HIV in Kansas

Integrated Epidemiological Profile: An Analysis of the HIV Epidemic in Kansas from 2010 – 2014

STI/HIV Surveillance Program
STI/HIV Section
Bureau of Disease Control and Prevention
Kansas Department of Health and Environment

Primary Sources of information for this report:
Kansas HIV Surveillance System (eHARS)
Kansas Integrated Surveillance and Case Management System (EpiTrax)
Kansas Ryan White Database (SCOUT)

For further information, please contact the STI/HIV Surveillance Program at 785-296-6174 or email HIV_Request@kdheks.gov

Disclaimer: There may be a difference from previously reported data, due to extensive data cleaning efforts.

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Acknowledgements:

The STI/HIV Surveillance Program would like to thank all of our partners who contributed to the production of this document, including: the Bureau of Disease Control and Prevention’s STI/HIV Section, and the Office of Vital Statistics. The STI/HIV Section includes the STI/HIV Surveillance Program, the STI/HIV Prevention Program, the STI/HIV Care Program and the STI/HIV Disease Intervention Program.

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*The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas*
Executive Summary

The state of Kansas is primarily a rural state, with the exception of three major metropolitan areas; Wichita, Kansas City, and Topeka. The major industry of Kansas is agriculture, growing more wheat than any other state in the union. The general population of Kansas is predominantly white (78%), with 50% of the estimated 2,904,021 population within the age range of 25-64.

In 2014, CDC released an updated HIV case definition in the Morbidity and Mortality Weekly Report (MMWR, using stage classification rather than HIV/AIDS. If an individual is HIV-positive, and has been diagnosed with an identified opportunistic infection or has a CD4 count below 201, that person is defined as Stage 3 (previously defined as AIDS).

On average, approximately 150 people are newly diagnosed with HIV in Kansas each year. As of December 31, 2014 there were a total of 2,827 persons known to be living with HIV in the state of Kansas. Approximately 76% of the 105 counties in Kansas have residents living with HIV. The three metropolitan areas represent 65% of the Kansas HIV epidemic.

The majority of people living with HIV in Kansas are male, Non-Hispanic, men who have sex with men (MSM), between the ages of 25-44 years of age. However, men of color continue to be disproportionately affected by HIV.

In Kansas between the years 2010 and 2014, 28% of new HIV diagnoses were simultaneously diagnosed as Stage 3. During this same time period, 11% of new diagnoses had a Stage 3 classification within twelve months. Collectively, this indicates that on average, 39% of new HIV diagnoses during this time tested later in their infection, which may contribute to further spread of the virus among the Kansas population, as well as decreased quality and length of life for those infected.

Despite a decrease in funding for KDHE-funded HIV Counseling and Testing sites (CT), calendar year (CY)2014 yielded a higher percent positive than in previous years. This can likely be attributed to non-healthcare testing sites providing more targeted testing in their respective areas.

In October 2014, the KDHE STI/HIV Program created and implemented the Not in Care in Kansas (NICK) program. The NICK program was designed to identify potential gaps in the clinical care of HIV-positive individuals presumed to be alive and residing in Kansas. The NICK program attempts to identify and re-engage HIV-positive persons who had not been receiving necessary HIV medical care. While the NICK program is ongoing; preliminary results have demonstrated a 50% successful re-engagement rate.

The Continuum of Care identifies the major milestones that an HIV-positive person goes through in an attempt to reach the ultimate goal of viral suppression. The stages that Kansas chose to identify for the Continuum of Care are “Prevalence”, “Engaged in Care”, “Retained in Care”, and “Virally Suppressed”. A tool like the Continuum of Care demonstrates where improvements in medical care and prevention are still needed. As of December 2014, 54% of HIV-positive persons living in Kansas were virally suppressed, compared to 40% nationally as of 2014.

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In 2011, the CDC released supplemental guidance for the treatment of gonorrhea due to the alarming rates of antibiotic resistance. Similarly, in CY2013, gonorrhea became a higher priority for the STI Disease Intervention Program due to concerns regarding resistance. This focused attention on gonorrhea is likely the cause of sharp increases in reported cases that year. However, due to rising syphilis and HIV cases beginning in 2014, gonorrhea cases were deprioritized due to decreased funding and staffing constraints. In 2014, there were 2,549 gonorrhea cases reported.

Chlamydia is the most frequently reported STI in Kansas with 11,011 cases reported in 2014.

While syphilis is not as frequently reported as chlamydia or gonorrhea, it can be more difficult to identify and diagnose. In addition, the populations most affected by HIV tend to be the same populations diagnosed with syphilis. During CY2014, 145 early syphilis cases, defined as infection of less than one year’s duration, were reported statewide.

During 2010-2014, a total of 200 people were diagnosed with tuberculosis (TB), 2% (4) of these cases were co-infected with HIV.
Background

Kansas HIV Surveillance

The Kansas Department of Health & Environment (KDHE) began monitoring the disease known as Acquired Immunodeficiency Syndrome (AIDS) in 1983. On July 1, 1999, the Kansas statutes requiring confidential name-based HIV reporting were passed into law. All HIV cases diagnosed or treated in the state of Kansas were made reportable to KDHE’s STI/HIV Section housed in the Bureau of Disease Control and Prevention (BDCP). Kansas Law (K.S.A. 65-6002) requires all physicians and laboratories to report all cases of HIV infection within 30 days and for laboratories to report CD4+ T-lymphocyte counts less than 500/µl and/or CD4+ T-lymphocytes less than 29% of total lymphocytes (K.A.R. 28-1-18).

KDHE’s STI/HIV Section

BDCP houses the STI/HIV Section, and the Tuberculosis/Immunization (TB/IMM) Section. The STI/HIV Section became fully integrated in the summer of 2012. Prior to this, the STD, HIV Surveillance, HIV Prevention, and Ryan White Part B and AIDS Drug Assistance Program (ADAP) operated independently of each other. This separation made information and data sharing a challenge. To eliminate the program silos, the HIV Surveillance Program, Care Program (Ryan White Part B and ADAP), HIV Prevention Program and the Disease Intervention Program (STD) were integrated into the STI/HIV Section. All programs now report to a unified STI/HIV Section Chief.

STI/HIV Prevention Program

The Prevention Program receives federal funding from CDC to support HIV prevention activities in the following areas: STI/HIV testing, prevention with positives, condom distribution, policy initiatives, jurisdictional planning, technical assistance and capacity building, and monitoring and evaluation.

STI/HIV Surveillance Program

The Surveillance Program is funded by the CDC to monitor the HIV epidemic in Kansas, analyze trends in infection, and provide accurate information for planning of HIV prevention and care activities. HIV case reports are sent directly to KDHE by doctors, hospitals, and laboratories. These reports are processed by the Surveillance Program and analyzed to assist with resource planning for the Prevention and Care Programs.

STI/HIV Care Program

The Care Program uses Ryan White Part B and AIDS Drug Assistance Program (ADAP) funding provided by the Health Resources and Services Administration (HRSA) to provide care for persons living with HIV infection who are not eligible to receive medical care through other public or private sources. The program, in coordination with the Ryan White Part A, C, D, and F grantees, assures that all Kansans living with HIV have access to the resources to manage their infection, in order to achieve the highest quality of life possible. The Care Program is responsible for administration of Part B and AIDS Drug Assistance Program (ADAP) activities. Part B funds
are to be accessed only when no other resources are available, serving as the payer of last resort. Additional services provided through the Care Program include: medical case management (MCM), Housing Opportunities for People with AIDS (HOPWA), dental care services, mental health, and substance abuse services.

**STI/HIV Disease Intervention Program**

The Disease Intervention Program is funded by the CDC to intervene in the spread of Sexually Transmitted Infections (STIs) by providing treatment and partner services for diagnosed syphilis and HIV cases. The Disease Intervention Program focuses on syphilis and HIV, but also provides some follow-up with gonorrhea. Through Partner Services (PS), Behavioral Intervention Specialist (BIS) work with infected patients to identify partners and other contacts in need of testing and treatment for these infections. Education for both patients and providers are provided by the BIS, including current STI information, prevention, and the most up-to-date treatment protocols. The eleven BIS in Kansas also work to change individual patient risk behavior through evidence-based interventions with the goal of reducing transmission in Kansas.
A Quick History of HIV

**Early 1980's:** During the early days of the epidemic; what was originally called GRID (Gay-Related Immune Deficiency) seemed to only target men who have sex with men (MSM) and injection drug users (IDUs). These individuals were contracting opportunistic infections (OIs) that were previously unseen.

**1983:** CDC released a MMWR report naming the new disease “Acquired Immune Deficiency Syndrome” (AIDS), and confirming that the disease was due to a virus found in the blood of an infected person.

KDHE started the AIDS Surveillance Program to monitor the spread of disease in Kansas.

**1986:** CDC and other medical providers start to use the term: Human Immunodeficiency Virus (HIV).

**1987:** The first anti-retroviral therapy (ART) was approved by the Food and Drug Administration (FDA).

CDC revised the case definition of HIV/AIDS; HIV is now classified as infection, with AIDS being classified as a late stage of HIV infection.

**1999:** The State of Kansas requires confidential name-based reporting for all HIV/AIDS laboratory tests. Tests include low CD4 (<500 µL count and/or <29% µL), viral loads, screening and confirmatory testing.

**2000:** CDC reported for the first time, Black/African American and Hispanic MSM have higher rates of infection nationwide when compared to White MSM.

**2002:** The first rapid HIV test was FDA approved.

**2006:** The first “once daily” oral HIV treatment was FDA approved.

CDC released new guidelines stating that anyone who was sexually active should go to their medical provider for routine HIV testing.

**2012:** The FDA approved an antiretroviral drug combination for Pre-Exposed Prophylaxis (PrEP).

**2013:** President Obama established the HIV Care Continuum Initiative.

**2014:** CDC revised the HIV/AIDS case definition to identify state classification (0,1,2, or 3) rather than HIV/AIDS.

- Stage 0 - acute infection (<180 days since previously negative HIV test),
- Stages 1 and 2 - HIV infection (CD4 levels determine stage),
- Stage 3 - replaces the term AIDS (low CD4 and/or diagnosed OI)

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About the Epidemiological Profile

This edition of the Kansas Epidemiological Profile will concentrate on trends and analysis from January 1, 2010 to December 31, 2014. This edition will be the first time that Kansas is able to provide a comprehensive analysis of both STI and HIV data in the same document.

