



Increase in Hepatitis C Diagnosis and Opioid-related Deaths in Urban Versus Rural Areas of LA from 2012-2015



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Abstract

Background:
The primary risk factor for HCV infections is exposure to infected blood through injection drug use. Louisiana (LA) has seen a substantial increase in heroin use in the last four years. The purpose of this study was to identify the trends in HCV diagnosis and opioid-related deaths in urban and rural areas of LA from 2012-2015.

Methods:
The HCV diagnosis trends were calculated using data from the LA Hepatitis C Register. Opioid-related deaths were extracted from the LA Vital Statistics records, using ICD10 codes for IDU deaths (T40.1-T40.4). The Vital Statistics records from 2013 to 2015 are preliminary. Urban and rural areas were determined by LA metropolitan areas as classified by the US Census Bureau. Comparisons for the 2012 and 2015 years were mapped using ArcGIS (version 10.2.2).

Results:
There was an increase in both HCV diagnosis and opioid-related deaths in LA from 2012-2015. The overall cases of opioid-related deaths increased from 155 to 245 total from 2012 to 2015, respectively. The geographic distributions of HCV diagnoses and opioid-related deaths from 2012 and 2015 are demonstrated in Figures 1 and 2. While the majority of HCV cases are still found in urban areas, rural HCV diagnosis rate increased 67.3% over the four year period, while the urban HCV diagnosis rate increased by only 7.4% (Figure 3)

Conclusion:
Although the association between Intravenous Drug Uses (IDU) and HCV infection has been well established, a direct association between the increase in IDU and HCV cases cannot be made with the data presented at this time. However, the increase of both simultaneously suggests an ecological correlation. The importance of recognizing the increasing trends of HCV diagnoses and opioid-related deaths in LA is essential for prevention strategies for both HCV and HIV and harm reduction. Furthermore, the significant increase in rural HCV diagnosis raises concern about potentially unidentified risk factors in these areas and the importance of continued awareness and access to testing and treatment for HCV in rural LA.

Background

- HCV is the leading blood-borne infectious disease in the United States.
- The primary risk factor for HCV infections is IDU
- Heroin use in the United States increased 63% from 2002 to 2013.
- LA has seen a substantial increase in heroin use in the last four years. The purpose of this study was to identify the trends in HCV diagnosis and opioid-related deaths in urban and rural areas of LA from 2012-2015.

Methods

Data Registries

- **LA Hepatitis C Register**
 - HCV diagnosis trends
- **Louisiana Vital Statistics**
 - Opioid-related deaths (ICD10 codes for intravenous opioid drug use deaths: T40.1-T40.4)
 - **records from 2013 to 2015 are preliminary*

