THE HEPATITIS C CASCADE OF CARE IN PHILADELPHIA

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PHILADELPHIA’S CASCADE
METHODS

Study Period= 2010-2013

1. Estimate HCV seroprevalence for Philly
   - Age, gender, and race/ethnicity specific NHANES rates applied to 2012 US census estimates (adjusted for deaths, births, etc)
   - Refined using high-risk group estimates excluded from NHANES (homeless, incarcerated)
   - Chak et al. implemented this method at the national level

*Chak et al. Hepatitis C virus infection in USA: an estimate of true prevalence. Liver Int 2011;31:1090-1101
METHODS

2. Calculate individuals at each stage of cascade

a) **HCV Ab Estimate**: Adjusted for likelihood of being tested in the study period

b) **HCV Ab positive**: 1st report during study period, surveillance data

c) **In Care**:
   a) $\geq 2$ HCV RNA tests reported $\geq 6$ months apart
   b) $\geq 1$ HCV test ordered by a Hepatologist, GI or ID specialist

d) **Treated**: Using surveillance program investigation estimate, considered an equal proportion of HCV patients in care to be treated

d) **Cure**: Unknown
### RESULTS

<table>
<thead>
<tr>
<th>HCV infected (estimate)</th>
<th>HCV Ab</th>
<th>HCV RNA</th>
<th>HCV in medical care</th>
<th>HCV antiviral treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>50,000</td>
<td>25,000</td>
<td>11,000</td>
<td>3,000</td>
<td>1,500</td>
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</table>

HCV-positive individuals are being lost at all stages of the HCV testing, referral to care, and treatment cascade.
WHAT IS BEING DONE TO UNDERSTAND AND IMPROVE THE CASCADE IN PHILLY?
CHANGE HEALTH CODE: REQUIRE REPORTING OF RNA(-) AND RAPID AB TEST RESULTS

1. Ensures an accurate picture of who is getting screened AND confirmed
2. Rapids are often done on the most at-risk groups
UNDERSTAND DIFFERENCES BETWEEN AB-ONLY AND AB + RNA PATIENTS

What keeps cases from getting RNA?

PDPH Surveillance Investigations during 2013 - June 2015

- Within Ab+RNA, 98% received RNA within 5 months of Ab

- 23% of Ab-Only cases received their test at a Medication-Assisted Treatment center vs. 2% of those with an RNA test

- Ab-Only significantly less likely to be aware they tested HCV+ (78% vs 95%)

Hom J et al. In Submission
ASSESS AB SCREENING RATES: TARGETED AT-RISK POPULATIONS?

Is screening disproportionate in certain city regions? Certain populations?

- Received negative Ab from several major labs
COLLABORATE WITH COMMUNITY-BASED ORGANIZATIONS AND AT-RISK GROUPS

‘Snap Shots’ of special groups can better describe the cascade for the overall population and inform change

**Prevention Point Philadelphia (PPP):** multi-service organization serving injection drug users (IDU) and other vulnerable populations.

- Clients receive rapid HCV Ab but no RNA on site → many don’t end up getting RNA
  - **Barriers:** insurance, physician bias, distance-to-care, lost-to-followup, lack of knowledge, ‘forget’

In January 2014, PDPH launched a program offering free confirmatory HCV RNA testing to PPP clients.

- 1x/week, draw blood from any PPP clients testing HCV Ab(+)
- RNA (+) clients are linked to clinical care by PPP case workers.
Collaborate with Community-based Organizations and At-risk Groups

- 271 RNA Tested
  - 61 RNA negative
  - 210 RNA (+)
    - 107 people linked to care at Philadelphia area clinics

- 77% people tested for HCV Ab
- 50% people tested for HCV Ab
- ~737 tested for HCV Ab
- ~328 HCV Ab (+)

Found clients were uninformed, forgot test history, and needed prevention education

WHAT HEPATITIS C TEST RESULTS MEAN FOR YOU

ANTIBODY - You have been exposed to the hepatitis C virus at some point, but it does not mean that you are currently infected.
Next Steps: You will need to take the "confirmatory" test to see if the hepatitis C virus is still in your body, or if your body has cleared the virus naturally.

CONFIRMATORY - (RNA+) You are currently infected with either an acute or chronic hepatitis C infection.
Next Steps: A cure exists for the hepatitis C virus and new treatments have very few side effects. It is very important that you seek medical attention before hepatitis permanently damages your liver.

CONFIRMATORY - (RNA-) You are currently not infected with the hepatitis C virus.
Next Steps: There is no vaccine for hep C. If you think you have been exposed, you should get tested again within three months.

CLEARING THE INFECTION
Hepatitis C can exist in your body as an acute infection or a chronic infection. An acute infection can last up to six months and can be cleared naturally by your body’s immune system. 25% of adults that get hepatitis C will only have an acute infection. A chronic infection occurs if your body cannot fight off the acute hep C infection after six months. A chronic infection can last a lifetime and cannot be cleared by your body naturally. 80% of adults with hep C have a chronic infection. Thankfully, there is a cure. If you have a chronic infection, talk to your doctor about the treatment options available to you.

