



FIVE HEALTH

Briefing: Florida's Response to Hepatitis C and HIV Outbreaks and Clusters

Executive Summary

This document synthesizes findings from a presentation by the Florida Department of Health concerning the state's response to interconnected outbreaks of Hepatitis C (HCV) and HIV, primarily centered in Miami-Dade County in 2018. The investigation revealed a significant outbreak of acute HCV among people who inject drugs (PWID), with an 18% positivity rate identified through behavioral surveillance. This population demonstrated high-risk behaviors, including low participation in Syringe Service Programs (SSPs) compared to non-acute individuals.

The data also identified a concurrent HIV risk network among PWID, confirmed through time-series and molecular network analysis. In response, the Florida Department of Health, in collaboration with local partners, developed a comprehensive outbreak response plan. Key interventions included enhanced outreach and testing, the creation of an alternative rapid testing algorithm for high-risk populations, and the mobilization of community stakeholders, including the IDEA Exchange SSP.

These events prompted an organizational restructuring within the Bureau of Communicable Diseases to create a dedicated Viral Hepatitis and Outbreak Response Program. The response framework developed in Miami-Dade has informed a broader statewide expansion of harm reduction services, with multiple counties subsequently authorizing and implementing syringe exchange programs as of late 2021.

1. Epidemiological Context: Miami-Dade County

Miami-Dade County serves as a critical focus area for communicable disease surveillance and response in Florida due to its demographic and epidemiological profile.

- **Population:** The county has an estimated population of 2,864,600.
- **HIV Burden:** It records the highest rates of new HIV diagnoses for any metropolitan statistical area (MSA) in the United States.
 - **Miami-Dade Rate:** 42.4 per 100,000 population.
 - **U.S. MSA Average Rate:** 13.2 per 100,000 population.

- **Hepatitis C (HCV) Burden (2019):**
 - **Acute HCV Rate:** 1.6 per 100,000 population.
 - **Chronic HCV Rate:** 46.7 per 100,000 population.
- **Harm Reduction Infrastructure:** At the time of the investigation, Miami-Dade was the only county in Florida with a Syringe Service Program (SSP).

2. Hepatitis C Outbreak Investigation (2018)

Initial surveillance data in 2018 pointed to potential gaps in public health follow-up for acute HCV, while targeted behavioral surveillance later uncovered the full extent of an outbreak among PWID.

2.1. Initial Surveillance Findings

Routine surveillance of acute HCV cases reported in 2018 (as of May 23, 2019) indicated a low rate of comprehensive investigation.

- **Total Cases Reported:** 63
- **Cases Investigated:** 34 (54%)
- **Cases Interviewed:** 3 (9% of those investigated)

2.2. National HIV Behavioral Surveillance (NHBS) Findings

A focused study on People Who Inject Drugs (PWID) from August 15 to December 15, 2018, provided critical evidence of a significant, previously under-identified outbreak of acute HCV.

- **Overall HCV Reactivity:** 57% of the sample had reactive HCV tests (including acute and chronic cases).
- **Acute HCV Positivity Rate:** 18% of the sample (89 out of 506 participants with confirmatory results) were determined to have acute HCV infection, identified by a non-reactive rapid HCV test followed by a positive RNA NAT test.

3. Profile of Acute HCV Cases among PWID (NHBS-IDU5 Data)

The NHBS study provided a detailed demographic and behavioral profile of the 89 individuals identified with acute HCV.

3.1. Demographics

Category	Breakdown

HIV Co-infection	9 of the 89 acute HCV cases (10%) also had a reactive HIV result.
Age at Interview	18-24: 3% 25-29: 16% 30-34: 10% 35-39: 19% 40-44: 30% 45-49: 4% 50+: 17%
Race / Ethnicity	Hispanic: 39% Black: 36% White: 21% Multiple Races: 3%
Gender	The vast majority of cases were among males (graphical representation indicates approximately 88%).

3.2. Risk Behaviors and Harm Reduction

Data revealed significantly lower engagement with harm reduction services among the acute HCV cohort compared to other PWID participants.