For updated data and information, please refer to the KDHE STI/HIV Surveillance website to view the HIV bi-annual data tables. The HIV bi-annual data tables reflect the incidence and prevalence for the state of Kansas, and HIV regions for the identified portion of a given calendar year.

http://www.kdheks.gov/sti_hiv/hiv_std_update.html

STI bi-annual statistics can be found by visiting the KDHE STI/HIV Surveillance website. Data can be viewed by case counts and case rates.

http://www.kdheks.gov/sti_hiv/sti_reports.htm
Guidelines to reading the Epidemiological Profile

The following guidelines are intended to facilitate proper interpretation of the tables and figures presented in this profile:

1. **Carefully examine the entire table or graph.** Read the title and look closely at the type of information presented on each axis. The axis may be presented in total numbers or in percentages. Look at the scales used for each axis. Review the time frame the graph is covering. Make sure to read the analysis given to see if any data has been excluded, for example: tables, and graphs may represent incidence data (newly diagnosed cases within a calendar year) or prevalence data (all HIV-positive persons living in Kansas).

2. **These data have certain limitations.** HIV named reporting in Kansas wasn’t required by law until July of 1999. Prior to this, the number of persons reported is relatively small and may not be representative of all infected persons. HIV Surveillance Data is reliant on timely reporting practices from health entities and laboratories, and this may not always occur. Different findings should be examined carefully. All data sources are not equivalent in their generalizability. All studies should be examined for their purposes, populations studied and limitations.

3. **Be cautious of small numbers.** Small changes or differences from year to year are expected. Due to the low number of cases in Kansas, comparing data from one year to the next can be complicated and may not be reflective of actual trends. Any significant changes will be noted in the analysis that accompanies tables, graphs, and/or charts. Data release limitations are set to ensure that the information cannot be used to inadvertently identify an individual. In Kansas certain datasets that contain a cell size less than 5 and could result in data being identifiable cannot be released. Take caution when looking at graphs, charts and/or tables due to this constraint.

4. **Case-Based vs. Person-Based Analysis.** All public health and medical data, including HIV, can be examined in two different formats; case-based and person-based. A case-based analysis counts the number of disease cases present. In this way a client could be counted once for being in the HIV-positive category and a second time for being Stage 3. A person-based analysis counts the client as a single entity, regardless of the stage or level of disease they have. In this way a client is only ever counted once, regardless of the stage of disease. In this publication, HIV will be illustrated in both formats. STI’s will only be illustrated in the case-based format.
**Data Sources**

Data were compiled from a variety of sources to provide a complete picture of the HIV epidemic in Kansas. When interpreting the data, keep in mind that each of the data sources has strengths and limitations. A brief description of each data source is provided below.

**HIV Surveillance Data**

Standardized adult and pediatric case report forms are used to collect demographics, vital status, laboratory and clinical results, as well as risk factor information on all cases. In addition, all laboratories performing HIV tests for Kansas residents are required to report positive HIV results, and CD4 counts less than 500 to KDHE. All surveillance data are entered into the Kansas electronic HIV/AIDS Reporting System (eHARS), the HIV surveillance database developed and required by CDC.

**Ryan White Care Data**

The Ryan White Part B & ADAP Programs in Kansas utilize the SCOUT database (hosted by Healthcare Strategic Initiatives (HSI) to collect client-level data. SCOUT is used for all data collection and reporting operations of the Ryan White Part B and ADAP programs.

**Sexually Transmitted Infection (STI) and Tuberculosis (TB) Surveillance**

Provider and laboratory reports, as required by state law, are utilized to collect demographics, laboratory results, and treatment information. All laboratories performing chlamydia, gonorrhea, TB, and syphilis testing in Kansas are required to report positive laboratory results to KDHE. Any provider diagnosing a case of syphilis must also report all case information to KDHE. Data collected is entered into the EpiTrax integrated disease surveillance database, which helps to identify co-morbidities and trends.

**HIV Counseling and Testing Data**

Counseling and Testing (CT) sites in Kansas are required to enter specified information for HIV testing events provided by KDHE into EvaluationWeb, the reporting database utilized by CDC. Data collected includes demographics, test results, risk factors, and linkage to care referral information.

**Vital Statistics Data**

The Office of Vital Statistics (OVS) collects information on all births and deaths that occur in Kansas. Vital statistics information is obtained on all reported cases by matching with birth and death certificate databases. These databases also assist in identifying perinatal exposures from birth data.

**Population Data**

The U.S. Census Bureau collects and disseminates population estimates for states and counties every ten years. The data consists of demographic, economic and household characteristics of the population.

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The U.S. Bureau of Labor Statistics collects and disseminates estimates regarding the economy, employment status, and poverty levels. The data utilizes population data collected from the U.S. Census Bureau.

The Kansas Information for Communities (KIC), collects Kansas statistics on a number of topics (including birth, death, population estimates, pregnancy, poverty, etc.). KIC allows users to create tables based off of gender, race/ethnicity, county of residence, age, etc. within chosen timeframes.

Disclaimers

There may be differences from previously reported data due to significant data cleaning efforts.

Due to rounding, percentages may not add to 100% for all graphs and tables.

The purpose of this publication is to illustrate STI/HIV health related conditions within the state of Kansas. This product may be corrected or updated as necessary without prior notification.

The data provided in this document is not intended to be used for any purposes other than those stated.
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Part 1: Kansas Demographics

A snapshot of the general population of Kansas
Kansas Demographics Section Highlights

- The state of Kansas is primarily a rural state, with the exception of three major metropolitan areas; Wichita, Kansas City, and Topeka.

- The major industry of Kansas is agriculture, growing more wheat than any other state in the union.

- The general population of Kansas is predominantly White (78%), with 50% of the estimated 2,904,021 population within the age range of 25-64. The population is equally divided by gender (50% male and 50% female).
Description of the Population of Kansas

Kansas is an agricultural state, with a total land area of 81,815 square miles. According to the United States Census Bureau, Kansas had a population estimate of 2,904,021 persons in 2014. The boundaries of Kansas form a nearly perfect rectangle around 105 counties, which range in population sizes from Greeley County with an estimated population of 1,301 persons to Johnson County with an estimated population of 574,272 persons. Kansas has three major metropolitan areas; Kansas City (Wyandotte and Johnson Counties), Wichita (Sedgwick County) and Topeka (Shawnee County). Thirty-six of 105 Kansas counties were designated as “frontier counties” as of the 2010 census. This designation indicates fewer than 6.0 persons per square mile.

Kansas Community Planning Group Regional Structures

The State of Kansas has been divided into nine regions for surveillance and public health planning purposes. These regions have neither similar geography nor population size. As shown in Figure 1, region sizes range from 31 counties (Region 7) to two counties (Regions 1 and 2).

Figure 1: Map of the Kansas HIV Regions

Region 8 contains the largest proportion of the state’s population (27%) and Region 6 contains the smallest (5%). The range in the number of counties and the area per region is due to the dramatic differences in population density throughout the state. This interesting mix of land mass and extremes in population density poses a major challenge in creating STI/HIV prevention programs and providing primary-HIV medical care for the citizens of Kansas.

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Table 1: Estimate Populations for Kansas by HIV Region, 2014

<table>
<thead>
<tr>
<th>Kansas Region</th>
<th>Regional Population Estimate</th>
<th>Percentage of State Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1: Kansas City</td>
<td>240,433</td>
<td>8%</td>
</tr>
<tr>
<td>Region 2: Kansas City</td>
<td>607,094</td>
<td>21%</td>
</tr>
<tr>
<td>Region 3: Lawrence</td>
<td>161,051</td>
<td>6%</td>
</tr>
<tr>
<td>Region 4: Topeka</td>
<td>306,596</td>
<td>11%</td>
</tr>
<tr>
<td>Region 5: Pittsburg</td>
<td>188,769</td>
<td>6%</td>
</tr>
<tr>
<td>Region 6: Manhattan</td>
<td>158,725</td>
<td>5%</td>
</tr>
<tr>
<td>Region 7: Salina</td>
<td>290,099</td>
<td>10%</td>
</tr>
<tr>
<td>Region 8: Wichita</td>
<td>780,890</td>
<td>27%</td>
</tr>
<tr>
<td>Region 9: Outreach Clinics</td>
<td>170,364</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Demographic Analysis of the General Population in Kansas**

**Race and Ethnicity**

According to the 2014 data released from the United States Census Bureau, the state of Kansas is predominantly White (76%). The racial and ethnic composition for Non-White populations was estimated to be 11.2% Hispanic, 6.2% Black/African American, 1.2% American Indian/Alaskan Native, 2.7% Asian, 2.7% two or more races defined, and 1% Native Hawaiian. The United States Census Bureau estimates that the Hispanic population in Kansas continues to grow, and is not fully represented in these graphs.

**Graph 1: Race and Ethnicity Estimates for the General Population in Kansas, 2014**

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The demographic makeup of Kansas is becoming more diverse with time. However the White, Non-Hispanic population maintains the majority in every region. Table 2 shows the regional breakdown for Kansas by race according to KDHE’s Office of Vital Statistics. Region 1 has the largest Black/African American population in the state of Kansas at 21%.

### Table 2: Race Percentage Estimates for the General Population in Kansas by Region, 2014

<table>
<thead>
<tr>
<th>Region</th>
<th>Region 1: Kansas City</th>
<th>Region 2: Kansas City</th>
<th>Region 3: Lawrence</th>
<th>Region 4: Topeka</th>
<th>Region 5: Pittsburg</th>
<th>Region 6: Manhattan</th>
<th>Region 7: Salina</th>
<th>Region 8: Wichita</th>
<th>Region 9: Outreach Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White, Non-Hispanic</td>
<td>Black/African American</td>
<td>Native American / Alaska Native</td>
<td>Asian / Pacific Islander</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Region 1: Kansas City</td>
<td>74%</td>
<td>21%</td>
<td>2%</td>
<td>3%</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Region 2: Kansas City</td>
<td>89%</td>
<td>5%</td>
<td>1%</td>
<td>5%</td>
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<td></td>
<td></td>
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<tr>
<td>Region 3: Lawrence</td>
<td>89%</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Region 4: Topeka</td>
<td>89%</td>
<td>7%</td>
<td>2%</td>
<td>1%</td>
<td></td>
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<tr>
<td>Region 5: Pittsburg</td>
<td>93%</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Region 6: Manhattan</td>
<td>86%</td>
<td>9%</td>
<td>1%</td>
<td>4%</td>
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<tr>
<td>Region 7: Salina</td>
<td>96%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td></td>
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<tr>
<td>Region 8: Wichita</td>
<td>87%</td>
<td>8%</td>
<td>2%</td>
<td>3%</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Region 9: Outreach Clinics</td>
<td>94%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
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</table>
Age and Gender

According to KDHE’s Office of Vital Statistics (OVS), the median age of Kansans during calendar year (CY)2014 was 36 years. The United States Census Bureau estimates that 25% of the general population in Kansas is younger than 18 years of age, 7% of the general population is under 5 years of age, and 14% of the general population is 65 years or older.

