Data-to-care Model
Using Facility-specific Hepatitis C Dashboards

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Hepatitis C Dashboards

• Developed dashboards for acute-care hospitals and community health centers in New York City
• Dashboards contain two metrics calculated using Health Department surveillance data
  • RNA confirmation rate
  • Treatment initiation rate
• Dashboards distributed annually to hospitals since 2017
Hepatitis C Clinical Exchange Network

Peer-to-peer learning collaborative since 2014

Increase clinical capacity for screening, diagnosing, managing and treating hepatitis C

97 Participating providers at 40 acute care hospitals, in gastroenterology, infectious disease and primary care

Dashboards as data-to-care tool to support implementation of quality improvement initiatives
Surveillance Registry

• Electronic laboratory reporting since 2006
• Receive all positive antibody, positive and negative RNA tests for all New York City residents
• Includes the name and address of the ordering facility
Identifying Facilities from Surveillance Data

- Ordering facility names and addresses on reported laboratory tests can require cleaning
  - Misspellings, variations all need to be accounted for
- Hospitals can have multiple addresses within the same complex, satellite buildings, multiple campuses, or outpatient clinics
  - Work with facilities to determine what sites to include

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YORK METHODIST HOSPITAL</td>
<td>7187803000</td>
<td>BROOKLYN</td>
<td>NY</td>
<td>11215</td>
</tr>
<tr>
<td>NEW YORK METHODIST ROP INTERFA</td>
<td>3474424585</td>
<td>BROOKLYN</td>
<td>NY</td>
<td>11215</td>
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<tr>
<td>NEW YORK METHODIST ROP INTERFA</td>
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<td>NY</td>
<td>11215</td>
</tr>
<tr>
<td>NEW YORK PRESBYTERIAN BROOKLYN METHODIST HOSPITAL</td>
<td>7187803000</td>
<td>506 6TH STREET</td>
<td>BROOKLYN</td>
<td>NY</td>
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<td>NY METHODIST GASTROENTEROLOGY</td>
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<td>NY</td>
<td>11215</td>
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<tr>
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<td>NY</td>
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<td>NY</td>
<td>11215</td>
</tr>
<tr>
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<td>NY</td>
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<tr>
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<td>NY</td>
<td>11215-9008</td>
</tr>
<tr>
<td>UVM ASSOCIATES</td>
<td>7187551000</td>
<td>BROOKLYN</td>
<td>NY</td>
<td>11215</td>
</tr>
</tbody>
</table>
RNA Confirmation Metric

- Percentage of people with ≥1 positive antibody test from a facility who have ≥1 RNA test ordered within 3 months from the same facility
- Person-level, not a per-antibody test metric

<table>
<thead>
<tr>
<th>Patient ID</th>
<th>Test name</th>
<th>Result</th>
<th>EIA test date</th>
<th>Order facility-EIA test</th>
<th>RNA test date 1</th>
<th>RNA test date 2</th>
<th>RNA test date 3</th>
<th>RNA test date 4</th>
<th>RNA test date 5</th>
<th>Order facility- RNA test</th>
</tr>
</thead>
<tbody>
<tr>
<td>100010003</td>
<td>Hep C antibody screen (EIA)</td>
<td>Positive</td>
<td>1/20/2018</td>
<td>Facility A</td>
<td>1/20/2018</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>Facility A</td>
</tr>
<tr>
<td>100010003</td>
<td>Hep C antibody screen (EIA)</td>
<td>Positive</td>
<td>6/1/2018</td>
<td>Facility C</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>Facility C</td>
</tr>
</tbody>
</table>
Treatment Initiation Metric

• **Patient assignment:** based on the location of a person’s last reported positive RNA test in the prior year, assign the person as a patient of that facility

• **Treatment initiation:** from the time of that last positive test, at least one negative RNA test result in the following year*
  • If $\geq 1$ subsequent negative RNA test comes from the patient’s assigned facility, treatment attributed to that facility
  • Otherwise, treatment initiation assigned to elsewhere in NYC

• Percentage of assigned patients initiating treatment by the end of the following year

*adapted from a validated surveillance-based treatment initiation definition
Treatment Initiation Example

- Patient assignment at the end of 2016
- Treatment initiation by the end of 2017

<table>
<thead>
<tr>
<th>Patient ID</th>
<th>RNA test result</th>
<th>RNA test date</th>
<th>Ordering facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>100010003</td>
<td>Positive</td>
<td>4/7/2016</td>
<td>Facility A</td>
</tr>
<tr>
<td>100010003</td>
<td>Positive</td>
<td>8/9/2016</td>
<td>Facility B</td>
</tr>
<tr>
<td>100010003</td>
<td>Positive</td>
<td>11/23/2016</td>
<td>Facility A</td>
</tr>
<tr>
<td>100010003</td>
<td>Positive</td>
<td>2/7/2017</td>
<td>Facility A</td>
</tr>
<tr>
<td>100010003</td>
<td>Negative</td>
<td>7/7/2017</td>
<td>Facility C</td>
</tr>
<tr>
<td>100010003</td>
<td>Negative</td>
<td>8/21/2017</td>
<td>Facility A</td>
</tr>
</tbody>
</table>
Testing Patient Assignment

• Is only one positive RNA test ‘enough’ to call someone a patient of a given facility?
  • Are some people really patients elsewhere and receiving care and treatment at another facility?

