Multi-pronged approaches to reducing the health consequences of opioid use, New York City
Northeast Epidemiology Conference

What is the strategy?

- Public health approach
  - Track drug use and associated health consequences at a population level
- Comprehensive and timely surveillance
- Develop data-driven initiatives
- Impact is measureable

Public health surveillance framework
- **Prevalence** – who, what, where
- **Morbidity** – who, what, where
- **Mortality** – who, what, where
- **Qualitative** – how and why

Data Sources

- Qualitative Research
- Price/Purity
- DEA ARCOS
- Treatment Admissions
- Jail Data
- Medicaid Fraud Data
- Hospitalizations
- Syndromic
- Pharmacy Crime
- Drug Prosecutions
- Poison Control
- PMP Data
- DEA
- Reduce Overdose Deaths Indicators
PRESCRIPTION MONITORING
PROGRAM

PMP for public health surveillance

- To understand population level prescription use trends over time
  - Historically, used as law enforcement tool
  - NYC DOHMH developed key indicators to evaluate data using the PMP
- To inform data-driven initiatives

Key public health PMP indicators

- Number of prescriptions, patients, prescriber, pharmacies
- Rate of opioid analgesic prescriptions filled overall and by drug type
- Median day supply
- Rate of patients filling opioid analgesic prescriptions
- Rate of high dose opioid analgesic prescriptions filled

Rate of opioid analgesic prescriptions filled by borough of residence, 2013

Note: Schedule II opioid analgesics + hydrocodone

Median day supply varies across New York City, 2013

Staten Island residents fill more high dose opioid analgesic prescriptions, 2013

Timely mortality data

- NYC receives mortality data monthly and reports data quarterly
- Prior to 2013 data was received annually and reported with a 1.5 year lag
- NYC published preliminary 2013 mortality data in July 2014
  – Time lag for the CDC is currently > 1 year
**Syndromic surveillance**

- An early warning system
- NYC receives data daily from 51 emergency department
- Emergency department visits are classified into "syndromes" based on chief complaint
- Syndromes are compared to baseline data to identify changing trends

**Syndromic data predictive of mortality trends**

- Number of heroin-involved overdose deaths
- Number of heroin mentions, syndromic surveillance

**Timely nature of syndromic data used to guide public health responses**

- Rapid assessment
  - Can include chart review, qualitative interviews, short surveys
- Rapid response
  - Engaging community stakeholders, strategic naloxone deployment, development of educational materials, etc.

**CASE STUDY: DATA DRIVEN INITIATIVES**
Fentanyl and heroin-involved overdoses

• 2014: Mid-Atlantic and Northeast states reported an increase in the number of overdoses related to heroin containing fentanyl
• February, 2014: Mass media coverage of heroin following the death of a public figure in New York City
  – Concern that fentanyl-involved overdose deaths would increase in NYC

What would you do?

Multi-agency response

• NYC Department of Health and Mental Hygiene (DOHMH) developed list of questions for existing datasets
• Multi-agency conference calls led by DOHMH
  – Medical examiner, NYPD, DEA, Manhattan DA office, NY/NJ HIDTA, Special Narcotics Prosecutor, Mayor’s Office

Investigation findings

• Public health
  – Medical Examiner
    • No increase in the number of overdose cases
    • Retrospectively tested all heroin deaths for fentanyl for the month of January
  – Syndromic surveillance
    • No detectable increase in the number of emergency department visits for overdose
  – Poison Control data
    • No increase in the number of consultations for heroin or fentanyl
Investigation findings

- Public safety
  - NYPD and DEA labs
    - No reported increase heroin samples tested containing fentanyl
- Community
  - Syringe Exchange Programs
    - No reported increase in fatal or non fatal overdoses

Data-driven response

- NYC DOHMH released two advisories regarding cases of fentanyl-associated overdoses in Mid-Atlantic and Northeast United States (2014)
  - A Health Alert Network letter for clinicians
  - A “Dear Colleague” letter for community program staff working with drug users
- Continued public health and public safety surveillance

Public safety response

- Included aggressive investigation of decedent’s dealer and subsequent arrest
- Discussed importance of routinely testing product and sharing results, including purity

How have others responded to similar events?
DATA-DRIVEN INITIATIVES

Data-driven initiatives

Reduce Overdose Deaths

MAT access
Emergency Action Plan
Public Health Detailing
Naloxone Access

Opioid Prescribing Guidelines
Overdose Prevention Programs

Opioid analgesics: A public health crisis in New York City

Rates of hydrocodone and/or oxycodone prescriptions filled by NYC neighborhood

Rates of unintentional opioid analgesic poisoning (overdose) deaths by NYC neighborhood

Multi-pronged approach to reducing opioid analgesic involved mortality

Staten Island opioid-analgesic poisoning mortality decreased 29% from 2011 to 2013.