In the general population of Kansas, 50% of the population are female, and 50% are male.

Table 3 shows data from KDHE’s OVS stratified by age group and gender.

<table>
<thead>
<tr>
<th>Age Group in Years</th>
<th>Percent of Males</th>
<th>Percent of Females</th>
<th>Percent of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 13 Years</td>
<td>51%</td>
<td>49%</td>
<td>21%</td>
</tr>
<tr>
<td>13 – 24 Years</td>
<td>52%</td>
<td>48%</td>
<td>14%</td>
</tr>
<tr>
<td>25 – 44 Years</td>
<td>51%</td>
<td>49%</td>
<td>25%</td>
</tr>
<tr>
<td>45 – 64 Years</td>
<td>49%</td>
<td>51%</td>
<td>25%</td>
</tr>
<tr>
<td>65 Years and Over</td>
<td>44%</td>
<td>56%</td>
<td>14%</td>
</tr>
<tr>
<td>Total</td>
<td>49%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

Socioeconomic Status

According to the United States Census Bureau, approximately 14% of Kansans live below the federal poverty level, compared to the national estimate of 15%. Eighteen percent of the general population are children under the age of 18 living in poverty. Approximately 5% of the general population aged 16 years and older are unemployed, but seeking work. Thirteen percent of the general population have severe housing problems (overcrowding, high housing costs, and/or lack of kitchen/plumbing facilities).

According to the Kansas Information for Communities (KIC), approximately 17% of the adult population in Kansas lacks health care coverage. Due to the rising costs of medical treatment and health care providers, 14% of the general population of Kansas stated they could not see a doctor due to cost in the past 12 months.

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
Part 2: HIV in Kansas

Overall trends for the HIV Epidemic in Kansas
Overview of the Not in Care in Kansas program
Continuum of Care
HIV in Kansas Section Highlights

• On average, 150 people are newly diagnosed with HIV in Kansas annually (incidence). The prevalent number of individuals living with HIV in Kansas on average increases in accordance with the number of newly diagnosed cases each year.

• The majority of the HIV epidemic (both prevalence and incidence) is found in the Kansas City and Wichita areas.

• The majority of people living with HIV (PLWH) are male, Non-Hispanic White, men who have sex with men (MSM), and between 25 and 44 years of age.

• Young MSM of color (Black/African American and Hispanic) continue to be disproportionately affected by HIV.

• Despite a decrease in funding for HIV Counseling and Testing (CT) sites, 2014 yielded a higher percent positive than seen in previous years.

• The Kansas STI/HIV Section started the Not in Care in Kansas (NICK) program in October of 2014. This program consists of identifying and re-engaging HIV-positive individuals who are not receiving necessary HIV medical care. The NICK program is on-going. However, preliminary results show that there has been a 50% successful re-engagement rate.

• The Continuum of Care identifies the major milestones of HIV care in an attempt to reach the ultimate goal of viral suppression. As of December, 2014, 54% of all Kansans who are living with HIV were virally suppressed.
The HIV Epidemic in Kansas

Analysis of the HIV epidemic in Kansas will include information on who is infected, how they likely became infected (if known), where the highest levels of incidence and prevalence are located, and trend analysis. Data will be presented by ‘person’ rather than by ‘case’ unless noted otherwise. Data will be presented for a five-year range beginning January 1, 2010 through December 31, 2014. To allow for reporting delays, data was collected through February, 2015. The completeness and accuracy of HIV surveillance data are impacted by several factors, including: compliance with required case reporting, timeliness of reporting, test-seeking behaviors of HIV-infected persons, and availability of testing services.

Incidence and Prevalence

Incidence is defined for use in this document as the number of newly diagnosed HIV-positive persons in Kansas during a specified time frame. Prevalence is defined as the number of all HIV-positive persons living in Kansas. As of December 31, 2014 a total of 2,827 people were known to be living with HIV in the state of Kansas (prevalence). Graph 2 shows incidence and prevalence of HIV in Kansas from 2010 – 2014.

Graph 2: Incidence and Prevalence by Person in Kansas, 2010 - 2014

In 2014, a total of 139 new cases of HIV were diagnosed in Kansas. Graph 2 shows that the incidence in Kansas has been relatively stable, with an average of 149 newly diagnosed persons annually. This is an average of 6.4 cases per 100,000 population for 2010-2014. The highest incidence in the past five years occurred in 2012 when 166 people were newly diagnosed with HIV. There is potential correlation to a syphilis outbreak that occurred in 2012 that may account for this increase (as described in Part 3 of this profile).
**Geographical Analysis**

The majority of Kansans living with HIV reside in the Kansas City and Wichita areas (Regions 1, 2, and 8). Between CY2010 and CY2014, an average of 65% of all HIV-positive Kansans resided in Regions 1, 2 or 8. Although HIV infection is more frequent in these regions, 76% (80 of 105) of Kansas counties report at least one prevalent case of HIV. Figure 2 shows the number of people living with HIV by county for the State of Kansas as of December 2014.

*Figure 2: Number of People Living with HIV by County in Kansas, December 2014*
As of December 2014, the majority of people living with HIV (PLWH) in Kansas were male (81%), White, Non-Hispanic (53%), men who have sex with men (MSM) (55%) between the ages of 25 and 44 years (64%).

**Gender**

Between CY2010 and CY2014, an average of 81% of PLWH in Kansas were male. An average of 81% of newly diagnosed cases (incidence) are also male. Graph 3 shows the incidence and prevalence displayed by gender through December 2014.

**Race / Ethnicity**

Between CY2010 and CY2014 an average of 53% of the HIV-positive population in Kansas was White, Non-Hispanic. However the burden of HIV continues to have a disproportionate impact on racial minorities in Kansas. The Black/African American, Non-Hispanic population accounted for only 6% of the Kansas general population, but represented 23% of incidence and 25% of prevalence. Graph 4 shows the racial disparity found in Kansas by comparing the general population to the HIV-positive population in Kansas as of December 2014.
The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas.

**Age**

In CY2014, people 25-44 years of age accounted for almost half (49%) of the newly diagnosed HIV in Kansas. During the same time frame, people 25-44 years of age represented 64% of prevalence. The second largest at 19% was the 13-24 age group. Graph 5 shows a comparison of the age groups by prevalence and incidence in Kansas. Incidence and prevalence by age group has remained stable in Kansas for over ten years.

**Graph 5: Incidence and Prevalence by Age Groups, 2010-2014**

**Transmission Category**

The transmission category examines the types of contact that may have put a person at risk for becoming infected with HIV. This includes: men who have sex with men (MSM), injection drug users (IDUs), MSM/IDU, high-risk heterosexual contact, pediatric birth to an infected mother, or no identified risk (NIR). High-risk heterosexual contact with a partner at high-risk for HIV infection, including MSM, IDUs, and individuals known to be HIV-positive. Graph 6 displays Kansas incidence and prevalence by transmission categories. During CY2010 to CY2014, an average of 54% of the time, the most frequent transmission category indicated was MSM. Pediatric cases are fairly rare in Kansas, constituting only 1.4% of prevalent cases in CY2014.

**Graph 6: Incidence and Prevalence by Transmission Category, December 2014**

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**Late Diagnosis**

Without effective treatment, most people infected with HIV will progress to Stage 3 in approximately 10 years. Late diagnosis of HIV infection is associated with increased morbidity, mortality, and health-care costs. A late diagnosis is defined as an individual whose HIV infection has already progressed to Stage 3 (previously referred to as AIDS) at the time of diagnosis, or progresses to Stage 3 within 12 months of initial HIV diagnosis. A late diagnosis represents missed opportunities for testing, prevention, and medical care.

Late diagnosis is linked with multiple negative outcomes. People with late diagnoses are often at an increased risk for HIV-related mortality, are more likely to have poorer response to medications, generally incur more medical costs, and have reduced life expectancy. In addition, studies have indicated that people who are unaware of their infection are more likely to transmit the virus to others.

In Kansas, an average of 28% of people are newly diagnosed in Stage 3. This shows that nearly 1/3 of newly diagnosed Kansans are testing late in their infection. Table 4 illustrates incidence diagnosis status by person.

### Table 4: Incidence Diagnosis Status by Person, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Diagnosed with Stage 3 within 12 months</th>
<th>Initial HIV &amp; Stage 3 Diagnosed Simultaneously</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>78</td>
<td>20</td>
<td>46</td>
<td>144</td>
</tr>
<tr>
<td>2011</td>
<td>87</td>
<td>21</td>
<td>37</td>
<td>145</td>
</tr>
<tr>
<td>2012</td>
<td>100</td>
<td>19</td>
<td>47</td>
<td>166</td>
</tr>
<tr>
<td>2013</td>
<td>93</td>
<td>10</td>
<td>46</td>
<td>149</td>
</tr>
<tr>
<td>2014</td>
<td>97</td>
<td>11</td>
<td>31</td>
<td>139</td>
</tr>
</tbody>
</table>

Between CY2010 and CY2014, the percentage of persons progressing to Stage 3 within one year of their initial diagnosis has decreased. In addition, the percentage of persons who were diagnosed as Stage 3 during initial diagnosis has decreased by almost 10%. Table 6 shows the increase in earlier diagnosis, and decrease in later diagnosis.

### Table 5: Incidence by Diagnosis Status by Year, 2010-2014

![Graph showing incidence by diagnosis status by year]
HIV Counseling and Testing in Kansas

Many factors may affect when or if a person gets tested for and diagnosed with HIV infection. Individuals who are infected and do not know they are infected may not seek testing unless they have the means, the knowledge, and/or a significant catalyst (i.e. symptoms, hospitalization, etc.). According to a 2012 study conducted by the National Institutes of Health (NIH), service providers and HIV-positive individuals have noted potential barriers such as: a general lack of knowledge about HIV and how it is transmitted, a person’s belief that they are at risk, logistical barriers (transportation, limited hours of operation at testing sites, testing availability, etc.), language barriers, and stigma associated with HIV.

Key Populations at Higher Risk for HIV Infection in Kansas

Men who have sex with men (MSM)

According to the CDC, men who have sex with men (MSM) continue to be the most frequently reported risk group. New infections continue to increase among young MSM (aged 13-24 years). According to the CDC’s national statistics report, young Black/African American MSM represent 55% of the new infections among young MSM in the nation. As mentioned above, in Kansas there has been a slight increase in young (13-24 year old) persons who are newly diagnosed. In Kansas, as of December 2014, MSM represented the most prevalent transmission category (55%).