Results

Figure 1: HCV diagnosis rate per 100,000 population- LA 2012 and 2015

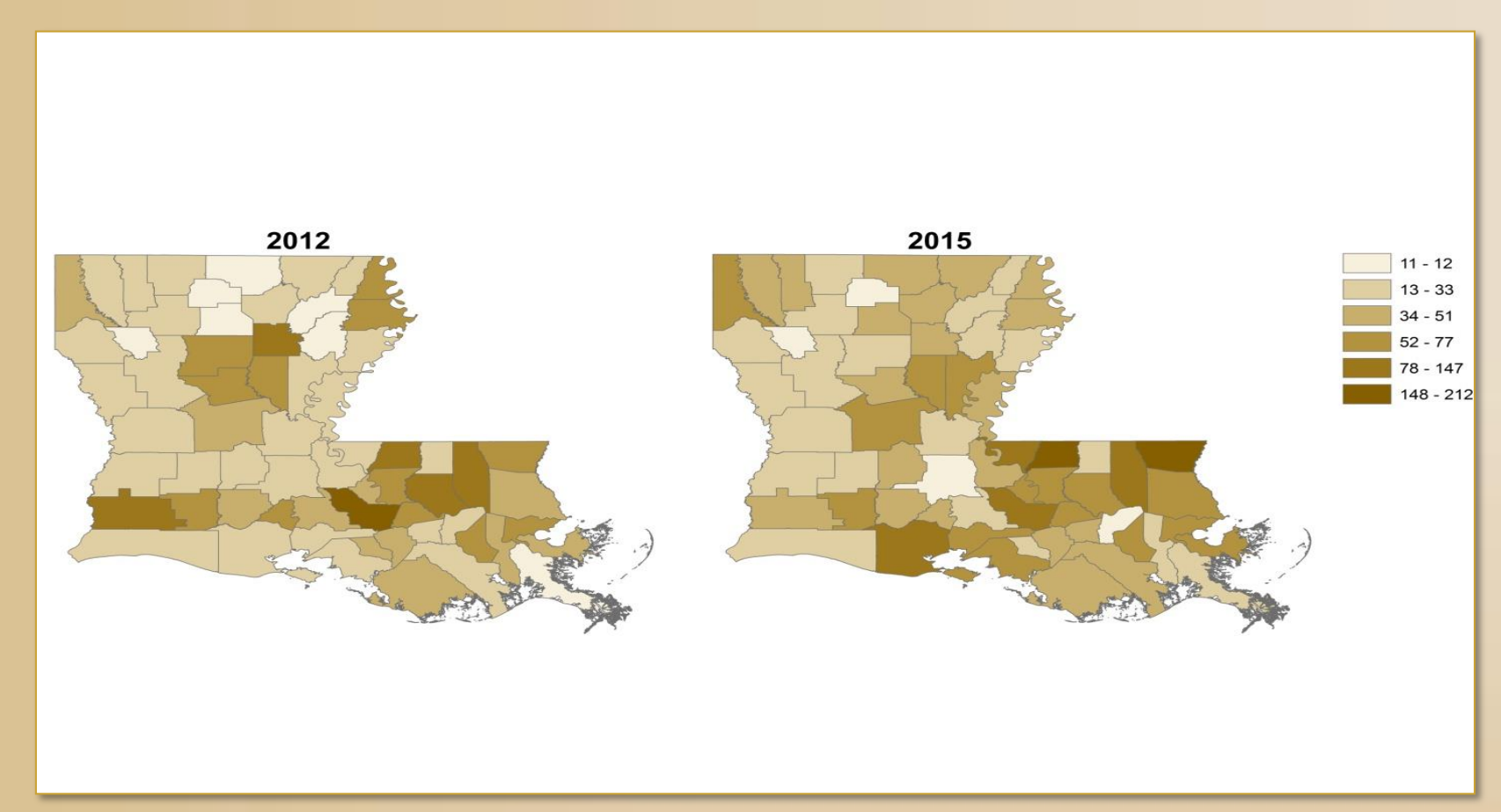


Figure 2: Opioid-related Death Reports per 100,000 population- LA 2012 and 2015

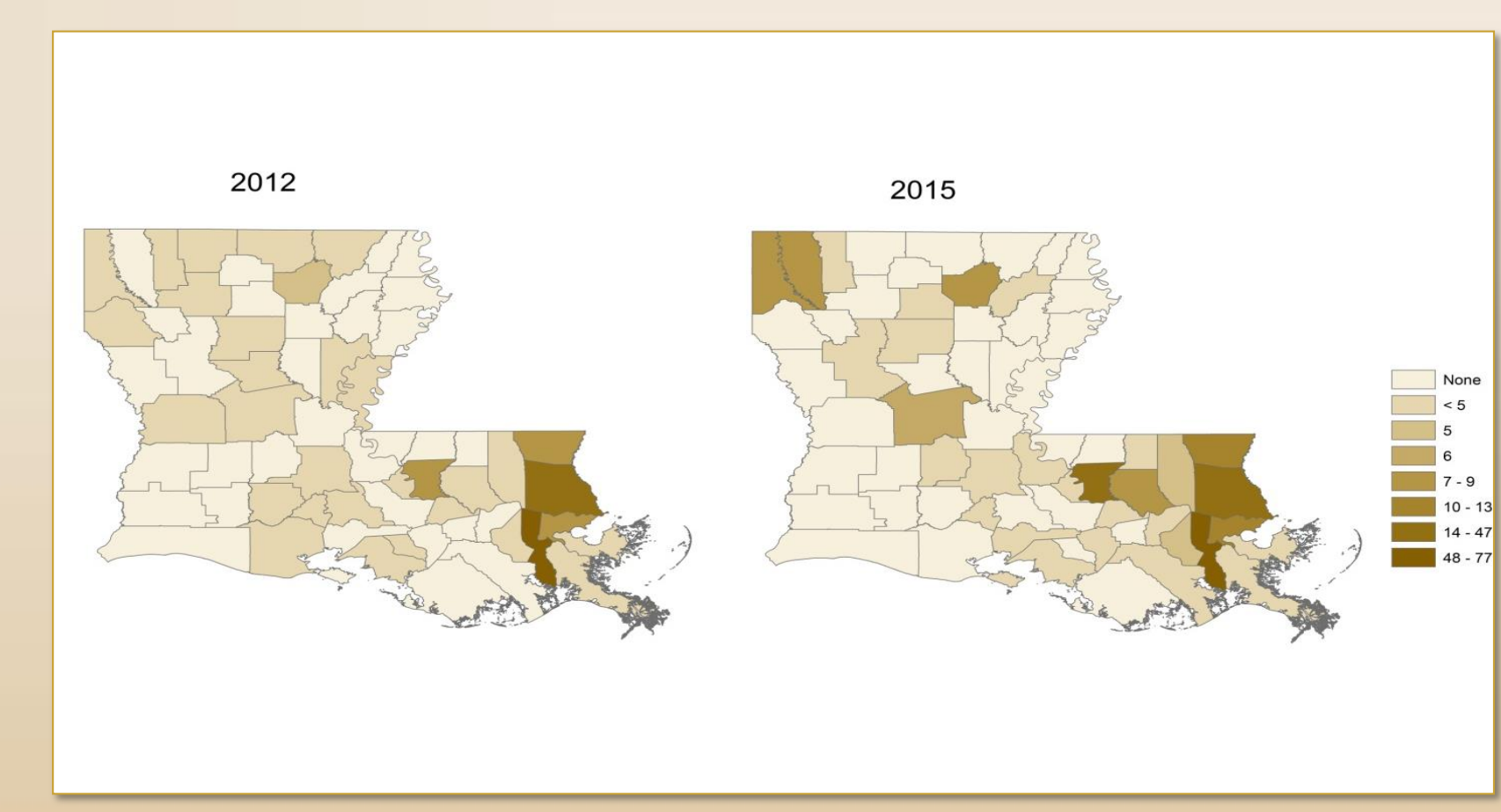


Figure 3: Urban versus Rural HCV diagnosis –LA 2012-2015

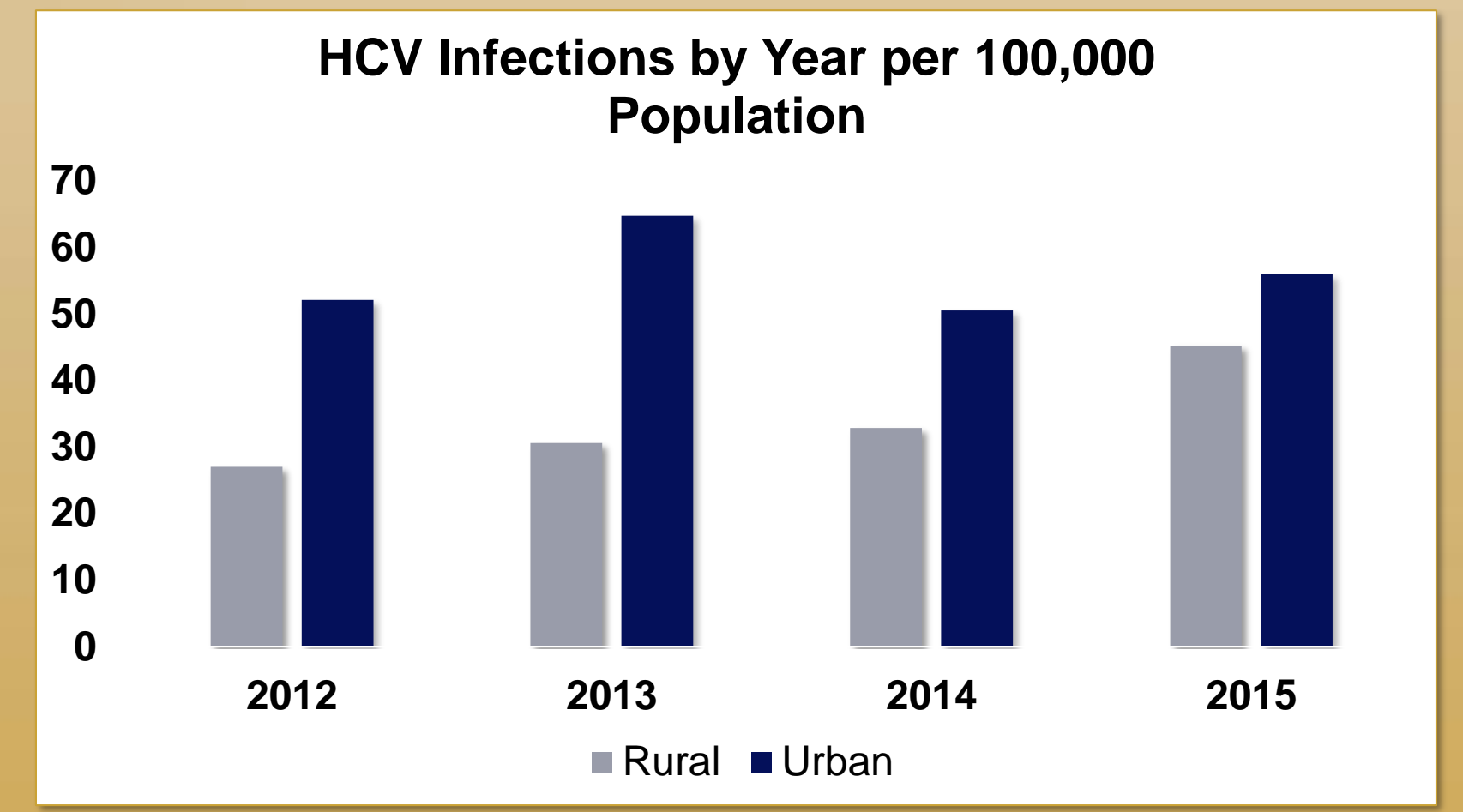
