IMPLEMENTING CONTINUOUS QUALITY IMPROVEMENT (CQI) IN THE DENTAL CLINIC

NATIONAL PRIMARY ORAL HEALTH CONFERENCE
NOVEMBER 12, 2013

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Harlem United Community AIDS Center, Inc.
Past

• Founded at height of first phase of AIDS epidemic: 1988
• Specifically to serve people living with HIV/AIDS (PLWH/As) who were homeless and/or suffering from mental illness and/or substance use.
• Agency of last resort for medically-underserved communities of color in Harlem.
• Part of community-based movement to care for PLWH/As:
  • Founded to address lack of response from established providers;
  • Responding to the unique personal, social, and institutional barriers to care in Harlem

Present

• In July 2007, Harlem United received a federally-qualified health center for the homeless (FQHC-H) designation from the Health Resources Services Administration (HRSA)
  • The FQHC-H designation allows HU to expand services to homeless people in Central and East Harlem communities who are predominantly African American and Latino(a) adults, and have histories of substance use and/or mental illness.
• In 2012, Harlem United received Patient-Centered Medical Home (PCMH) level 3 accreditation
To best meet the needs of a complex yet chaotic and vulnerable population, Harlem United has developed a comprehensive interdisciplinary system of care and support, distinguishing us from community health centers with a multitude of services delivered in a fragmented system.
Harlem United – Organizational Structure

Community Health Services

- Community Based HIV/STI/HCV Screening
- Access to Care
- Drug User Health Services (Syringe Access, Harm Reduction, Recovery Readiness)
- Black Men’s Initiative – integrated interventions for MSM of color

Integrated HIV Services

- Adult Day Health Centers
- Food & Nutrition
- Supportive Housing (Women’s Housing, Transitional Housing, Congregate, etc.)
- Health Home
- Family Support

Holistic Provider-Led, Patient-Centered Primary Care and Dental Services
- Behavioral Health Services
- Patient Navigation/Case Management Support
Harlem United – Management Triad

Continuous Quality Improvement (CQI):
Program-level assessment of service delivery

Administrative Data-driven supervision:
Staff-level assessment (broad) of service delivery

Clinical Supervision:
Staff-level assessment (focused), clinical skills building and trainings
Getting the project underway

- Benefits of having QM infrastructure in place in getting CQI project started
- Identifying what need to be done to roll out the project

  - **Data**
    - Defining performance indicators
    - Determine data collection method/procedure
  
  - **Staff**
    - Who should be involved
    - Staff training
  
  - **Time management**
    - Block staff time for monthly CQI meetings
    - Block clinic schedule
    - Allocate staff time for data collection
Challenges in implementing CQI in Dental clinic

- Managing staff capacity
- Selecting performance indicators that are relevant and meaningful
- Database and data reporting limitations
- Developing efficient and reliable data collection method/procedure
Defining Dental Performance Indicators

Generating a list of indicators to monitor (29 initial indicators):

- Oral Health Quality Indicators recommended by NQC Guideline-based Quality Indicators for HIV Care (http://www.nationalqualitycenter.org/index.cfm/6115/19392)
- General indicators (i.e. admin, general health)

Selecting indicators to be monitored monthly:

- List of indicators is selected based on a number of factors, e.g. relevance to HU dental population, reporting requirements, internal/external standards, clinic/staff capacity

Finalizing indicators to measure performance of Dental clinic:

- 14 Oral Health indicators
- Defining appropriate denominators for each indicator
# Defining Dental Performance Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Denominator</th>
<th>Data source (Dentrix)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health history</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>Is there a medical history form that is updated in the past 6 months?</td>
<td>All clients</td>
</tr>
<tr>
<td>Q1a</td>
<td>Is there PCP contact information?</td>
<td>All clients</td>
</tr>
<tr>
<td>Q1b</td>
<td>Hep B status documented</td>
<td>All clients</td>
</tr>
<tr>
<td>Q1c</td>
<td>Hep C status documented</td>
<td>All clients</td>
</tr>
<tr>
<td>Q2</td>
<td>If HIV, current HIV medications?</td>
<td>HIV</td>
</tr>
<tr>
<td>Q3</td>
<td>CD4 results in the last 6 months</td>
<td>HIV</td>
</tr>
<tr>
<td>Q4</td>
<td>Viral Load results in the last 6 months</td>
<td>HIV</td>
</tr>
<tr>
<td><strong>Annual Exam</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nqc2</td>
<td>Documentation of annual intra-oral exam with a dental caries and soft tissue exam</td>
<td>All clients</td>
</tr>
<tr>
<td>nqc3</td>
<td>Documentation of annual periodontal exam</td>
<td>All clients</td>
</tr>
<tr>
<td>nqc4</td>
<td>Documentation of annual extra-oral (head and neck) exam</td>
<td>All clients</td>
</tr>
<tr>
<td><strong>Tx Plan</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nqc5</td>
<td>Written treatment plan that was updated within the past 1 year?</td>
<td>All clients</td>
</tr>
<tr>
<td>nqc6</td>
<td>Documentation that client has received education about caries prevention</td>
<td>Clients with teeth</td>
</tr>
<tr>
<td>nqc7</td>
<td>Documentation that client has received education about tobacco cessation</td>
<td>All clients</td>
</tr>
<tr>
<td><strong>Oral Health dx</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ai1</td>
<td>Number of clients who have periodontitis</td>
<td>Clients with teeth</td>
</tr>
<tr>
<td>ai2</td>
<td>Number of clients who wear removable prosthesis</td>
<td>All clients</td>
</tr>
</tbody>
</table>
Data Collection Planning

Data collection tool
• Developing chart review tool
• Hard copy
• Electronic copy (Survey Monkey) for data entry
• Staff training on collecting data using chart review tool

Sampling method
• Random sampling of clients who have dental visit in month of review
• 50 randomly sampled charts monthly (using randomizer.org)

Procedure
• Dedicate staff member(s) to conduct chart review
• Data entry specialist enters data into Survey Monkey

Data summary
• Evaluator provides data summary
• Downloads data from Survey Monkey
• Summarizes data in CQI table
CQI cycle in Dental

1. Collect & review data
2. Develop problem statement & set improvement goal
3. Investigate the process
4. Plan & implement changes
5. Evaluate results
6. Systematize changes
Issue:
- There are three indicators that were declining/sporadic in 2012 (i.e. PCP contact info, Hepatitis B, & Hepatitis C status)
- After some investigation, the team found out that the reason why those indicators were low performing was because the medical history forms were not always completed/updated (note: data for those indicators are extracted from medical history forms)

Action taken:
- A new indicator was created (i.e. updated medical history forms every 6 months) and monitored monthly
Collect & Review Baseline Data

- Collect & review baseline data:
  - 2012 data
    - Is there PCP contact information?
      - Sep: 84%
      - Oct: 51%
      - Nov: 49%
      - Dec: 46%
    - Hep B status documented
      - Sep: 42%
      - Oct: 55%
      - Nov: 31%
      - Dec: 58%
    - Hep C status documented
      - Sep: 52%
      - Oct: 60%
      - Nov: 35%
      - Dec: 58%
  - 2013 data
    - Is there a medical history form that is updated in the past 6 months?
      - Feb: 30%
Problem statement & Improvement goal

- **Problem statement**: Medical history forms have not been consistently updated/completed for all clients. Only 30% had updated medical history forms at baseline.

- **Improvement goal**: Improve completion and updates of clients’ medical history forms from 30% to 80% by August 2013.
Investigate the process

- Barriers:
  - There are only 2 scanners (1 in front desk, 1 in exam room)
  - Medical history forms are not scanned in right after they are completed
  - There is a backlog on medical history forms to be scanned
  - Dental Assistants (DA) & front desk were too busy
  - Lack of reviewing completeness of medical history forms
Plan for Improvement

- Improve scanning flow
  - Email IT to move scanner to 3rd exam room
  - Daily scanning for all clients who have dental visits
  - Scan back log of med hx forms on Tuesdays & Thursdays
  - Request additional scanner
  - Appoint a staff member to take the lead on scanning

- Ensure completion of medical history forms
  - Front desk to review documents and make sure they are complete
  - Providers to review all medical history forms before client dismissal from a visit
  - When making appointments, tell clients to come 30 min earlier to fill out paperwork
Results & Next Steps

- Performance of indicator after implementation of action steps on the work plan:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a medical history form that is updated in the past 6 months?</td>
<td>30%</td>
<td>40%</td>
<td>42%</td>
<td>65%</td>
<td>59%</td>
<td>79%</td>
<td>83%</td>
</tr>
</tbody>
</table>

- What works:
  - Checking clients’ schedule in advance and reviewing whether or not the medical history forms are updated (front desk)
  - Front desk probes clients to enter information when medical history forms are not completed
  - Having a staff member take the lead in scanning medical history forms