Factors other than individual risk behavior contribute to the uneven burden of HIV infections among MSM, especially young MSM. These factors pose challenges in prevention of new HIV infections. In Kansas, due to stigma of HIV and sexual orientation, many young MSM engage in high-risk sexual encounters with anonymous partners. According to the CDC, other factors to consider are “…stigma and homophobia, which deter some from seeking HIV prevention services; barriers such as lack of insurance and concerns about confidentiality, that result in less access to testing, care, and antiretroviral treatment.”

Injection Drug Users (IDU)

In Kansas, between CY2010 and CY2014, an average of 3.8% of new cases were attributed to persons who indicate that injection drug use (IDU) was their only risk factor for HIV. IDUs are at risk for HIV infection through sharing needles and other equipment with HIV-infected persons. Typically, other risky behaviors accompany injection drug use, such as anonymous and multiple sexual partners, unprotected sexual encounters, and exchanging sexual acts for material items, food, and/or shelter.

Heterosexual Contact

Between CY2010 and CY2014, the most common mode of HIV transmission among women was heterosexual contact with an HIV-positive partner known to the woman to be infected. Typically this type of transmission occurs when the partner is either MSM and/or IDU. Sex partners of both these groups are at increased risk for infection.
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Counseling and Testing Sites in Kansas

The STI/HIV Prevention Program began a new Funding Opportunity Announcement (FOA) in calendar year 2012. The core components for the FOA included: HIV testing, comprehensive prevention with positives, condom distribution and policy initiatives. The HIV testing program supports efforts in both healthcare and non-healthcare settings. Healthcare settings include local health departments, community health centers, and correctional facilities. Since CY2012, the HIV testing program has contracted with three local health departments located in high morbidity areas of Kansas for conventional and/or rapid opt-out HIV testing. These local health departments conducted opt-out HIV testing within STI, prenatal, maternal and infant, family planning, and tuberculosis programs for patients aged 13 to 64. As of December 2014, HIV testing was supported through an additional 24 healthcare settings to offer conventional and/or rapid testing to their clients.

Non-healthcare settings included testing done in outreach venues such as substance abuse treatment facilities, university campuses, social service agencies, and other high-risk areas. Funding supported rapid HIV testing and/or processing of conventional blood specimens through the Kansas Health and Environmental Laboratories (KHEL). From January 2012 to June 2014 KDHE contracted with six community-based organizations (CBOs) to conduct targeted HIV testing in non-healthcare settings. Between July 2014 and December 2014, KDHE contracted with four CBOs and one Local Health Department to conduct targeted testing. Douglas County AIDS Project closed their doors and the Lawrence-Douglas County Health Department assumed the contract. One of the contracted CBO’s continuously failed to meet the CDC requirement of a 1.0 percent positive for HIV testing in non-healthcare settings and in June of 2014, the funds were redistributed among the remaining contracted CBOs. Contracted non-healthcare settings focus their testing efforts on populations identified by CDC as high-risk, including: MSM, Black/African American Women, Youth, IDU, HIV-positive persons, high-risk negatives, and those with a history of an STI.

Graph 7 shows the total number of testing sites in Kansas between CY2012 and CY2014. In 2013, the STI/HIV Prevention Program received a significant reduction in funds, at which time regional incidence in combination with testing data was analyzed to determine where testing resources were best allocated within the state based on disease burden. As a result, support for 50 healthcare sites that did not meet the CDC requirements of 0.1 percent positive for HIV testing in healthcare settings and two non-healthcare sites that did not meet the CDC requirement of a 1.0 percent positive for HIV testing in non-healthcare settings was redistributed to areas of higher disease burden. A letter went out to the 52 affected sites in November 2012 notifying them of the decrease in funding. Kansas has a state statute requiring anonymous HIV testing be available within 100 miles of any point of the state, and this statute is still met by the currently supported sites. Non-funded sites were provided with a list of available rapid testing technologies and associated costs available for any site that wished to continue rapid testing independent of fiscal support from the KDHE.
Data in this profile includes only HIV testing supported and/or funded by KDHE during CY2012-CY2014. Participants at all CT sites completed a risk assessment during their testing session. This data, including general demographics characteristics of individuals being tested, as well as specific risk behaviors, were then entered into EvaluationWeb. EvaluationWeb is a relatively new reporting mechanism that did not begin until the beginning of CY2012, limiting the data to be presented to those after CY2012.

Graph 8 shows the relationship between the number of decreased testing events and the number of newly diagnosed persons.

Despite significant reductions in both funding and (as a result) physical testing sites, there was an increase in the overall percent positive during calendar year 2014. In CY2014, there were 52 individuals that tested positive for HIV, yielding an overall percent positive of 0.27% for CT sites. Table 6 illustrates the percent positive from 2012-2014, separated by setting. As shown in Table 6, testing events at non-healthcare settings yielded a higher percent positive overall, and doubled the percent positive from 2013 to 2014.
Table 6: Healthcare and Non-Healthcare Settings Percent Positive, 2012-2014

<table>
<thead>
<tr>
<th></th>
<th>Healthcare Settings</th>
<th>Non-Healthcare Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0.18%</td>
<td>2012</td>
</tr>
<tr>
<td>2013</td>
<td>0.16%</td>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
<td>1.49%</td>
<td>2014</td>
</tr>
</tbody>
</table>

Non-healthcare settings focus on building trust and rapport with the community, and this has been vital to prevention and testing efforts. All contracted CBOs have initiated social networking and community-level strategies to counter stigma, misconceptions, and provide a safe atmosphere for anyone who wants to be tested.

**Demographic Analysis of Individuals Receiving HIV tests**

**Gender**

During CY2014 there were more testing events for females (11,885) when compared to males (5,221) in healthcare settings. During the same timeframe, males had the larger volume of testing events at non-healthcare settings (1,111) when compared to female testing events (452). This is likely due to the need for non-healthcare settings to prioritize and target their testing to reach the highest risk populations.

Graphs 9 and 10 display testing event trends by gender for the years 2012-2014. The line overlaid on each graph represents the number of newly diagnosed HIV-positive events found in each setting type.

**Graph 9: Healthcare Settings Total Testing Events and Newly Diagnosed Events, 2012-2014**

**Female Testing Events**

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>17,813</td>
</tr>
<tr>
<td>2013</td>
<td>5,185</td>
</tr>
<tr>
<td>2014</td>
<td>11,885</td>
</tr>
</tbody>
</table>

**Male Testing Events**

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>7,552</td>
</tr>
<tr>
<td>2013</td>
<td>12,215</td>
</tr>
<tr>
<td>2014</td>
<td>5,221</td>
</tr>
</tbody>
</table>

**Transgender Testing Events**

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>18</td>
</tr>
<tr>
<td>2013</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>0</td>
</tr>
</tbody>
</table>

**Graph 10: Non-Healthcare Settings Total Testing Events and Newly Diagnosed Events, 2012-2014**

**Female Testing Events**

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>769</td>
</tr>
<tr>
<td>2013</td>
<td>626</td>
</tr>
<tr>
<td>2014</td>
<td>452</td>
</tr>
</tbody>
</table>

**Male Testing Events**

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1,879</td>
</tr>
<tr>
<td>2013</td>
<td>1,640</td>
</tr>
<tr>
<td>2014</td>
<td>1,111</td>
</tr>
</tbody>
</table>

**Transgender Testing Events*  **

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>3</td>
</tr>
<tr>
<td>2013</td>
<td>9</td>
</tr>
<tr>
<td>2014</td>
<td>8</td>
</tr>
</tbody>
</table>

*There were no positive HIV tests found in transgender populations during calendar years 2012-2014.

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The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas

Race / Ethnicity

Graph 11 displays all testing events, and all newly HIV-diagnosed persons for the years 2012-2014. This graph clearly indicates that Black/African American testers make up a disproportionately larger percentage of positive tests when compared to the percentage of testing events they represent. During 2012-2014, an average of 24% of testing event participants were Black/African American. During 2012 and 2013, 35% and 42% of persons (respectively) who were given a first time HIV-diagnosis were Black/African American. This trend reversed itself during CY2014, and at this time there is no explanation that can be given for this reversal.

Graph 11: Healthcare Settings Testing Events compared to Newly Diagnosed Persons, 2012-2014

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
**Risk Factors**

HIV prevention efforts are intended to be focused in populations where HIV is most frequently diagnosed to achieve the greatest impact in preventing HIV transmission. Risk factor data is collected on testing done in non-healthcare settings only. This data is analyzed to ensure that high-priority populations are being reached. Testing done in healthcare settings is considered routine testing as recommended by the CDC, therefore risk factor data is not collected.

In 2014, the most frequent risk factor collected for testing in non-healthcare setting sites was MSM. Because MSM transmission was reported for 59% of all the new cases found in 2014, this indicates the proper placement of prevention resources. Graph 12 displays mode of transmission data for calendar year 2014.

**Graph 12: Non-Healthcare Sites Testing Events and New Diagnosis by Mode of Transmission, 2014**
Not in Care in Kansas – Re-Engagement Program

The Not in Care in Kansas (NICK) program was initiated as a way to identify people infected with HIV, who reside in the state of Kansas, and have not been able to remain engaged in necessary HIV medical care. This includes individuals who never engaged in care after diagnosis, as well as those that discontinued medical engagement.

The NICK program allows for efficient data cleanup efforts throughout the year, rather than annually, as had historically been done. Data cleanup for eHARS includes: deduplication efforts with other jurisdictions, updating current residency, and updating current vital status. This project also identifies laboratories that were delinquent or delayed in reporting HIV-related laboratory documents. These data clean up techniques allow Surveillance staff to report accurate data, and provide a clearer picture of the HIV epidemic in Kansas. In addition, partners in the local Ryan White Part C and D program have been working closely with KDHE Surveillance staff to coordinate data sharing and to ensure no duplication of efforts.

The first NICK list was created in October 2014; this initial list is expected to be the largest NICK list that Kansas will ever have for data cleanup efforts. A new NICK list will be created by Surveillance staff annually. All programs in the STI/HIV Section assist with re-engagement activities including database record searches, provider and medical case management (MCM) phone calls and field visits.

The October 2014 list has not been completed as of publication of this profile. However, the Kansas STI/HIV program has already demonstrated success with the NICK project. Graph 13 depicts the cases that were determined to truly be in need of medical re-engagement. This does not include clients determined to be engaged in HIV medical care, clients who had moved out of state, clients that had died, etc. Graph 13 shows that there has been a 50% re-engagement success rate for clients determined to have truly disengaged from care.

Graph 13: Not in Care in Kansas, Patient Follow Up, December 2014

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
HIV Continuum of Care

The HIV Continuum of Care (also sometimes called the HIV Treatment Cascade) is a model that outlines the stages of HIV medical care that people living with HIV proceed through from initial diagnosis to achieving the ultimate goal of viral suppression. Viral suppression is a very low (less than 200 copies/ml) level of HIV in the body. When an HIV-positive person becomes virally suppressed they are less likely to transmit the infection to others, and more likely to have an improved quality and length of life.

