

# **THE CONTINUING EPIDEMIC OF HEPATITIS C IN THE UNITED STATES: THE CASE OF WEST VIRGINIA**

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# Introduction

- **HCV is the one of the most common blood-borne viruses in the U.S.**
- **In 2012 there were approximately 17,000 new hepatitis C cases**
- **The Appalachian states had the highest rates of HCV cases in the U.S. in 2012 (CDC and West Virginia Department of Health and Human Resources)**

# Introduction

- **Six major genotypes of HCV, each comprised of multiple subtypes, have been identified worldwide**
- **75.52% of Americans with HCV have genotype 1 of the virus**
- **HCV progresses very slowly, which increases the risk for serious complications**
- **No preventive vaccine for HCV**

# Introduction

- Interferon had been a cornerstone of HCV therapy, but has significant side effects
- In 2014, the FDA had approved the use of ledipasvir/sofosbuvir (Harvoni) for the treatment of HCV genotype 1

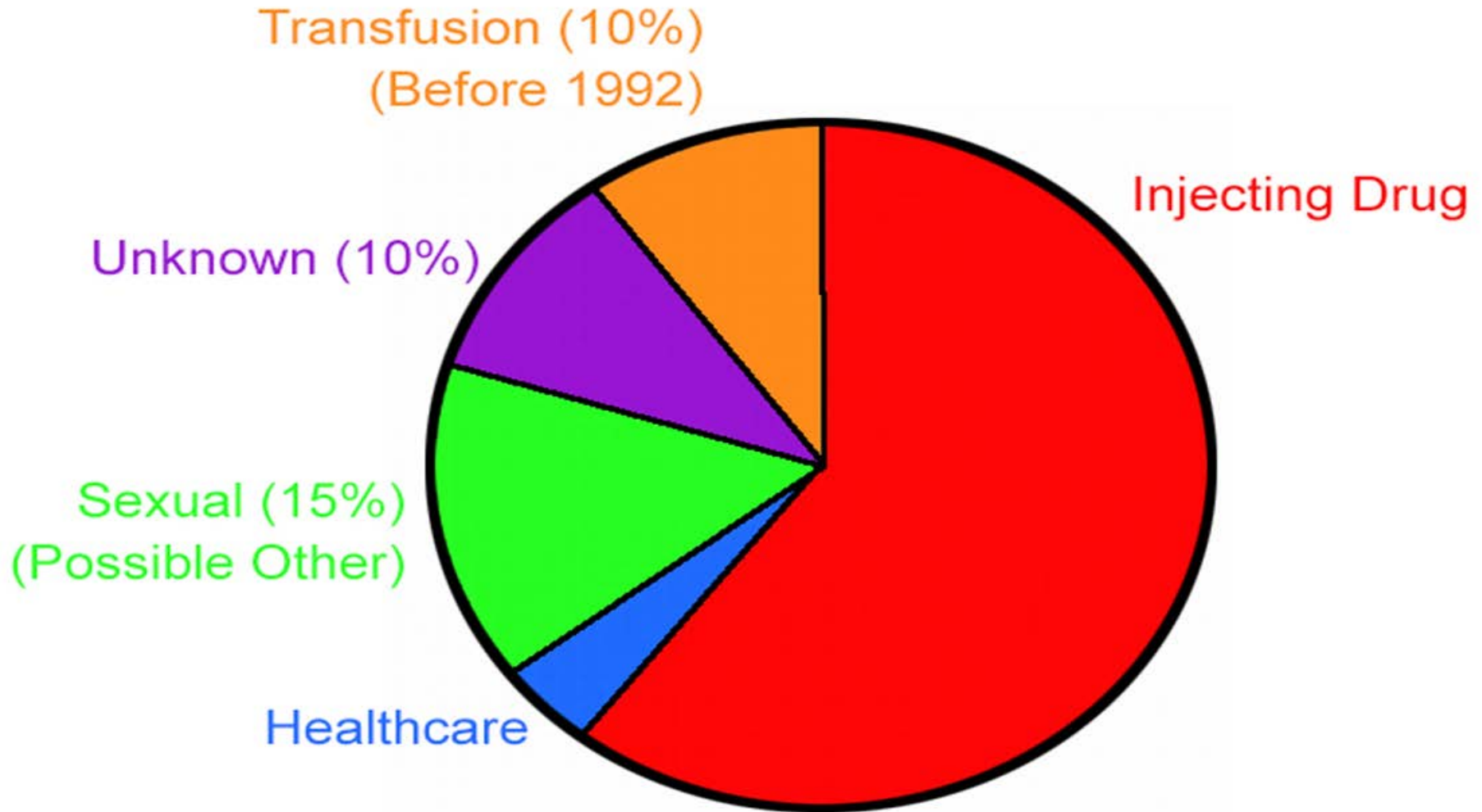


# Purpose

- **Primary purpose: analyze the earlier identification process associated with HCV treatment to determine if decreased incident and prevalence of the disease could be realized through early identification programs.**
- **Secondary purpose: determine if preventable health complications could be avoided by offering affordable alternatives or cures.**