• Tested a stricter definition of patient assignment: at least one additional HCV test from the same facility ordered within ±6 months

• People with one positive RNA test, but not this additional test, were treated at a much lower rate (30% vs 60%) than those that had this additional test
  • Conclusion: Hospitals need to prioritize care and treatment for all individuals that test RNA positive at their facilities; they cannot assume patients are receiving treatment elsewhere
Dashboards since 2017

2017

We are pleased to provide you with your hospital's 2016 Hepatitis C Dashboard. The Dashboard is a component of the Hepatitis C Clinical Exchange (HepCEx) network of 36 hospitals who aim to increase their facilities capacity to screen, link to care, treat and cure New York City residents with hepatitis C.

This year, one key indicator was selected: Hepatitis C (HCV) RNA Confirmation Rate. This selection is based on research that shows that among persons who have a positive anti-HCV result in New York City, one third did not receive an HCV RNA test to confirm infection status within 6 months of the initial diagnosis. In the future, the hospital dashboards will include facility-based Treatment and Cure Rates.

Your hospital’s performance on this indicator was assessed using viral hepatitis surveillance laboratory data reported to the New York City Department of Health and Mental Hygiene. Of the 576 patients who had a positive antibody test (HCV-antigen/antibody assay) done at your hospital in 2016, 61.8% received a confirmatory RNA test within 3 months of your admission.

2018

Hepatitis C Antibody Testing

Number of people who tested hepatitis C antibody positive at Hospital XYZ System, 2016-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,101</td>
<td>1,086</td>
<td>953</td>
</tr>
</tbody>
</table>

Hepatitis C RNA Confirmatory Testing

Percentage of people who tested hepatitis C antibody positive who received a confirmatory RNA test within three months, 2016-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>85%</td>
<td>88%</td>
<td>87%</td>
</tr>
</tbody>
</table>

The New York City Health Department’s goal is 85% hepatitis C RNA confirmation compliance. This can be accomplished by implementing hepatitis antibody to RNA reflex testing.

Hepatitis C Treatment Initiation

Number of people who tested hepatitis C RNA positive at Hospital XYZ and 40 Hep C Clinical Exchange Hospitals in 2016 and 2017, and percentage who initiated treatment by the end of 2017 and 2018.

<table>
<thead>
<tr>
<th>Year</th>
<th>Hospital XYZ</th>
<th>40 Hep C Clinical Exchange Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>51% Not Treated</td>
<td>51% Not Treated</td>
</tr>
<tr>
<td>2017</td>
<td>5% Not Treated</td>
<td>5% Not Treated</td>
</tr>
<tr>
<td>2018</td>
<td>49% Not Treated</td>
<td>49% Not Treated</td>
</tr>
</tbody>
</table>

513 RNA Positive 2016

513 RNA Positive 2017

Data source: New York City Health Department Surveillance.

To read the "Hepatitis A, B, and C in New York City: 2017 Annual Report," visit nychealth.gov and search for hepatitis. For more information about the dashboard, email HepCEx@health.nyc.gov.

We have included the addresses linked to your hospital in the attached FAQ page which also answers common questions you might have about the dashboard. Kindly reply by Monday, July 31, 2017 confirming that the list of addresses represents all locations from which your hospital orders lab tests.

We welcome questions and feedback on this dashboard at nycdashboard@health.nyc.gov.

Regards,
Ann Winters, MD
Medical Director, Viral Hepatitis Program
Bureau of Communicable Disease

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NYC Health
NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Mary T. Bassett, MD, MPH, Commissioner

2019

2017

2018

2019

Hepatitis C Testing and Treatment Dashboard

Hospital XYZ

2016-2018 New York City Health Department Surveillance Data
Targeted Technical Assistance

• Engage with providers and hospital leadership to increase capacity to treat through provider training
• Identify facilities in need of support for the implementation of reflex to RNA testing
• Offer EMR query tool for providers to monitor patients through the care continuum
• Promote initiatives to support patient outreach and improve linkages to care
Hospital Leadership Responses

“We have received the HCV Dashboards for [our hospital], and really appreciate the report! We will share it with all of our staff at [our infectious disease program], and with our hospital leadership, and brainstorm ideas for improving linkage to care for HCV positive patients.”

“This report is really great. We’re using it to convince our leadership to implement universal testing at our clinics.”

“We are falling short on the treatment part. [...] Obviously, we need to do more on this.”

“It would be extremely useful for us if you could provide us with the list of patients that you have identified as hep C positive and requiring treatment. We could cross match with our own list, determine why treatment was not provided at [our hospital] and seek resources for more aggressive linkage to care for these specific individuals.”
Providing Patient Lists

• Support providers follow-up on patients in need of linkage to care
• Dashboard data are not real-time, surveillance data are
• Tension between providing up-to-date data vs providing data reflective of dashboard metrics
Conclusions and Lessons Learned

• Dashboards helpful for situational awareness, quality improvement, targeted technical assistance
• Dashboard development requires extensive analytic time and capability
  • Need generally complete and comprehensive surveillance system
  • Reporting of both negative and positive RNA tests
  • Query-able system and ability to ID ordering facilities
  • Analyst and programmatic time
  • Relationships with facilities
Contact Information

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