The Kansas Care Continuum is broken into four sections:

Prevalent Cases

The HIV Continuum of Care begins with a diagnosis of HIV infection. As of December, 2014 there were 2,827 people living with HIV in Kansas.

Engaged in Care

Once an individual is aware of their HIV-positive status, it is imperative that they are linked to an HIV healthcare provider. The HIV healthcare provider and medical case manager (MCM) will assist the individual with obtaining access to the care and treatment HIV-positive individuals need to stay healthy. The second bar, “Engaged in Care”, shows the percentage of people who had laboratory documentation of medical care within three months of their initial HIV diagnosis. As of December 2014, 60% of HIV-positive people living in Kansas had laboratory evidence of a medical visit (via laboratory documentation) within three months of their initial diagnosis.

Retained in Care

HIV treatment is necessary not only to ensure a good quality of life for those infected, but also to reduce the incidence of transmission. The third bar, “Retained in Care”, shows the percentage of people who have engaged in HIV medical care within the past eight months. As of December 2014, 68% of HIV-positive people living in Kansas had laboratory evidence that they were currently retained in HIV medical care.

Virally Suppressed

Anti-retroviral therapy (ART) is a combination of medications that are used to keep virus levels in the body contained. According to the CDC, with treatment HIV-positive persons can live longer, be healthier, and reduce their ability to sexually transmit HIV by 96%. The fourth and final bar, “Virally Suppressed”, shows the percentage of people living in Kansas who were virally suppressed as of December 31, 2014. As of this date, 54% of HIV-positive people living in Kansas were virally suppressed.

Graph 14 displays the Kansas Continuum of Care as of December 2014. The first bar will always be 100%, since it represents all known, living HIV-positive individuals residing in Kansas. Graph 15 depicts the National Continuum of Care as of December, 2014 for comparison.
The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas.
Part 3: STIs and TB in Kansas

Overall Trends for STIs in Kansas
STIs & HIV Co-Morbidity
HIV & TB Co-Morbidity

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
STIs & TB in Kansas Section Highlights

- Chlamydia is the most frequently reported STI in Kansas with over 11,011 cases reported in 2014.

- In 2011, the CDC released supplemental guidance for the treatment of gonorrhea due to the alarming rates of antibiotic resistance. Similarly, in CY2013, gonorrhea became a higher priority for the STI Disease Intervention Program due to concerns regarding resistance. This focused attention on gonorrhea is likely the cause of sharp increases in reported cases that year. However, due to rising syphilis and HIV cases beginning in 2014, gonorrhea cases were deprioritized due to decreased funding and staffing constraints. In 2014, there were 2,549 gonorrhea cases reported.

- In 2012, the Northeast Region of Kansas was involved in a syphilis outbreak that caused an increase in reported syphilis cases in the 20-24 age group. The increase in cases has remained consistently elevated through 2014.

- In 2014, there was an additional syphilis outbreak in North Central Kansas. This outbreak created a steep increase in newly diagnosed syphilis cases in the 40 and over age group.

- During 2010-2014 a total of 200 persons were diagnosed with TB. Two percent of these cases had co-morbidity with HIV.
Sexually Transmitted Infections (STIs) are among the most frequently reported infectious diseases and constitute a significant health problem in Kansas. The three most common bacterial STIs reported to KDHE are chlamydia, gonorrhea, and syphilis. As with HIV, certain limitations in the interpretation of presented data should be considered, including delayed reporting.

Women are generally diagnosed with STIs more frequently than men. Because of the asymptomatic nature of chlamydia and gonorrhea, as well as the screening criteria for publicly funded screening programs, women are often tested for STIs as part of a routine exam, and for prenatal care. Comparatively, men are generally tested only if they have symptoms. This often results in a higher number of cases diagnosed and reported among females, particularly for those diseases where men are likely to be asymptomatic (chlamydia and gonorrhea).

**Chlamydia**

Chlamydia is a common STI that is easily cured. However if left untreated, it can have severe consequences. Infection with chlamydia can cause serious, permanent damage to a woman’s reproductive system, making it difficult or impossible for her to become pregnant. Chlamydia can also cause a potentially fatal ectopic pregnancy. The CDC recommends routine screening for chlamydia on an annual basis for all sexually active individuals aged 25 years and younger.

**Gender**

Both men and women can become infected with chlamydia, as it is spread through vaginal, anal, and/or oral sex with someone who is infected. A person can become re-infected regardless of previous treatment. In 2014, there were 11,011 cases of reported chlamydia. In calendar year 2014, approximately 74% of chlamydia cases were female. Graph 16 displays total number of reported chlamydia cases by gender.

*Graph 16: Chlamydia Cases in Kansas by Gender, 2010-2014*
**Race / Ethnicity**

Graph 17 displays reported cases of chlamydia from CY2010 to CY2014 by race/ethnicity. The largest number of reported cases of chlamydia is among White, Non-Hispanic persons. During CY2010 to CY2014, the percentage of Black/African American persons diagnosed with chlamydia has decreased, although there isn’t a clear reason as to why this occurred. It is possible that this decrease may be attributable to decreased testing within this group.

*Graph 17: Chlamydia by Race/Ethnicity, 2010-2014*
Age

Nationally, chlamydia has been more commonly reported in the 15-24 age groups. Graph 18 shows that this is observed in Kansas as well. The majority of the reported chlamydia cases are found in persons aged 20-24, closely followed by persons aged 15-19.

Graph 18: Chlamydia by Age, 2010-2014

Gonorrhea

Gonorrhea is also an STI that can cause be easily cured, but can cause very serious complications when not treated, or not treated correctly. Some infections among men produce symptoms that cause them to seek treatment, but typically not soon enough to prevent transmission to other partners. Many women typically do not produce recognizable symptoms until complications arise. Routine screening for gonorrhea on an annual basis is recommended by the CDC for all sexually active females 25 years of age and younger.

In 2011, the CDC released a publication in the Morbidity and Mortality Weekly Report (MMWR) concerning resistant strains of gonorrhea. In this publication the CDC discusses the need for a rigid adherence to the new treatment guidelines. Certain strains of gonorrhea have become resistant to all but one classification of medications used for treatment. Therefore, CDC recommends that health care providers treat with both a cephalosporin and azithromycin or doxycycline. If gonorrhea becomes resistant to this treatment protocol, the results could be an easily transmittable communicable disease causing infected persons to become hospitalized for days in order to be cured of the infection.

Gender

Both men and women can become infected with gonorrhea, as it is spread by having vaginal, anal, and/or oral sex with someone who is infected. A person can get re-infected regardless of previous treatment. In 2014, there were 2,529 cases of reported gonorrhea. In contrast to chlamydia, females only slightly outnumber
males reported. In 2014, females accounted for 57% of the reported cases. This is likely due to the more symptomatic nature of gonorrhea in males.

Graph 19 displays the trends in reported cases of gonorrhea for the state of Kansas from CY2010 to CY2014. In 2013, the STI/HIV Program began investing more time in gonorrhea follow-up, which is reflected in the spike in numbers. More partners were found, diagnosed, and treated as a result of these efforts. In CY2014, due to rising numbers in HIV and syphilis and decreases in funding, gonorrhea was again deprioritized.

**Graph 19: Gonorrhea by Gender, 2010-2014**

![Graph showing gonorrhea cases by gender from CY2010 to CY2014]

**Race / Ethnicity**

Graph 20 displays the number of reported gonorrhea cases for CY2010 to CY2014. Black/African American, Non-Hispanic persons account for the largest proportion of reported cases. White, Non-Hispanic persons have slowly been increasing in number during the time period. In 2010, White persons accounted for 35% of the reported cases compared to 2014, where White persons accounted for 45% of the reported cases. Increasing case among Hispanic persons has slowly been occurring as well, but not as dramatically as their White, non-Hispanic counterparts. The Hispanic population has seen a 1% increase in their rate of infection every year from CY2011 to CY2014.

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Age

Similar to chlamydia, the burden of disease is highest in those between the ages of 20-24. However, the second highest age group varied between CY2010 to CY2014. During CY2010 to CY2012, the graphs show similarities to chlamydia in that the second largest group burdened was those ages 15-19. However in 2013-2014, the second largest group became those aged 25-29. Gonorrhea has seen steady increases in the 25-29 and 30-34 age groups.

Graph 21: Gonorrhea by Age, 2010-2014

*In CY2014, there were zero cases between the ages of 0-9 years.
Syphilis

Syphilis is an STI that can cause long-term complications, including neurological problems and death, if left untreated. Syphilis is unique due to the fact that the infection is spread through direct contact with infectious symptoms (usually a sore called a chancre). This can include skin to skin contact that does not necessarily require vaginal, anal, and/or oral sex to occur. Infectious symptoms can commonly be found on the penis, inside the mouth, vagina, and anus, and on the lips or around the mouth. Syphilis has been called the ‘great imitator’ due to the many possible symptoms, and how those symptoms can be misdiagnosed and mistaken for other infections. The painless sore, or chancre, is highly infectious but can be mistaken for an ingrown hair, zipper cut, cold sore, or other seemingly harmless bump. Due to these difficult to diagnose symptoms, most people are diagnosed later in the infection cycle.

An infected person may seek treatment due to the different signs or symptoms found throughout the infection cycle. Primary infection includes the previously mentioned painless sore (chancre). Secondary infection can manifest in a variety of symptoms, most of which involve a variety of rashes. Tertiary infection can manifest with cardiac, neurological, and/or degenerative conditions. It is the goal of the STI/HIV Section to identify, diagnose, and treat those who are in the primary stage of infection, when an infected person is most likely to transmit the infection to others. Graph 22 displays the trend analysis for primary stage infections and total number of cases reported to KDHE.

In 2013 and 2014, nationwide there were rises in syphilis rates, and Kansas was no different. In 2013, Kansas City, Missouri saw a 150% increase in syphilis cases. Due to Kansas and Missouri sharing the metropolitan city of Kansas City, some of the initial increases in Kansas can likely be attributed to Missouri cases coming into Kansas. In 2014, there were 145 total syphilis cases reported to KDHE, compared to the 83 cases reported in 2010.

Graph 22: Primary Infection and Total Number of Early Syphilis Cases, 2010-2014

![Graph 22: Primary Infection and Total Number of Early Syphilis Cases, 2010-2014](image)
**Gender**

Like gonorrhea and chlamydia both men and women can become infected and can get re-infected regardless of previous treatment. However, unlike chlamydia and gonorrhea, men on average tend to have higher rates of syphilis infection when compared to women, with MSM generally having the highest rates during the reported time frame. In CY2014, males accounted for 77% of all the syphilis cases reported. Graph 23 displays all reported cases for the state of Kansas from CY2010 to CY2014 by gender.