# Introduction



**Overall modes of HCV Transmission in the US (CDC)**

# Results

- **Early Identification of Hepatitis C Virus**
  - **68% newly acquired cases of HCV are related to IV drug abuse**
  - **Prevention strategies - risk reduction counseling and health care services**

	<b>Rate 2009</b>	<b>Rate 2010</b>	<b>Rate 2011</b>	<b>Rate 2012</b>	<b>Rate 2013</b>
West Virginia	1.7	1.1	2.53	3	3.1
United States	0.3	0.3	0.4	0.6	0.7

- **New HCV Diagnosis in the U.S. and WV per 100,000 in 2013**

**Source: CDC**

# Results

- **Birth Cohort Screening**
  - In 2012, reduced deaths by 82,300 at a cost of \$15,700 per QALY gained, born between 1945-1965
  - Direct-acting antiviral (DAA) treatments reduced approximately 121,000 deaths compared with risk-based screening at a cost of \$35,700 per QALY
  - Birth cohort screening was of moderate benefit in reducing the incidence of HCV



# Results

- **Hospitalizations Costs associated with Hepatitis C Virus**

<b>Principal Diagnosis: Hepatitis C Infection</b>	<b>2004-05</b>	<b>2010-11</b>
Number of Hospitalization	20,963	64,867
Rate per 100,000 People	4.76	13.81
Average per Hospitalization Charge	\$42,415	\$53,626

**Trends in Rates and Costs of Hospitalization in Adults for HEP C 2004-11**

**Source: Xu, Tong and Leidner (2014)**

# Results

- **HCV oral medications have reduced the risk of liver cancer by 76% and of death by any cause by 50%**
- **Oral medications in comparison to the customary Interferon-based Standard of Care (SOC) for chronic HCV did reveal high rates of Sustained Virologic Response (SVR)**

# Results

- **Total cost of care for the most common liver-related complications related to HCV**
  - estimated at \$6.5 (\$4.3-\$8.4) billion in 2013.
  - will peak in 2024 at \$9.1 (\$6.4-\$13.3) billion with a lifetime cost estimated at \$64,490 per HCV infected individual



# Results

- **Payment Issues**
  - Payers have instituted restrictive reimbursement policies in response to the cost of HCV medications (\$83,000 to \$153,000 per course)
  - In 33 state Medicaid programs, only the sickest patients where infection has progressed to severe liver disease qualified for HCV treatments
  - In 2014, 4.5 billion was spent on oral medications like Harvoni, more than 15 times what it spent the year before on older treatments

# Results

- **WV Response to Hepatitis C Epidemic**
  - **6647 cases of Chronic HCV was reported for 2014 with Cabell (618 cases) and Kanawha (803 cases) being the highest two counties**
  - **In 2015, WVDHHR provided funding to CHHD for WV's first ever Syringe Exchange Program (SEP)**
  - **In its first 15 weeks, the health department saw more than 1000 clients**

# Discussion

- **The CDC identified birth-cohort group and at-risk population such as IV drug users that warranted testing for HCV**
- **Payment restrictions and regulations regarding HCV treatment by Medicaid and private payers = barrier to decreasing the incident and spread of HCV**
- **West Virginia has responded by implementing an early intervention program with the needle exchange program**

# Discussion

- **Dr. Mahmoud Shorman, an Infectious Disease physician at Marshall Health, stated that when patients are not treated right away they come back in a few months with multidisciplinary problems**
- **Harvoni requires a prior authorization form to be approved by insurance**
- **Criteria for approval is long and specific:**
  - Documented diagnosis of cirrhosis
  - Patient has abstained from the use of illicit drugs and alcohol

# Practical Implications

- **Possibility of obtaining funding for early intervention programs**
- **Improving testing and simplifying screening and data collection**
- **Effective standards of care**
- **Expand the clinical workforce of Specialists**



# Conclusion

- **Early identification in acute and chronic HCV infected populations could lead to a decrease in the incidence and prevalence realized through more awareness of testing and early intervention**
- **Results and outcomes can also address payment restrictions on treatment**

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