Heroin abuse and Hepatitis C

George G. Abdelsayed, M.D.

Director of Gastroenterology and Hepatology

Staten Island University Hospital

Northwell Health

Associate Professor of Medicine

Hofstra Northwell School of Medicine

Scope of the problem

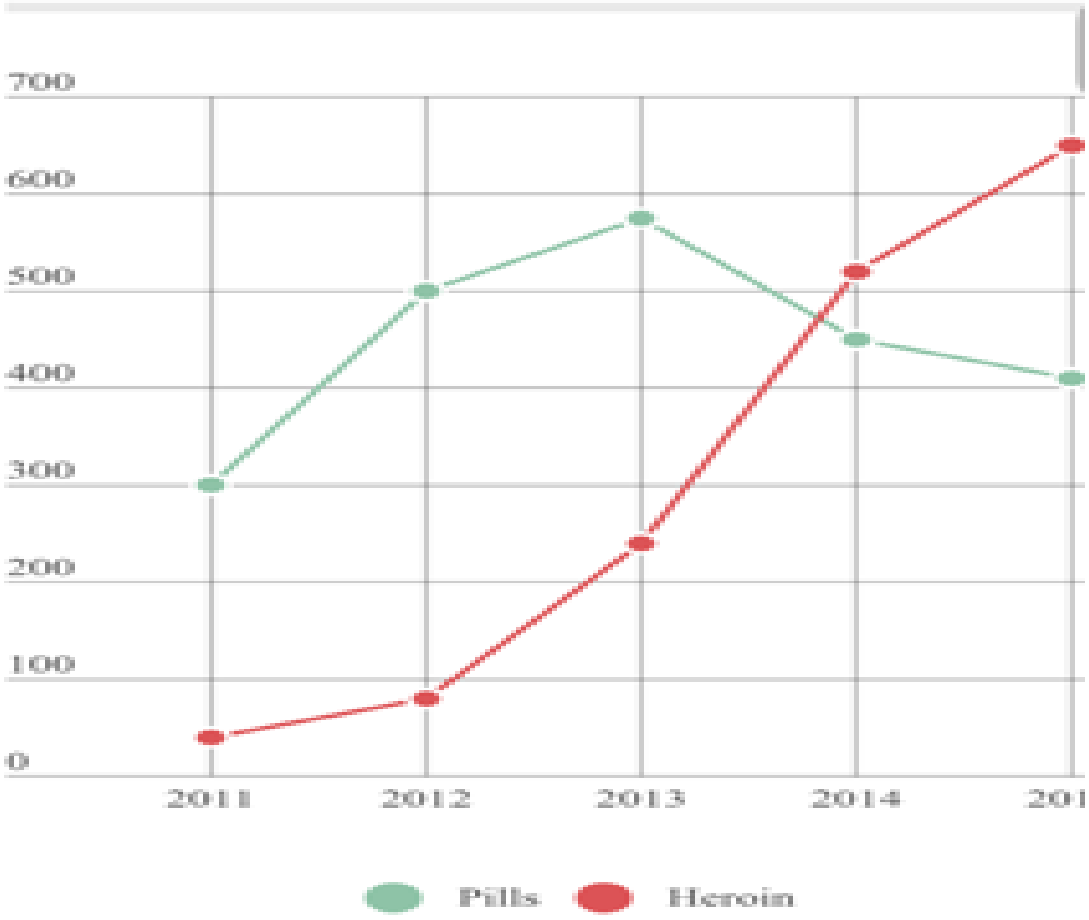
- Heroin abuse on Staten Island has skyrocketed
- 2 arrests per day; 650 arrests in 2015, up from 500 in 2014 (30%)
- Much of the heroin is of greater potency; 55% pure, compared with 40% in previous years.
- There is more per capita cases of HCV infections among young people on Staten Island — 34.7 per 100,000 people — than in any other borough in New York City.
- 63 Staten Islanders affected under age 30 in 2014 (Anthony DePrimo, Staten Island Advance)

- Health Department: Staten Island had the HIGHEST drug overdose death rate in 2014

- Heroin was involved in the overdose deaths of 42 Staten Islanders in 2014, up from 32 in 2013

- The increase in heroin abuse may be partially related to the tightened regulation over prescription drug usage

Heroin and pill-related arrests on Staten Island, 2011-2015



THE GOOD NEWS!

- We now have terrific drugs to combat all HCV genotypes
- Harvoni, with or without ribavirin- genotypes 1 and 4 Mono or HIV coinfected; post transplant
- Viekira pak, with or without ribavirin- genotype 1; minus Dasabuvir/ Technivie- genotype 4 , contraindicated in Childs B and C cirrhotics
- Mono and HIV coinfected(if on appropriate antiretrovirals)

- Daclatasvir-Sofsbuvir, with or without ribavirin, for genotypes 1, 3 ; mono or HIV coinfected; post transplant
- Grazoprevir/Elbasvir, with or without ribavirin; mono and HIV coinfected.
- Newer pangenotypic regimens coming soon
- Extremely high SVRs!