![Graph 23: Early Syphilis by Gender, 2010-2014](image)

**Race / Ethnicity**

Syphilis is predominately seen in White, Non-Hispanic populations, as seen in Graph 24. On average 59% of the reported cases were White, Non-Hispanic. In 2012, it appears that there was an increase in the Asian/Island Pacific population; this is more likely to be a data anomaly due to extremely low numbers.

![Graph 24: Early Syphilis by Race / Ethnicity, 2010-2014](image)
**Age**

The age groups 0-9 and 10-14 had zero cases of syphilis from CY2010 to CY2014 in Kansas. This is significant to note, because this means that no congenital syphilis cases were reported during this time frame. This is likely due to the diligent work of the Partner Services (PS) program quickly identifying pregnant women who may be at risk of infection.

During CY2012, Kansas experienced a syphilis outbreak in the Riley County area (Kansas State University and Fort Riley). This outbreak is responsible for the sharp increase in reported cases in the 20-24 age group. This increase has remained in a stable yet elevated state since CY2012.

Reported syphilis cases in the 40+ age group has steadily been increasing, and the steep increase in 2014 can be linked to another syphilis outbreak in Saline County. Saline County has had increased activity in older meth users who are using internet apps and websites for the purposes of finding sexual partners.

**Graph 25: Early Syphilis by Age, 2010-2014**
**STI and HIV Co-Morbidity in Kansas**

Most STIs are asymptomatic and/or have symptoms that the patient misinterprets as something else, leading to an estimated underdiagnosis of around 50%. According to Nushbaum, Wallace, Slatt and Kondrad, researchers at the University of North Carolina at Chapel Hill, diagnosis of an STI can be an indicator of risky behavior and can lead to the acquisition of other STIs and/or HIV. Research shows that a co-infected patient is two to five times more likely to be infected with HIV if exposed, and to transmit HIV if already infected.

**HIV and Chlamydia**

**HIV and chlamydia dual diagnosis**

During 2012-2014 there were three people in the state of Kansas who were diagnosed within thirty days with both chlamydia and HIV. Chlamydia is a more widespread disease, but tends to be seen in younger populations with heterosexual transmission risks. HIV is a smaller demographic and is generally associated with MSM and IDU transmission.

**Previous HIV-positive persons newly infected with chlamydia**

A total of 18 people who had been previously diagnosed with HIV were diagnosed with a new chlamydia infection during CY2012 to CY2014. In CY2014, 12 of these infections (67%) occurred, as compared to 3 infections each in 2012 and 2013. It is important to note, that there were no significant increases in overall chlamydia infections for 2014.

**HIV and Gonorrhea**

**HIV and gonorrhea dual diagnosis**

During CY2012 to CY2014, there was only one dual diagnosis of HIV and gonorrhea, and this occurred in 2012. There was not a significant increase in reported gonorrhea cases in 2012. Due to the small numbers, it is difficult to determine with certainty if there is any significance to this finding.

**Previous HIV-positive persons newly infected with gonorrhea**

A total of 22 people who had been previously diagnosed with HIV were diagnosed with a new gonorrhea infection during CY2012 to CY2014. Similar to chlamydia, the majority of the cases were reported in 2014 (50%). Gonorrhea has had a steady increase in reported cases over the time period and had a steep increase in rates in 2014.
**HIV and Syphilis**

HIV and syphilis dual diagnosis

During CY2012 to CY2014, there were four dual diagnoses of HIV and syphilis. Syphilis and HIV have a stable relationship, averaging about 1 reported case a year with co-morbidity. Syphilis and HIV have a strong correlation due to both infections having similar risk behaviors and population demographics. Providers and testing sites should encourage the general population to engage in dual testing (both HIV and syphilis).

Previous HIV-positive persons newly infected with syphilis

During 2012-2014, there were a total of 25 newly diagnosed syphilis cases that occurred in a previously known HIV-positive persons. In 2013, the overall rise in syphilis cases can be correlated with the increase of HIV and syphilis co-morbidity cases. In 2012, there were 5 reported cases of people who were HIV-positive and newly tested positive for syphilis, as compared to the increase of 11 people in 2013.

---

**Graph 26: Dual Diagnosis Totals, 2012-2014**

![Graph 26](image)

**Graph 27: New STI Diagnosis for a Previously Known HIV-Positive Person, 2012-2014**

![Graph 27](image)
HIV & Tuberculosis Co-Morbidity in Kansas

During CY2010 to CY2014, Kansas diagnosed and reported 4 persons with tuberculosis (TB) and HIV co-morbidity. During this period, a total of 200 persons were diagnosed with TB, resulting in 2% of all cases of TB having co-morbidity with HIV.

Of these four persons, all were female. Three were born outside the United States. Three were identified as Non-Hispanic, Black and one was identified as White, Non-Hispanic. The age of the cases ranged from 29 to 60 years of age.

Best practice guidance directs that all persons diagnosed with TB should have a known HIV status. The goal in Kansas is to have 100% known HIV status in persons with TB while the national objective for 2020 is 98%.

Kansas is a low morbidity state with a current average annual morbidity of approximately forty cases of TB disease. There has been a steady decline of TB morbidity over the past twenty years.

The greatest risk in Kansas for many years has been being born outside of the United States. Foreign-born persons account for 67 – 74% of TB disease cases annually. Many studies have indicated that risk for TB is greater within the first 2 – 5 years of arrival in the U.S. However, in Kansas, 60% of active TB disease was diagnosed among the foreign-born, and diagnosis was made greater than 5 years after arrival in the U.S.

There has also been a recent increase in the number of pediatric TB cases diagnosed in Kansas. Generally, these children are either foreign born refugees, immigrants, or they are children of recent refugees and immigrants.

When considering race, Asian populations account for the highest rate of TB in Kansas at 23.61 per 100,000 as compared to .36 per 100,000 in Whites. The typical rate among Hispanics of all races is 3.00 per 100,000 and the rate of TB among Black/African Americans has now consistently dropped to around 1.2 per 100,000. Rarely, Kansas has diagnosed TB in Native American or Pacific Islanders.

Graph 28 was provided by the TB Section to display the above mentioned case rates and co-morbidities.
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Graph 28: Tuberculosis in Kansas from 2010-2014

Reporting of Positive or Negative HIV Test Result for TB Patients
Kansas 2010 to 2014

<table>
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<tr>
<th>Cohort Period</th>
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<td>HIV- (%)</td>
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<td>HIV Test Result Reported (%)</td>
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<td>100.0</td>
<td>100.0</td>
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<tr>
<td>Program Targets (%)</td>
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<td>100.0</td>
<td>100.0</td>
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<tr>
<td>National Average (%)</td>
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<td>84.8</td>
<td>86.6</td>
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<td>89.2</td>
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<tr>
<td>National Target (%)</td>
<td>--</td>
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<td></td>
<td></td>
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<td>37</td>
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<td>HIV Test Result Reported (n)</td>
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Part 4: Kansas Regional Profiles

Kansas Regional trends for HIV/AIDS

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Kansas Regional Profiles Section Highlights

- Kansas has been separated into 9 Regions for the purposes of HIV planning and evaluation.
- Regions 1 and 2 are a part of the Kansas City Transitional Grant Area (TGA).
- Overall, each region follows the same trends as the statewide HIV-positive population in Kansas.
Kansas HIV Trends by Region

Kansas is divided into nine HIV-planning regions. Regional comparisons provide a basis for planning and evaluation strategies. Kansas continues to be relatively stable in terms of trend analysis and scope of the HIV epidemic. Commentary will be added to each region only if there is a deviation from the statewide trend analysis as described in section two of this publication. Each region will include graphs that show incidence and prevalence comparisons and prevalence by gender, age, and transmission category. Tables and graphs depicting initial diagnosis status have been provided as well.

Some of the regions have extremely small numbers of cases. Smaller numbers mean that rates, proportions, and analysis are statistically unstable. This can result in large fluctuations in rates, proportions, and percentages. Changes from one year or group of years may reflect true changes, but are more likely the result of normal variations that present as changes that appear significant, but are the result of smaller numbers rather than dramatic changes.

As of December, 2014 there were 2,827 people living with HIV in Kansas across all nine regions. Graph 29 displays a side by side comparison of the Kansas general population and the Kansas HIV-positive population broken down by Kansas HIV Region. Region 8 (Wichita) has the largest population, for both the general population (27%) and the HIV-positive population (32%). Region 1 (Kansas City) contains 8% of the general population, but accounts for 19% of the HIV-positive population.

Figure 1: Map of the Kansas HIV Regions

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Table 7 displays prevalence of the HIV epidemic in Kansas by person within each HIV region. This table displays the stability in numbers Kansas has in its HIV-positive population.

Table 7: Prevalent HIV by Region, 2010-2014

<table>
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<td>2201</td>
<td>2416</td>
<td>2598</td>
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Region 1 is located in the northeastern section of Kansas and consists of two counties; Leavenworth and Wyandotte. This area is a part of the Kansas City Transitional Grant Area (TGA), the Kansas City region that overlaps the Kansas and Missouri borders. This is geographically the smallest region in the state. In 2014, the estimated population of Region 1 was 240,433. Region 1 contained 399 prevalent cases of HIV as of December 31, 2014. Region 1 contains 8% of the general population, but accounts for 19% of the HIV-positive population, which represents a disproportionate number of HIV cases for the Region.

