

Millennials vs. Baby Boomers: The Changing Face of Hepatitis C Infection in Kansas, 2016

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Background

- Incidence rates of hepatitis C virus (HCV) infection in Kansas are highest among baby boomers (born 1945-1965) followed by millennials (born 1982-2002)
 - Baby Boomers Incidence: 130 / 100,000
 - Millennials Incidence: 39 / 100,000
- Limited studies have assessed causes for high incidence of HCV infection among millennials

Objective

- Identify how demographic and risk factors have changed between two age groups with HCV chronic infection in Kansas

Methods

- Inclusion Criteria:
 - Persons aged 14-24 & 55-70 years
 - Laboratory confirmed HCV infection
 - Reported to Kansas Department of Health and Environment (KDHE) between 01/01/2016 and 12/02/2016
- Demographic factors examined:
 - Race, ethnicity, gender, age at diagnosis, and county type based on population density
- Behavioral risk factors examined:
 - Contact with another HCV-positive individual, type of that contact, illicit drug use, injection drug use, and sharing of needles
- Records were excluded if demographic or risk factor information was unavailable
- Data was analyzed using Chi-square & logistic regression in SAS® 9.3

Millennials with HCV

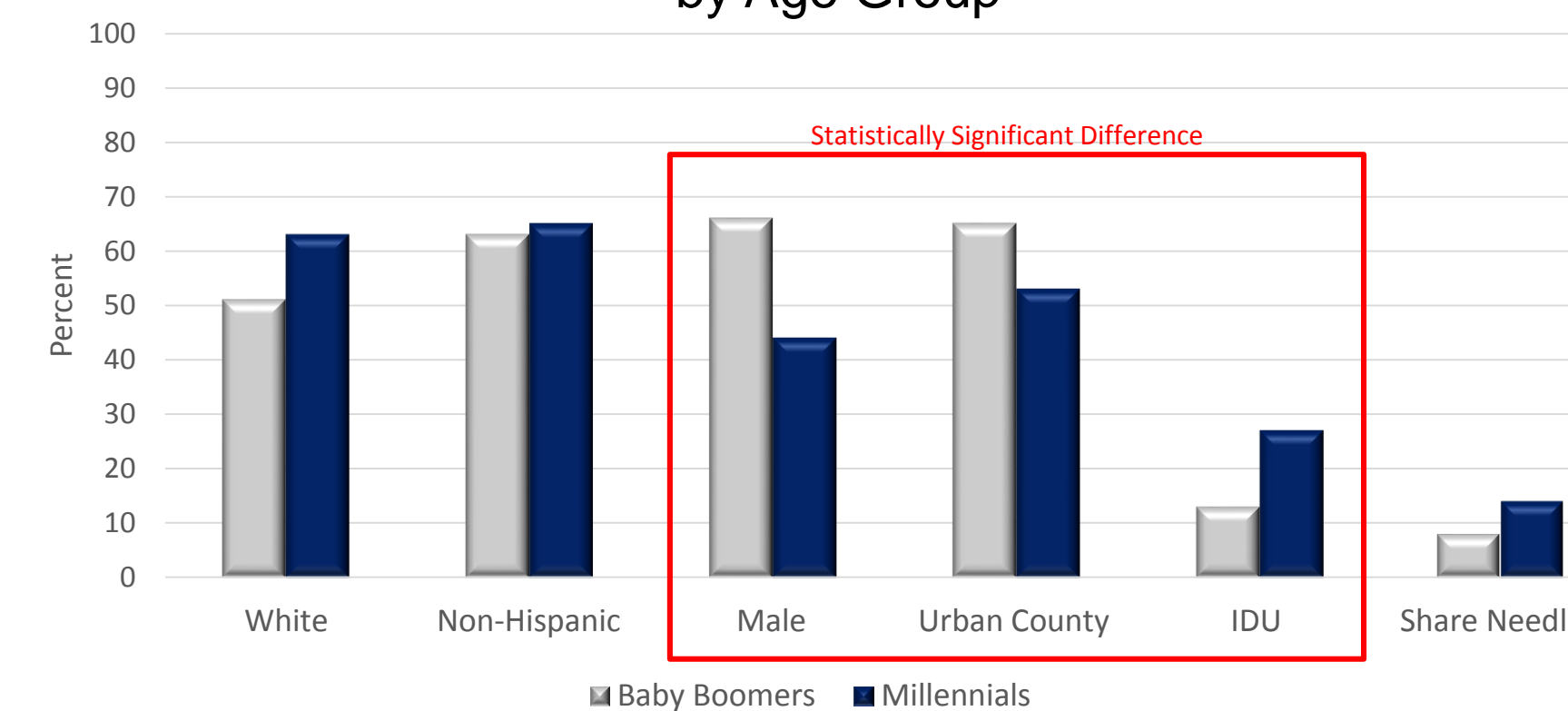


Photo source: US News 2014

- 731 HCV chronic cases were reported to KDHE between 01/01/2016 and 12/02/2016 and included in analysis
 - Baby Boomers: n=629
 - Millennials: n=102
- Sample population was majority white, non-Hispanic persons in both generational groups (Figure 1).
- Factor that were markedly different by age group
 - Gender
 - Baby Boomers majority male 66%
 - Millennials majority female 56%
 - Injection Drug Use (IDU)
 - Baby Boomers 13%
 - Millennials 27%
 - Sharing Needles
 - Baby Boomers 8%
 - Millennials 14%

Results

Figure 1: Sample Population Demographics and Risk Behaviors by Age Group



- Factors significantly associated with HCV infection by generation
 - Demographics
 - Gender (χ^2 p: <0.0001)
 - County type (χ^2 p: 0.0019)
 - Risky Behaviors
 - IDU (χ^2 p: 0.0055)

Table 1: Factors Associated with HCV Infection Among Millennials Compared to Baby Boomers

	OR	Confidence Interval
Gender (Female v. Male)	2.68	1.74 – 4.15
County Type (Urban v. Rural)	3.21	1.38 – 8.86
Injection Drug Use* (Yes v. No)	2.22	1.15 – 4.40

*Adjusted for Gender

Discussion

- Of the factors assessed, gender, county type and use of injection drugs were found to be significantly associated with HCV infection by age group
 - County of residence and IDU are factors that can be modified to reduce risk
- Compared to baby boomers, millennials with HCV infections had significantly higher odds of being
 - Female
 - Live in an urban county
 - Injection drug user
- IDU association was positively confounded by gender
- The association between millennials with HCV infections and IDU may be linked to the opioid epidemic
 - Nearly 2x the percentage of millennials reported sharing needles though this factor was not found to be significant
 - The lack of statistical significance may be a factor of low sample size of millennials compared to baby boomers in this study

Conclusions

- This study revealed the changing face of HCV infection among younger persons in Kansas and highlights the need to adjust public health efforts when addressing this high risk population
- Prevention efforts need to focus on reduction of injection drug use, education on risks of sharing needles, and target messaging towards women
- This investigation will need to be performed again when additional years of data is available to confirm results and establish trends