- **Syringe Service Program (SSP) Participation:**
 - **Acute HCV Group:** Only 25% had participated in an SSP.
 - **Non-Acute HCV Group:** 53% had participated in an SSP.
- **Needle Sharing:** A majority of the acute HCV group reported using a needle after another person. The specific breakdown by number of sharing partners is as follows:
 - **Shared with 0 people:** 38%
 - **Shared with 1 person:** 4%
 - **Shared with 2 people:** 6%
 - **Shared with 3 people:** 3%
 - **Shared with 4 people:** 2%
 - **Shared with 5 people:** 3%
 - **Shared with 6 people:** 1%
 - **Shared with 7 people:** 1%
 - **Shared with 10 people:** 2%
 - **Shared with 25 people:** 1%

4. Concurrent HIV Seroconversion Network

Parallel to the HCV outbreak, a time-series analysis confirmed multiple HIV seroconversions in Miami during 2018. Subsequent investigation identified a tightly linked HIV risk network among PWID.

- **Investigation:** The findings were detailed in the paper "Rapid Identification and Investigation of an HIV Risk Network Among People Who Inject Drugs –Miami, FL, 2018" published in *AIDS and Behavior*.
- **Network Analysis:** Primary epidemiologic and molecular network analysis visualized the connections between individuals. Links were established through:
 - Epidemiological Link
 - Social Link
 - Molecular Link (at 0.5% and 1.5% genetic distance)
- **Connection to SSP:** The network diagram confirmed that a number of individuals within this transmission network were participants in the IDEA Exchange SSP, highlighting the program as a critical venue for intervention.

5. Public Health Response and Interventions

The identification of these linked outbreaks prompted a multi-faceted public health response coordinated by the Florida Department of Health.

- **Strategic Planning:**
 - Organized local leadership in Miami-Dade.
 - Developed the "**Community Response Plan for HIV and Hepatitis C among People Who Inject Drugs**" in March 2019.
 - Mobilized community stakeholders, including the county's only SSP, the IDEA Exchange.
- **Enhanced Field Operations:**
 - Leveraged Department and local resources for testing and treatment referrals, including the "Test Miami" mobile health unit.
 - Increased the number of outreach and testing events.
 - Improved the focus on surveillance and local case investigations.
- **Development of an Alternative Testing Algorithm:** A new rapid HIV/HCV testing algorithm was designed to better identify acute infections in high-risk populations.
 - **Prescreen:** Targets persons who have injected drugs in the last 30 days or who are participating in the IDEA Exchange SSP.
 - **Initial Test:** A rapid HIV/HCV antibody test is administered.
 - **Confirmatory Testing:** Regardless of the rapid test result, an HIV/HCV Nucleic Acid Test (NAT) is ordered through the State Lab to detect acute infections that occur before antibodies develop.
 - **Linkage to Care:** All individuals with positive results (either rapid or NAT) are linked to care. Individuals with a positive rapid test who had a negative result in the past 6 months are also directly linked to care while awaiting NAT results.

6. Organizational and Policy Developments

The Miami-Dade outbreak served as a catalyst for structural changes within the Department of Health and informed broader statewide policy on harm reduction.

6.1. Bureau of Communicable Disease Reorganization

The bureau was restructured to create a more integrated and responsive unit for syndemic outbreaks.

- **Previous Structure:** Operated with separate sections for HIV/AIDS and STD/Viral Hepatitis.
 - *Bureau Chief:* Emma Spencer
 - *HIV/AIDS Section:* Brandi Knight
 - *STD and Viral Hepatitis Section:* Craig Wilson
- **New Structure:** Established a new, dedicated **Viral Hepatitis and Outbreak Response Program**.
 - *Program Administrator:* (Unspecified)
 - *Lead Epi, Outbreaks and Response:* Scott Pritchard
 - *Field Operations Consultant:* Nita Harrelle
 - *Health Educator:* Ashley Huie

6.2. Statewide Expansion of Syringe Exchange Programs

Following the pilot program in Miami-Dade, Florida law was changed to allow other counties to establish SSPs. As of October 1, 2021, the implementation status across the state includes counties with:

1. Operational syringe exchange programs.
2. County ordinances approved for syringe exchange.
3. Executed letters of agreement with the Florida Department of Health.

Statutory Requirement: County commissions must authorize SSPs via a local ordinance and enter into a letter of agreement with the Department of Health before an entity can operate a program.

7. Acknowledgements

The response and investigation involved collaboration between multiple entities and individuals:

- **Organizations:**
 - Florida Department of Health (State and Miami-Dade County offices)
 - University of Miami
 - IDEA Exchange

- **Individuals:**

- David Forrest
- Gabriel Cardenas
- Monica Faraldo
- Dr. Reynald Jean
- Kira Villamizar
- Dr. Yesenia Villalta
- Dr. Hansel Tookes
- Dr. Tyler Bartholomew