced the maternal and child health infrastructure within high-risk communities experiencing significant birth disparities. Starting with the implementation of the March of Dimes Becoming a Mom®/Comenzando bien® (BaM/Cb) curriculum in Saline County in 2012, the KPCC has since grown to 16 active sites throughout the state, most clustered in the northeast corner, with three sites in southwest Kansas. One new site joined in the northwest part of Kansas to serve counties with the least population density.

This widespread expansion can be attributed to strong collaboration between private and public partnerships across the state and at the local level. The KPCC serves high-risk women throughout Kansas and connects them with community resources such as WIC, *Baby and Me Tobacco Free*, Maternal and Child Health Services, SCRIPT, and Mental Health Services.

Three KPCC sites in the state, Crawford County, Saline County, and Wyandotte County, have shown long-term success that they attribute to strong partnerships, improved cross-program referrals through the Integrated Referral and Intake System (IRIS), incentive programs, and sustained funding for the collaboratives through grants.

Crawford County KPCC identified its inter-referral system as a strength to success and enrollment, especially its partnership with WIC. A focused MCH Navigator works in the community to actively source referrals and conduct outreach to mothers who may not know about available supports. Barriers include increasing private practice participation in the shared referral system, accessing virtual and telehealth, and continued health disparities.

Saline County KPCC cited positives of truly collaborative efforts in the local community, including a partnership with the Child and Advocacy Parenting program that provides a no-cost facility and daycare to support mothers attending group prenatal education classes. Combined with the availability of telehealth, this United Way-funded support has been a tremendous asset to increase attendance and participation. Barriers include referral follow through, staff turnover, high smoking rates, and ensuring communities can access available telehealth technologies.

Wyandotte County KPCC partners with the Keeler Women's Center and local YMCAs to host *Becoming a Mom/Comenzando bien* classes. More women can access the classes because Wyandotte County offers multiple locations for their classes, making them more accessible to where the women live, as well as free childcare. This reduction in barriers has also widened the group's reach to mothers who may not have otherwise been able to attend.

Overall, the use of IRIS has made it easier for pregnant women to connect to important services in their communities. Improving referral rates and closing the loop on pending referrals has proven beneficial for both mothers and the KPCC.

Emerging Issues in Kansas

When the initial iteration of IM CoIIN was complete in 2017, states were expected to continue their efforts to improve birth outcomes related to infant mortality and preterm birth – not an easy feat without funding and the support provided through the CoIIN and organized with technical assistance by NICHQ.

As Kansas continues its work to improve outcomes for mothers and babies, stakeholders identified several critical issues. In addition to the loss of infrastructure that IM CoIIN provided, stakeholders in Kansas reported limitations due to the lack of evidence-based clinical solutions and the complexity of addressing factors related to the social determinants of health, including housing, transportation, food security, and others that can either hinder or support maternal health.



Other issues as Kansas considers priorities for the future include:

- Comprehensive screening during well-woman visits (mental health, domestic violence, substance abuse, tobacco, pregnancy intention screening, social determinants of health) as an upstream approach to achieve healthy pregnancies
- Citizenship and immigration
- Violence against women including homicide
- Opioids and other substance use

There are numerous reasons why access to care is a major barrier to the health needs of pregnant and postpartum women. Hospital closures, clinician shortages (outside of metropolitan areas), and a lack of Maternal Fetal Medicine specialists, all make it particularly difficult for low-income women to access high-quality, equitable health care.

In addition, the IM CoIIN participants in Kansas pointed to the lack of clinical solutions and the complex nature of preterm birth as limitations on the ability to create a comprehensive preterm birth reduction strategy with partners across the state. More research into the causes and solutions, specifically related to addressing social determinants of health and the underlying causes of preterm birth, is needed to turn the corner in the rising preterm birth rate.

References

1. United States Department of Health and Human Services (US DHHS), Centers of Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics (DVS). Linked Birth / Infant Death Records 2007-2018, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program, on CDC WONDER On-line Database. Retrieved from <http://wonder.cdc.gov/lbd-current.html>
2. Bureau, U. (2020, August 26). 2010 Census: Population Density Data. Retrieved from <https://www.census.gov/data/tables/2010/dec/density-data-text.html>
3. Rural Health Information Hub. (2010, July). Selected Rural Healthcare Facilities in Kansas. Retrieved from <https://www.ruralhealthinfo.org/states/images/kansas-rural-health-facilities.jpg>
4. Bureau, U. (2020, August 26). 2010 Census: Population Density Data. Retrieved from <https://www.census.gov/data/tables/2010/dec/density-data-text.html>
5. U.S. Census Bureau. (n.d.). QuickFacts: Kansas. Retrieved from <https://www.census.gov/quickfacts/KS>
6. Kansas Health Institute. (2018, April). Socioeconomic Status: Disparities in the Sunflower State. Retrieved from https://www.khi.org/assets/uploads/news/14815/ib1807_socio_final.pdf
7. Kansas Health Institute. (n.d.). Elements in Competing Versions Affect Estimated Enrollment Retrieved from <https://www.khi.org/assets/uploads/news/14962/issuebrief-medicaidexpansioninkansas.pdf>
8. Kansas Department of Agriculture. (n.d.). Retrieved from <https://agriculture.ks.gov/about-kda/kansas-agriculture>
9. March of Dimes. (2020, November). Smoking: Behavioral Risk Factor Surveillance System. Behavioral Surveillance Branch, Centers for Disease Control and Prevention. Retrieved from www.marchofdimes.org/peristats
10. March of Dimes. (2020, November). Obesity: Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention. Retrieved from www.marchofdimes.org/peristats

11. DAISEY Solutions. (n.d.). Retrieved from <https://www.inquirer.com/health/fda-advisors-makena-preterm-birth-20191029.html>
12. Kansas Department of Health and Environment. (2019, December). State Aggregate Report. Retrieved from https://www.kdheks.gov/cf/kpcc_docs/BaM_2018_State_Aggregate_Report.pdf
13. Kansas Health Matters. (n.d.). Percent of Adults Who Currently Smoke Cigarettes. Retrieved from <https://www.kansashealthmatters.org/indicators/index/view?indicatorId=2266>
14. Ablah, E., Dong, F., & Konda, K. (2017, June 12). Tobacco-free policies at worksites in Kansas. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5468950/>
15. Kansas Health Institute. (2019, February). Tobacco 21 in Kansas: Local Efforts to Regulate Age of Smokers and Vapers. Retrieved from https://www.khi.org/assets/uploads/news/14901/t21_handout.pdf
16. Kansas Health Institute. (2020, March). Summary of Medicaid Expansion Proposals in Kansas as of March 3, 2020. Retrieved from https://www.khi.org/assets/uploads/news/14964/tracker_web_030420_final.pdf