Bronx residents had second highest rate of opioid analgesic prescriptions filled in 2012 and 2013.

Bronx residents had the second highest rate of opioid analgesic overdose death in NYC.

Judicious Opioid Prescribing
Public Health Detailing Campaign, Bronx NY

October 1, 2015
Marissa Kaplan-Dobbs, MPH
Judicious Opioid Prescribing Public Health Detailing Campaign

- Modeled after pharmaceutical sales approach
- Effective in changing clinical practice behavior
- “Sell” or promote key recommendations focusing on safe and judicious prescribing
- 8 week campaign (Spring 2015); 2 visits per contact
- Brief, 1:1 interactions with providers and staff
- Provide key messages, clinical tools, patient materials
- Evaluation: knowledge assessment at beginning of 1st and 2nd visit

Seven steps of a detailing visit

1. Introductions
2. Framing the issue
3. Survey questions
4. Stating recommendations
5. Promoting materials in kit
6. Handling objections
7. Gaining a commitment

Key campaign messages
- When opioids are warranted, a three-day supply is usually sufficient.
- Avoid prescribing opioids to patients taking benzodiazepines whenever possible.
- Use ≥100 MME as a threshold for caution and thorough patient reassessment.

Action kit highlights
Provider information
- National and local data about opioid analgesic epidemic
- Prescribing guidelines
- OpioidCalc
- New York State Prescription Monitoring Program
- Substance use disorder treatment referral
- Naloxone

Patient information
- Posters
- Brochures
Evaluation of health care provider knowledge

- 3-question survey
  - Self-reported knowledge related to campaign recommendations

- Reps administered survey to health care providers at beginning of initial and follow-up visits

- Very brief, ~2 minutes

Detailing visit process data

- Health care provider visits
  - 972 initial visits
  - 814 follow-up visits (84% follow-up rate)

- Non-health care provider office staff
  - 504 initial visits
  - 341 follow-up visits
Conclusions

- Public health detailing campaign reached nearly 1000 Bronx health care providers in specialties that prescribe the most OAs
- Campaign well-received
- Campaign changed health care provider knowledge about opioid prescribing
- Other jurisdictions might consider public health detailing on opioid analgesics

Overview of medication-assisted treatment for opioid use disorder (addiction)

- Medications are the most effective treatment for opioid use disorder
- Gold standard medications:
  - Methadone
    - Can only be prescribed in addiction settings
  - Buprenorphine
    - Can be prescribed by general physicians or specialists in office-based setting
How does buprenorphine work?

• Partial opioid agonist
  – Attaches to same receptors in the brain as other opioids (e.g., opioid analgesics, heroin, methadone), blocking their effects and preventing withdrawal symptoms
  – Ceiling to side effects, including respiratory depression
• Produces only weak morphine-like effects, without the high triggered by full opioid agonists
• Long-acting and blocks the effects of any opioids taken after its administration
• Available in tablet or film formulation

Effectiveness

• Demonstrated in multiple studies to be effective treatment for opioid use disorder
• Reduces
  – Opioid use
  – Mortality
• May also reduce risk of HIV infection

How long should a person take buprenorphine?

• Every person is different → depends on individual
• Better outcomes with longer treatment
• Diabetes treatment analogy

What about misuse and diversion of buprenorphine?

• Risk of misuse is lower with buprenorphine than with full opioid agonists
  – Not drug of choice to get high
  – Long-acting with ceiling effect → limits euphoria
  – Naloxone included in Suboxone formulation to deter injection®
• Most common reasons for buprenorphine misuse:
  – Self-treatment of withdrawal symptoms
  – Lack of access to treatment
Barriers to access/utilization

- Prescribing restrictions
  - Only MDs and DO
  - 8-hour training
  - Limits on number of patients
- Lack of physician familiarity
- Lack of physician time to manage and coordinate care
- Prior authorizations
- Stigma

Health Department strategy to increase access

- Programs to increase local prescribing capacity
  - Provide technical assistance to health centers
  - RFP for nurse care manager model
- Work with other governmental agencies on policy development
- Materials for health care providers and patients
- Messaging to decrease stigma

Buprenorphine CHI

City Health Information

Buprenorphine—An Office-Based Treatment For Opioid Use Disorder

- Buprenorphine treatment is a life-saving tool for patients with opioid use disorder.
- Learn to recognize opioid use disorder and recommend effective treatment.
- Incorporate buprenorphine treatment into your practice.

Summary

- Buprenorphine is a key NYC DOHMH strategy to reduce risk of opioid overdose
- Buprenorphine is effective
  - Reduces opioid use and mortality
- Buprenorphine is safe
  - Ceiling effect; difficult to overdose
- Can be prescribed by physicians in office-based settings
- Barriers exist
- NYC DOHMH is actively working to increase access
- Other jurisdictions should include expanding access to buprenorphine as a strategy to reduce opioid overdose
DISCUSSION