Graph 30: Kansas HIV Incidence & Prevalence vs Region 1 Incidence & Prevalence, December 2014

Graph 31: Region 1 - Incidence and Prevalence by Gender, December 2014

Region 1 – Incidence by Gender

Region 1 – Prevalence by Gender
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Graph 32: Region 1 - Prevalence and Incidence by Age, December 2014

Region 1 – Incidence by Age

<table>
<thead>
<tr>
<th>Year</th>
<th>&lt;13 Years</th>
<th>13-24 Years</th>
<th>25-44 Years</th>
<th>45-64 Years</th>
<th>65 &amp; Over</th>
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<td>2014</td>
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Region 1 – Prevalence by Age

<table>
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<tr>
<th>Year</th>
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<th>25-44 Years</th>
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<td>2014</td>
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</table>

Graph 33: Region 1 - Incidence and Prevalence by Transmission Category, December 2014

Region 1 – Incidence by Transmission Category

- High Risk Heterosexual Contact: 0%
- Injection Drug User (IDU): 4%
- MSM & IDU: 40%
- Men who have sex with men (MSM): 56%
- No Identified Risk (NIR) or Other: 0%
- Pediatric (All Risks Combined): 0%

Region 1 – Prevalence by Transmission Category

- High Risk Heterosexual Contact: 0%
- Injection Drug User (IDU): 16%
- MSM & IDU: 51%
- Men who have sex with men (MSM): 21%
- No Identified Risk (NIR) or Other: 6%
- Pediatric (All Risks Combined): 6%
Table 8: Region 1 - Incidence Diagnosis Status by Person, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
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<td>2014</td>
<td>15</td>
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<td>6</td>
<td>25</td>
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Graph 33: Region 1 - Incidence Diagnosis Status by Person, 2010-2014
Region 2 – Kansas City Suburbs

Region 2 is located in the northeastern section of Kansas and consists of two counties; Johnson and Miami. This area is a part of the Kansas City Transitional Grant Area (TGA), the Kansas City region that overlaps the Kansas and Missouri borders. In 2014, the estimated population of Region 2 was 607,094. Region 2 contained 438 prevalent cases as of December 31, 2014. Region 2 contained the second largest general and HIV-positive populations in Kansas.

Graph 35: Kansas HIV Incidence & Prevalence vs Region 2 Incidence & Prevalence, December 2014

Graph 36: Region 2 - Incidence and Prevalence by Gender, December 2014

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The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas.
The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
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<td>2010</td>
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<td>32</td>
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Graph 39: Region 2 - Incidence Diagnosis Status by Person, 2010-2014
Region 3 – Lawrence

Region 3 is located in the northeastern section of Kansas and consists of three counties; Douglas, Franklin, and Jefferson. Douglas County, home to the city of Lawrence, includes the main campuses of the University of Kansas and Haskell Indian Nations University. Region 3 has the second largest proportion of Native American residents in the state. In 2014, the total estimated population of Region 3 was 161,051. Region 3 contained 89 prevalent cases as of December 31, 2014.

In 2014, there appeared to be an increase of Native American / Alaskan Native individuals who had a first time diagnosis of HIV. There were a total of two Native American / Alaskan Native persons who had an initial diagnosis during 2014. While it appears to be a large increase, the data are of a small cell size which makes it difficult to determine an accurate trend analysis.

Graph 40: Kansas HIV Incidence & Prevalence vs Region 3 Incidence & Prevalence, December 2014

Graph 41: Region 3 - Incidence and Prevalence by Gender, December 2014

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Graph 42: Region 3 - Incidence and Prevalence by Age, December 2014

Region 3 – Incidence by Age

Region 3 – Prevalence by Age

Graph 43: Region 3 - Incidence and Prevalence by Transmission Category, December 2014

Region 3 – Incidence by Transmission Category

Region 3 – Prevalence by Transmission Category

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas.
Table 10: Region 3 - Incidence Diagnosis Status by Person, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
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<td>3</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>2014</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

Graph 44: Region 3 - Incidence Diagnosis Status by Person, 2010-2014
The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas

Region 4 – Topeka

Region 4 is located in the northeastern section of Kansas and consists of eleven counties; Atchison, Brown, Coffey, Doniphan, Jackson, Lyon, Morris, Nemaha, Osage, Shawnee and Wabaunsee. Topeka, located in Shawnee County, is the capital city of Kansas. In 2014, the estimated population of Region 4 was 306,596. Region 4 contained 257 prevalent cases of HIV as of December 31, 2014.

Graph 45: Kansas HIV Incidence & Prevalence vs Region 4 Incidence & Prevalence, December 2014

Graph 46: Region 4 - Incidence and Prevalence by Gender, December 2014

Region 4 – Incidence by Gender  
Female 18%  
Male 82%

Region 4 – Prevalence by Gender  
Female 15%  
Male 85%
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The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas.

Table 11: Region 4 - Incidence Diagnosis Status by Person, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>2012</td>
<td>11</td>
<td>2</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>2013</td>
<td>12</td>
<td>0</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>2014</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

Graph 49: Region 4 - Incidence Diagnosis Status by Person, 2010-2014
Region 5 – Pittsburg

Region 5 is located in the southeastern section of Kansas and consists of eleven counties; Allen, Anderson, Bourbon, Cherokee, Crawford, Labette, Linn, Montgomery, Neosho, Wilson, and Woodson. This region borders both Oklahoma and Missouri. Pittsburg, located in Crawford County, is the home to Pittsburg State University. In 2014, the estimated population of Region 5 was 188,769. Region 5 contained 161 prevalent HIV cases as of December 31, 2014. Region 5 has the smallest population for both the general population and for HIV-positive persons in the state of Kansas.

Graph 49 indicates that 100% of incident cases in Region 5 during CY2014 reported being White, Non-Hispanic. It is important to note in 2014 a total of three incident cases of HIV were reported to KDHE in Region 5.

**Graph 50: Kansas HIV Incidence & Prevalence vs Region 5 Incidence & Prevalence, December 2014**

**Graph 51: Region 5 - Incidence and Prevalence by Gender, December 2014**

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The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas

Table 12: Region 5 - Incidence Diagnosis Status by Person, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Graph 54: Region 5 - Incidence Diagnosis Status by Person, 2010-2014

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
Region 6 is located in the north central portion of Kansas and consists of six counties; Clay, Geary, Marshall, Pottawatomie, Riley and Washington. This area includes a major military base (Fort Riley) and the main campus of Kansas State University. In 2012, this was the region most affected by a syphilis outbreak. In 2014, the total estimated population of Region 6 was 158,725. Region 6 contained 93 prevalent cases of HIV as of December 31, 2014.

Graph 54 indicates that 87% of all incident cases reported being White, Non-Hispanic. It is important to note in 2014 a total of six incident cases of HIV were reported to KDHE in Region 6.

Graph 55: Kansas HIV Incidence & Prevalence vs Region 6 Incidence & Prevalence, December 2014

Graph 56: Region 6 - Incidence and Prevalence by Gender, December 2014

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Graph 57: Region 6 - Incidence and Prevalence by Age, December 2014

Region 6 – Incidence by Age

Region 6 – Prevalence by Age

Graph 58: Region 6 - Incidence and Prevalence by Transmission Category, December 2014

Region 6 – Incidence by Transmission Category

Region 6 – Prevalence by Transmission Category

The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
**Table 13: Region 6 - Incidence Diagnosis Status by Person, 2010-2014**

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>2012</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>2014</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

**Graph 59: Region 6 - Incidence Diagnosis Status by Person, 2010-2014**
Region 7 – Salina

Region 7 is located in the northwestern quarter of Kansas and consists of thirty-one counties; Barton, Cheyenne, Cloud, Decatur, Dickinson, Ellis, Ellsworth, Gove, Graham, Jewell, Lincoln, Logan, Marion, McPherson, Mitchell, Norton, Osborne, Ottawa, Phillips, Rawlins, Republic, Rice, Rooks, Russell, Saline, Sheridan, Sherman, Smith, Thomas, Trego, and Wallace. Thirteen of the counties in Region 7 are considered frontier counties. Consequently, this is the largest region by geographical land area. In 2014, the total estimated population of Region 7 was 290,099. Region 7 contained 215 prevalent HIV cases as of December 31, 2014.

In 2014 a total of six incident cases of HIV were reported to KDHE in Region 7. Twenty-five to forty-four was the most prevalent age group for HIV-positive people in Kansas. In Region 7 all six of the incident cases were within this age range.

Graph 60: Kansas HIV Incidence & Prevalence vs Region 7 Incidence & Prevalence, December 2014

Graph 61: Region 7 - Incidence and Prevalence by Gender, December 2014
The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas

Graph 62: Region 7 - Incidence and Prevalence by Age, December 2014

Region 7 – Incidence by Age

Region 7 – Prevalence by Age

Graph 63: Region 7 - Incidence and Prevalence by Transmission Category, December 2014

Region 7 – Incidence by Transmission Category

Region 7 – Prevalence by Transmission Category

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The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>2012</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>2014</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Graph 64: Region 7 - Incidence Diagnosis Status by Person, 2010-2014
Region 8 is located in south central Kansas and consists of fifteen counties; Barber, Butler, Chase, Chautauqua, Cowley, Elk, Greenwood, Harper, Harvey, Kingman, Pratt, Reno, Sedgwick, Stafford, and Sumner. Sedgwick County is home to the Wichita State University campus and is the largest metropolitan area in Kansas. Region 8 had the largest general and HIV-positive population in the state of Kansas. In 2014, the total estimated population of Region 8 was 780,890. Region 8 contained of 970 prevalent cases of HIV as of December 31, 2014.

Graph 65: Kansas HIV Incidence & Prevalence vs Region 8 Incidence & Prevalence, December 2014

Graph 66: Region 8 - Incidence and Prevalence by Gender, December 2014

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The Mission of the STI/HIV Section is to stop the spread of STIs & HIV in Kansas
**Table 15: Region 8 - Incidence Diagnosis Status by Person, 2010-2014**

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>33</td>
<td>2</td>
<td>18</td>
<td>53</td>
</tr>
<tr>
<td>2011</td>
<td>33</td>
<td>1</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>2012</td>
<td>26</td>
<td>2</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td>2013</td>
<td>16</td>
<td>2</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>2014</td>
<td>30</td>
<td>0</td>
<td>9</td>
<td>39</td>
</tr>
</tbody>
</table>

**Graph 69: Region 8 - Incidence Diagnosis Status by Person, 2010-2014**
Region 9 – Southwest Kansas

Region 9 is located in the southwestern corner of Kansas and consists of twenty-four counties; Clark, Comanche, Edwards, Finney, Ford, Grant, Gray, Greeley, Hamilton, Haskell, Hodgeman, Kearny, Kiowa, Lane, Meade, Morton, Ness, Pawnee, Rush, Scott, Seward, Stanton, Stevens, and Wichita. Fifteen counties are considered frontier counties, and average less than six persons per square mile. In 2014, the total estimated population of Region 9 was 170,364. Region 9 contained 163 prevalent cases of HIV as of December 31, 2014.

Graph 69 indicates that 100% of all incident cases in Region 9 during CY2014 reported being Black/African American, Non-Hispanic. It is important to note that in CY2014, only one incident case of HIV was reported to KDHE.

Graph 71: Region 9 Incidence and Prevalence by Gender, December 2014
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Table 16: Region 9 - Incidence Diagnosis Status by Person, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Initial HIV Only</th>
<th>Initial HIV, within 12 Months Stage 3</th>
<th>Initial HIV &amp; Stage 3 same time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Graph 74: Region 9 - Incidence Diagnosis Status by Person, 2010-2014
Part 5: Ryan White Services in Kansas

Utilization of Ryan White services & ADAP by Kansas clients
Overview of Unmet Need
Ryan White Services in Kansas Section Highlights

- The State of Kansas provides Ryan White Part B and ADAP services for eligible HIV-positive Kansas residents.