The barriers

- Exist mainly with PWID (Persons Who Inject Drugs)
- HIV coinfection alters the natural history of HCV, accelerating liver disease progression significantly!
- The unprecedented high rates of response (SVR), which have replaced the dismally low IFN based regimen response has brought new hope for this patient population

HCV treatment is successful among PWID

- The older HCV treatment guidelines excluded substance users from HCV treatment consideration
- This was largely based on the concerns of poor adherence, exacerbation of preexisting substance use, and psychiatric comorbid conditions and reinfection
- Revised guidelines recommend consideration of HCV treatment on a case-by-case basis; this approach has been shown to result in an increase in HCV treatment uptake among PWID, including active users (IDSA, AASLD)

- Studies have shown that RIBAVIRIN is safe and effective among PWID
- Active, including recent use of injecting drugs, if not frequent or daily, even if coupled with alcohol use does not significantly impact the SVR or treatment completion
- Rates of reinfection (1-5% per year)
- Despite such encouraging data, the rates of treatment among PWIDs remain low

Other barriers

- Most PWIDs have complex social, medical, and psychiatric comorbid conditions

- Other barriers that exist include,
  - -Systems-level barriers
  - -Practitioner-level barriers
  - -Patient-level barriers

Systems-level barriers

- Lack of consensus about screening and treatment guidelines among individual practitioners
- Lack of availability of certain services; for example FibroScan, liver biopsy and other tests to assist disease severity
- Limited reimbursement and the stigma of being co-infected

Practitioner-level barriers

- Misperceptions about poor adherence, ongoing substance use, relapse and comorbidities
- The fear of treatment of the active substance user
- In a study of Canadian HCV specialists, only 20% would provide treatment to active PWID's
- A lack of confidence by many low-volume providers
- Misperceptions and preconceived notions about substance use or psychiatric premorbid conditions May lead to negative treatment outcomes, with delayed entry
- Underutilization of OST and NSP
- Eligibility of persons who inject drugs for treatment of hepatitis C virus infection

OSP/ NSP... etc

- OMT(Opioid a maintenance Therapy)= MMT(Methadone Maintenance Therapy)/ BMT(Buprenorphine Maintenance Therapy)
- **MMT:** Methadone is a long acting opiate agonist with single daily dosing; reduces the risk of frequent hair when use, along with the risk of promiscuous needle sharing and the exchange of drugs for money/sex
- Downside is that methadone clinics can only accommodate 15 to 20% of heroin addicts.
- **BMT:** Buprenorphine is a partial mu opioid agonist;
- Buprenorphine has been combined with naloxone in a 4:1 ratio (Suboxone, Zubsolv) or a 6-7:1 ratio (Bunavail)

Patient-level barriers

- Poor knowledge and absence of noticeable symptoms, leading to the perception of a B9 disease
- Unemployment, unstable housing, lack of transportation leading to poor access, poverty, incarceration, un insurance or under insurance
- Poor patient-provider relations

Therapeutic Options

- Psychosocial interventions
  - Contingency management
  - Individual, group and family counseling
  - Motivational interviewing
  - Case management
  - 12-step interventions
- Pharmacological interventions
  - Methadone (can be used for taper as well)
  - Buprenorphine (can be used for taper as well)
  - Naltrexone (also used for alcohol dependence in oral and injectable forms)

Methadone Maintenance for Opioid Dependence: Benefits

- Reduced drug use
- Reduced criminality
- Improved health (reduced utilization of health care)
- Improved functioning
- Public health gains (HIV, Hepatitis,etc.)
- Overall health care cost savings

Methadone for Opioid Dependence: Risks

- Prolonged QT interval: question of what to do for assessment and treatment
- Overdose risks: primarily associated with methadone prescribed for pain; treatment decreases risk of overdose from heroin
- Diversion concerns?

Buprenorphine

- Buprenorphine available as a single agent or as a combined agent with naloxone
- Available in sublingual preparation that includes naloxone as a diversion prevention measure
- The injectable form of buprenorphine is NOT approved for use in the treatment of addiction

Buprenorphine

- Partial opioid agonist with ***high affinity*** for receptor
- Low overdose potential
- Easier to withdraw from than heroin, methadone, or LAAM

Suboxone®

The active ingredient in Suboxone is buprenorphine, a partial opioid agonist. It also contains naloxone, an opioid antagonist to discourage people from dissolving the tablet and injecting it

Suboxone may be used to

- reduce illicit opioid use
- help patients stay in treatment

by

- suppressing symptoms of opioid withdrawal
- decreasing cravings for opioids

Additional Buprenorphine Benefits

- **Short-term buprenorphine use** is helpful for detoxification from other opiates
- For those wishing to remain on buprenorphine indefinitely, that is an option
- Buprenorphine can be prescribed by a local doctor in the privacy of his or her office and can be obtained from a local pharmacy, whereas methadone must be obtained from a methadone clinic (OTP) and quite often on a daily basis
- There is less chance of overdose with buprenorphine than with methadone.

Drug Substitution Treatment - Harm Reduction

Drug Substitution Treatment in the U.S. is considered a harm reduction approach

- tapering doses of methadone or Suboxone®/Subutex®
- opioid maintenance.

Helps to: reduce the spread of HIV/AIDS/hepatitis; reduce illicit drug use; increase treatment retention; reduce crime to attain drugs; improve employability, improve family relations.

Drug Substitution Treatment Today

Drug Substitution Treatment, or Medication-Assisted Treatment if you prefer, is a popular method of treatment in the U.S. and abroad.

In the U.S. people are treated either with

- methadone or with Suboxone®

In Europe

- heroin is also used, especially for those who do not do well on Methadone Maintenance Treatment.

In both the U.S. and abroad, counseling is recommended with substitution treatment.

Summary

- HCV is high among PWIDs, with 67% of PWID HCV positive
- The HCV public health threat is high, yet the public awareness remains low; this is particularly problematic in areas with a high prevalence of PWID
- The access to testing, assessment and treatment among PWIDs is poor, despite evidence of treatment effectiveness
- Significant reduction in HCV prevalence can be achieved by the provision of integrated care, which includes risk reduction as well as harm reduction, such as OST
- The current era of interferon free highly potent Halle Berry or two resistance DAA regimens holds great help to ultimately eradicator significantly reduce the burden of HCV in our PWID population


Thank you ...