PREVENT HEP A & B
Regardless of hepatitis C status, everyone should be concerned about hepatitis A and hepatitis B infections. Ask your co-worker about getting tested. If your test comes up negative, ask to get vaccinated to ensure you won’t catch hep A or hep B in the future.

USE CLEAN WORKS
If you inject drugs, it is very important that you never share your works and that you use new clean equipment every time you inject. Storing works or reusing equipment greatly increases your chance of contracting or spreading hep C, hep B, HIV, as well as many other diseases.

Created a wallet card for client’s test tracking, testing information, and prevention
Found many cases PDPH investigated were underinformed about their infection, resources, and treatment

1. Offer investigated cases educational materials, mailed/trailed
2. Created a website for city-wide usage: PhillyHepatitis.org
INFORM AND EMPOWER PATIENTS

Created Posters for Health Centers and Clinics

THERE ARE TWO PHASES OF A HEPATITIS C INFECTION

ACUTE
- June 6
- Hepatitis C infections are called “acute” during the first six months after you have been infected.
- It is possible for your body to fight off an acute infection without the help of doctors or medicine.
- Most acute infections cannot be fought off, so see a doctor to get tested if you think you have hepatitis C.

CHRONIC
- Forever
- Acute infections your body cannot fight off are called “chronic” and can remain in your body for a lifetime.
- Without medical help, a chronic infection can cause serious health issues such as liver cancer or death.
- There are new medications that can cure your infection with very minimal side effects.

GET TESTED. KNOW THE DIFFERENCE.

IT TAKES TWO TESTS TO SEE, IF YOU HAVE HEPATITIS C.

ANTIBODY
- An Antibody test detects if you have been exposed to hepatitis C.
- A positive result only means that you have been exposed to hepatitis C.
- If your Antibody test is positive, you need to take an RNA test to know if you are currently infected with hepatitis C.

RNA
- An RNA test can tell if you are currently infected with Hepatitis C.
- If you test positive, there are new medications that can cure your hepatitis C infection with very minimal side effects.
- A negative test result means that your body fought off the infection without medical help.

GET TESTED. KNOW THE DIFFERENCE.
INFORM AND EMPOWER PATIENTS

Created Posters for PWID

NEW WORKS ARE FREE OF HEPATITIS C.

You can get HEPATITIS C by sharing used:
- Needles
- Syringes
- Cookers
- Water
- Tie-offs
- Pipes
- Filters
- Crack
- Surfaces

If blood has touched it, hepatitis C might be on it.

USE NEW WORKS EVERY TIME!
UPDATE TREATMENT INFORMATION FOR INVESTIGATED CASES

• Sending patient line lists to hospitals and clinics
  – Has patient received treatment on-site?
  – If not, was patient referred elsewhere?
  – Date treatment started?
  – Regimen?
  – SVR?

• Important to remember our data is not static ➔ reevaluation is necessary
ADDITIONAL APPROACHES FOR PHILLY & FOR YOU
USE ALL ACCESSIBLE DATA

- Vital stats – birth records and death certificates
- Negative Testing
- MCO Claims
- Behavioral Health
- Medical Examiner
- Pharmacy
- Other Payers
- EMR
- Inpatient/Outpatient PHC4 data
- Other Health Department data (STD, HIV, etc.)
- Cancer registry data
Use whatever data you have to assess particular steps in the cascade (ie. the drop off from Ab-only to Ab+RNA)
  - Everyone can create a local estimate!

Assess cascade at sentinel sites

Assess cascade for special populations
  - Youth
  - Baby boomers
  - Homeless
  - Inmates
  - IDU
  - Other?
BARRIERS

1. Manpower

2. Legal:
   – Access to Behavioral Health/Other data sources held up by law

3. Data silos:
   – Access held up by red tape

4. Data Content:
   – No race/ethnicity information from our reported labs

5. Cost
   – Even if you don’t use surveillance data, how can you pay for any time spent to build and change cascade?
   – Linkage to care, testing all require $$
SOME SOLUTIONS

- On-board Students, PHAPs, CSTE Fellows
- Collaborate with stakeholders: CBOs, academic institutions, hospitals
- Build a Local Coalition (ie. a network of stakeholders)
WHY CREATING A LOCAL CASCADE IS WORTH THE EFFORT

- Localities often more likely to get identified data
- Easier to identify groups at increased risk of falling out of the cascade
- Reasons for falling out may be region specific (e.g., in Philadelphia, MATs are unable to perform RNA testing)
  - Policy change may need to be state/city level
- The National picture may not be representative of the local experience
  - Can use data to inform National efforts with local data
- Any information is helpful information!!
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Phillyhepatitis.org
https://hip.phila.gov/DiseaseControlGuidance/DiseasesConditions/HepatitisC