Using Health Information Technology to Improve Chicago PWLHA Engagement-in-care

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Background

- 2015 NHAS HIV care cascade goals re: retention-in-care
  - Increase number of Ryan White patients in continuous care from 238,000 to 261,000

- Why does retention-in-care matter?
  - Giordano et al. demonstrated that those PLWHA with poor retention have increased risk of death.

  - Looked at a cohort of PLWHA diagnosed 1997-1998 within the VA system.
  - Patients started on ARTx, with at least 1 PCP visit after ARTx initiation and whom survived at least 1 year were included.
  - They stratified patients by number of quarterly visits during the course of the year.
  - Multivariate analysis, of data drawn from >2500 patients observed up through 2002, demonstrated that patients with fewer than 4 quarterly visits during the course of the year had higher mortality.

  - Mugavero et al. demonstrated similar association between missed visits and increased mortality.

  - Looked at a cohort of >500 patients for associations with mortality among these patients.

  - On multivariate analysis patients who missed visits within the first year of initiating ARTx had an increased hazard ratio for death (HR 2.9, 1.28-6.56)

Can health information technology be used to improve retention-in-care for PLWHA?

- The Louisiana Public Health Information Exchange (LaPHIE) demonstrated how HIT can be used to improve engagement-in-care outcomes for PLWHA.

- LaPHIE represents a partnership between the Louisiana Office of Public Health (OPH) and the LSU Health Care Services Division (LSUHCSD) hospitals and clinics to identify PLWHA whom have not had CD4 and/or VL monitoring in > 12 months.

- Via bi-directional sharing of data between the OPH and LSUHCSD facilities, LaPHIE was able to send real-time prompts to non-HIV providers seeing PLWHA who had no lab monitoring.
  - The system also employed real time clinical decision support prompts on how to link those patients with care.
  - 82% of those identified by the LaPHIE prompt had follow-up CD4/VL monitoring in the subsequent 18 month study period.

Herwehe, et al. JAMIA, 2012
Cook County Health and Hospitals System (CCHHS)

- CCHHS provides safety-net medical care to approximately 500,000 unique individuals in the Chicago area annually.
- Includes 2 acute care hospitals, several urgent care clinics, 16 ambulatory primary care clinics, and hospital-based outpatient specialty care services.
- The John H. Stroger, Jr Hospital of Cook County Emergency Department experiences around 150,000 patient visits annually (around 80,000 unique patients).
- The Ruth M. Rothstein CORE Center provides HIV primary care to approximately 5500 PLWHAs annually.
HIV Tx Cascade supplement – Chicago site – Aim 1

- Develop the data sharing infrastructure within the Cook County Health and Hospital System (CCHHS) that enables real-time identification of non-engaged HIV primary care patients presenting to CCHHS clinical sites.

CRU* Server hosts registration data

Filtered through clinical decision support logic

- CORE Primary care visit in prior 24 months
- No visit in the prior 7 months
- If criteria are met and patient registers at CCHSS facility then

Real time prompt to project coordinator

- Project coordinator will see patient in real time when possible; schedule follow up appt. and make reminder phone call.

*CRU = Collaborative Research Unit
HIV Tx Cascade supplement – Chicago site – Aim 2

- Assess how real time alerts used to prompt clinical providers at CCHHS Emergency Departments, urgent care and specialty care sites facilitate re-engagement for non-engaged HIV patients and how this EMR-prompt system compares with previous re-engagement strategies which relied on patient navigator-based outreach.
  - Assess number of patients for whom prompt triggers
  - Proportion re-engaged in care within 90 days of prompt-based intervention
  - Compare this approach with several other patient navigator/DIS-based outreach programs
    - Compare numbers of out-of-care patients reached
    - Proportion re-engaged in care
      - Defined as visit within 90 days of prompt trigger vs. outreach effort
    - Assess costs per patient re-engaged with prompt vs. outreach-based interventions
HIV Tx Cascade supplement – Chicago site – Aim 3

- **Exploratory Aim:** Partner with key Chicago area stake-holders to establish data sharing agreements, along with the regulatory, informatics and clinical workflows required for a Health Information Exchange (HIE) to identify, and re-engage out-of-care PLWHA.

- **Goal:**
  - Regulatory: How general consent for care needs to change in order to incorporate HIV diagnosis, visit, Rx and lab data in current data sharing efforts in a HIPAA compliant manner.
  - Informatics: Determine technical capabilities and HIT upgrades needed to share data between clinical care entities, cloud, and DOH as required
  - Clinical work flows: How to make use of data sharing
    - Examples:
      - How to use visit data to re-link to medical home
      - How to use Rx data to assess adherence to ARTx
Key aim 2 partners

- Medical Home Network
- Illinois Public Health Information Exchange
- CDPH
- IDPH
- AIDS Foundation of Chicago
- Cook County Health and Hospitals System
Progress to date

- In the process of working out decision support logic needed to send real-time prompt.
- Conducting retrospective assessment to project numbers of patients whom may trigger prompt.
- Held initial quarterly key stakeholder meeting.

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- AFC
- ILHIE

Questions/comments?