- HIV-positive persons living in the TGA (Kansas City metropolitan area) receive services from the Ryan White Part A program located in the Kansas City, Missouri Health Department and the Kansas ADAP.

- The majority of people living with HIV (PLWH) are male, Non-Hispanic White, men who have sex with men (MSM), and between 25 and 44 years of age.

- The term “Ryan White” in this publication will always refer to Ryan White Part B and the AIDS Drug Assistance Program collectively.
Characteristics of Ryan White Clients in Kansas

Like the statewide analysis, Ryan White clients in Kansas continue to be relatively stable in terms of trend analysis and scope of the HIV epidemic. The following graphs and tables will be similar to those presented for the general HIV-positive Kansas populations as presented in section two of this publication.

As with other sections within this publication, smaller numbers mean that rates, proportions, and analysis are statistically unstable. This can result in large fluctuations in rates, proportions, and percentages. Changes from one year or group of years may reflect true changes, but are more likely the result of normal variations that present as changes that appear significant, but are the result of smaller numbers rather than dramatic changes.

Demographic Analysis of Ryan White clients living in Kansas by Gender, Race/Ethnicity and Age

Gender

Graph 75 displays prevalence comparisons for all HIV-positive people in the state of Kansas and those who are utilizing Ryan White Part B and ADAP services by gender. As discussed in section two, 81% of the Kansas epidemic is male, and as of December 2014, 77% of Ryan White clients were male, 22% female, and 1% transgender.

Graph 75: Kansas HIV-Positive Prevalence vs Kansas Ryan White Prevalence by Gender, December 2014

Race/Ethnicity

Graph 76 displays a comparison of the general Kansas HIV-positive population prevalence by race/ethnicity and Kansas Ryan White clients, as of December 2014. The Ryan White data for this graph was collected from the Care database, SCOUT, which does not collect multiple races. Six percent of the general Kansas HIV-positive population identified as two or more races and were suppressed from the comparison. Analysis of the graph indicates that Ryan White populations closely reflect the demographics of the general Kansas HIV-positive populations.
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Graph 76: Kansas HIV-positive Prevalence vs Kansas Ryan White Prevalence by Race/Ethnicity, December 2014

Age

Graph 77 displays the Kansas HIV-positive population (prevalence) in comparison to the Kansas Ryan White population by age. More Ryan White clients are in the older age groups (45-64 years of age) as compared to the overall Kansas HIV-positive population who tend to reside in the 25-44 age group. This may be attributed to the care that an HIV-positive individual receives through the Ryan White program. Many people are initially diagnosed HIV-positive in younger age groups, but quality care assists them in living longer. HIV-positive persons who are 65 years of age and older will likely receive assistance with their copayments, medications, and deductibles from Medicaid, rather than the Ryan White program.
**Economic Indicators for Part B Support Service Clients**

All the tables identified in the following sections will have Regions 1 and 2 combined. These two regions are a part of the TGA and receive services through the Kansas City Missouri Health Department with funding from both the Ryan White Part A and Kansas ADAP. The rest of Kansas (regions 3-9) receive services through KDHE funded by the Ryan White Part B program. The tables below (Tables 18, 19, and 20) represent HIV-positive Kansas residents who had a documented encounter indicating active Ryan White service enrollment between the dates of January 1, 2014 and December 31, 2014.

**Income Levels**

Table 17 displays income brackets for Ryan White clients in the state of Kansas broken down by HIV regional groups. The STI/HIV Care program determines eligibility at the time of enrollment and at bi-annual renewals, including whether a client meets the income requirement. To be eligible for Ryan White funding, a client must be at or below 300% of the federal poverty level (FPL) as of December 31, 2014.

Every region, including the TGA, has more clients whose income is equal to or below the FPL.
**Table 17: Economic Indicators for Part B Ryan White Clients, Income Levels by Region, December 2014**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>TGA</th>
<th>Region 3</th>
<th>Region 4</th>
<th>Region 5</th>
<th>Region 6</th>
<th>Region 7</th>
<th>Region 8</th>
<th>Region 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal to or Below FPL</td>
<td>39.2%</td>
<td>40.0%</td>
<td>49.4%</td>
<td>51.5%</td>
<td>35.6%</td>
<td>44.6%</td>
<td>53.7%</td>
<td>47.7%</td>
</tr>
<tr>
<td>101-200% FPL</td>
<td>30.7%</td>
<td>36.7%</td>
<td>32.0%</td>
<td>28.8%</td>
<td>40.0%</td>
<td>27.7%</td>
<td>29.6%</td>
<td>22.7%</td>
</tr>
<tr>
<td>201-300% FPL</td>
<td>26.6%</td>
<td>18.3%</td>
<td>16.3%</td>
<td>16.7%</td>
<td>20.0%</td>
<td>17.8%</td>
<td>13.1%</td>
<td>15.9%</td>
</tr>
<tr>
<td>&gt;300% FPL</td>
<td>3.5%</td>
<td>5.0%</td>
<td>2.2%</td>
<td>3.0%</td>
<td>4.4%</td>
<td>9.9%</td>
<td>3.5%</td>
<td>13.6%</td>
</tr>
</tbody>
</table>

**Medical Insurance**

Table 18 displays the type of medical insurance utilized by Ryan White clients throughout the state. It is important to note several things about this table:

- A client may utilize more than one type of insurance. For example a client may use employer based insurance, but need to supplement this insurance with the use of Medicare/Medicaid.

- The SCOUT database was not implemented until 2011. The previous database had incomplete insurance information which accounts for the high percentages of “Unknown/Not Reported” insurance.
Table 18: Economic Indicators for Part B Ryan White Clients, Medical Insurance by Region, December 2014

<table>
<thead>
<tr>
<th>Medical Insurance</th>
<th>TGA</th>
<th>Region 3</th>
<th>Region 4</th>
<th>Region 5</th>
<th>Region 6</th>
<th>Region 7</th>
<th>Region 8</th>
<th>Region 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Insurance</td>
<td>13.5%</td>
<td>18.3%</td>
<td>8.4%</td>
<td>7.6%</td>
<td>11.1%</td>
<td>10.9%</td>
<td>9.6%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Private-Pay Insurance</td>
<td>3.5%</td>
<td>5.0%</td>
<td>23.0%</td>
<td>13.6%</td>
<td>13.3%</td>
<td>13.9%</td>
<td>15.8%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Medicare</td>
<td>14.2%</td>
<td>23.3%</td>
<td>22.5%</td>
<td>31.8%</td>
<td>31.1%</td>
<td>32.7%</td>
<td>29.4%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>10.2%</td>
<td>21.7%</td>
<td>29.2%</td>
<td>30.3%</td>
<td>24.4%</td>
<td>14.9%</td>
<td>23.0%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Other Public Provider</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other Medical Benefits</td>
<td>0.7%</td>
<td>1.7%</td>
<td>2.2%</td>
<td>0.0%</td>
<td>2.2%</td>
<td>4.0%</td>
<td>1.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>No Public or Private Insurance</td>
<td>14.2%</td>
<td>1.7%</td>
<td>1.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>2.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Unknown / Not Reported</td>
<td>51.2%</td>
<td>41.7%</td>
<td>29.2%</td>
<td>34.8%</td>
<td>31.1%</td>
<td>32.7%</td>
<td>32.2%</td>
<td>43.2%</td>
</tr>
</tbody>
</table>

Living Arrangement

Table 19 displays the regional breakdown of living arrangements for Ryan White clients. The goal of programs like HOPWA is to have all HIV-positive persons in a permanent housing situation. This allows clients to focus on healthy choices like adhering to their treatment protocols rather than worry about housing.

Table 19: Economic Indicators for Part B Ryan White Clients, Living Arrangements by Region, December 2014

<table>
<thead>
<tr>
<th>Living Arrangement</th>
<th>TGA</th>
<th>Region 3</th>
<th>Region 4</th>
<th>Region 5</th>
<th>Region 6</th>
<th>Region 7</th>
<th>Region 8</th>
<th>Region 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent Housing</td>
<td>90.0%</td>
<td>96.7%</td>
<td>74.2%</td>
<td>83.3%</td>
<td>93.3%</td>
<td>93.1%</td>
<td>88.1%</td>
<td>90.9%</td>
</tr>
<tr>
<td>Non-Permanent Housing</td>
<td>7.6%</td>
<td>0.0%</td>
<td>1.1%</td>
<td>13.6%</td>
<td>2.2%</td>
<td>0.0%</td>
<td>6.6%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Institution</td>
<td>0.2%</td>
<td>0.0%</td>
<td>1.1%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>3.0%</td>
<td>0.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Homeless</td>
<td>0.7%</td>
<td>3.3%</td>
<td>7.3%</td>
<td>3.0%</td>
<td>4.4%</td>
<td>1.0%</td>
<td>2.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Other</td>
<td>1.5%</td>
<td>0.0%</td>
<td>16.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>3.0%</td>
<td>2.7%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Ryan White Service Utilization

Ryan White eligible clients residing in Kansas can utilize many services including outpatient medical care, dental care, health insurance assistance, medical case management (MCM), transportation services, housing (HOPWA), mental health, ADAP treatments, and nutritional therapy. Graph 78 displays a chart of the aforementioned services provided to eligible Kansas residents and the amount of clients served. In Kansas ADAP and MCM are the two services that nearly all Ryan White clients utilize.

![Graph 78: Ryan White Part B Services Utilized, December 2014](image)
Part 6: Appendices

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**Acronym List**

- ADAP: AIDS Drug Assistance Program
- AIDS: Acquired immunodeficiency syndrome
- ART: Anti-retroviral Therapy
- BDCF: Bureau of Disease Control & Prevention (KDHE)
- BIS: Behavioral Intervention Specialist (Disease Investigator)
- CBO: Community Based Organization
- CDC: Centers for Disease Control & Prevention
- CT: Counseling and testing
- eHARS: Enhanced HIV/AIDS Reporting System (Surveillance Database)
- FDA: Federal Drug Administration
- FOA: Funding Opportunity Announcement
- FPL: Federal Poverty Level
- GRID: Gay-Related Immune Disease
- HIV: Human Immunodeficiency Virus
- HOPWA: Housing Opportunities with Persons with AIDS
- HRSA: Health Resources & Services Administration
- HSI: Healthcare Strategies Initiates
- IDU: Injection Drug User
- K.A.R: Kansas Administrative Regulations
- KDHE: Kansas Department of Health & Environment
- KHEL: Kansas Health & Environment Laboratories
- KIC: Kansas Information for Communities
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References


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