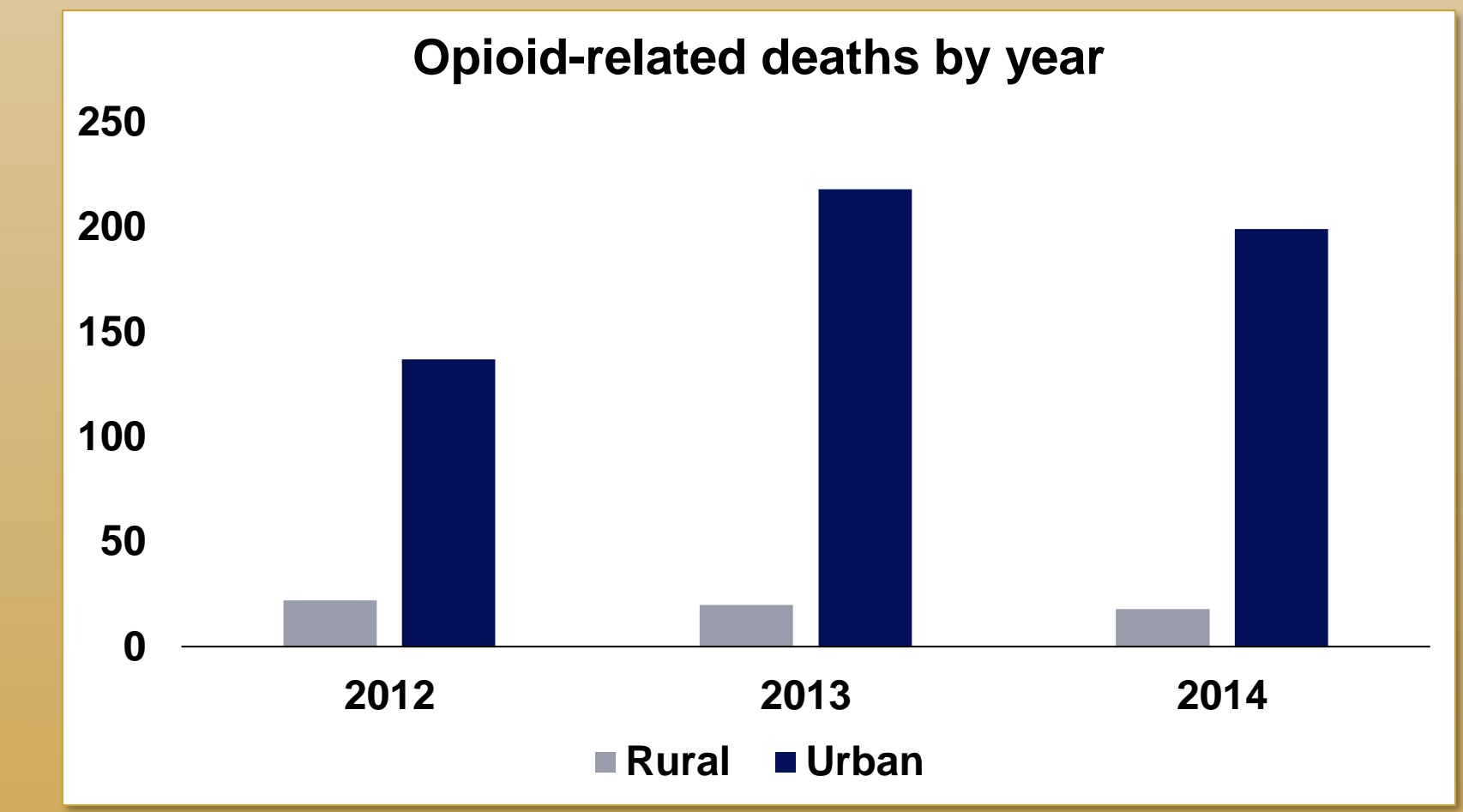


Figure 4: Urban versus Rural Opioid-related deaths –LA 2012-2014



Opioid-related death data for 2015 was preliminary and distribution could not be determined

- **Increase in HCV diagnosis rate from 2012-2015**
 - **Urban:** 7.4% increase
 - **Rural:** 67.3% increase

- **Percent change in opioid-related deaths 2012-2014**
 - **Urban:** 45% increase
 - **Rural:** 18% decrease

Conclusion

- Increasing trend in HCV diagnosis in both rural and urban LA
- Simultaneous rise in HCV diagnosis and opioid related deaths indicate possible ecological correlation
- Overall increase in rural HCV diagnosis is greater than urban diagnosis

Going Forward

- Further investigation is needed to determine relationship between increase in opioid-related deaths and HCV infections in LA.
- Further investigation of increase in rural HCV diagnosis to determine cause
- Need for increased IDU prevention efforts and HCV awareness
- Further investigation into role of opioid-use in rural HCV transmission.

References

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