Identifying Acute HIV Infections in the Emergency Room: Benefits of Fourth Generation HIV Testing

Michael Menchine[1,2], Kathleen Jacobson[1], Chun Nok Lam[1], Ira Shulman[1], Sanjay Arora[1,2]

[1]USC Keck School of Medicine, Los Angeles, CA;

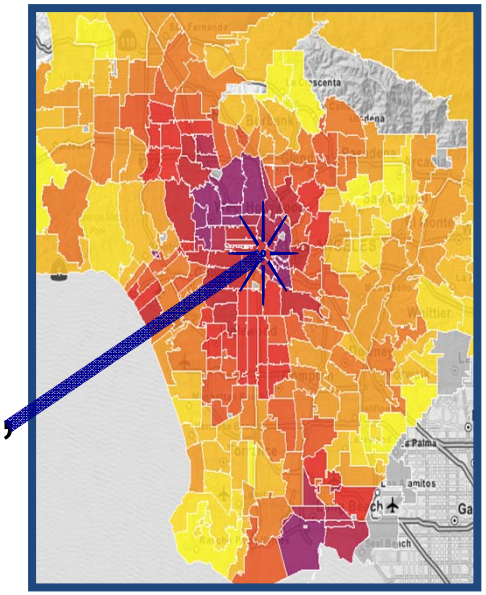
[2]USC Schaeffer Center for Health Policy and Economics, Los Angeles, CA

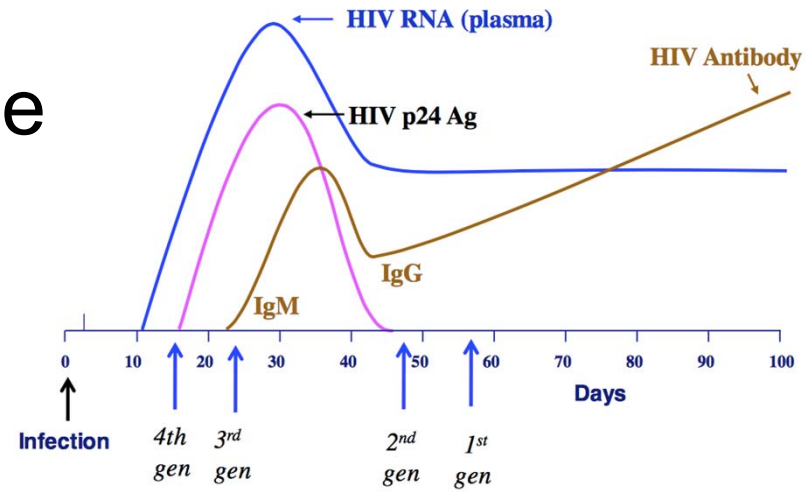
[3]Pacific AIDS Education and Training Center

Keck School of Medicine of USC

Background

- 2006 CDC → non-targeted HIV screening in EDs
- 2011→'R/O HIV at the LAC+USC ED'
- 2013→ 4th gen HIV testing (Ag/Ab)
  - Increased scale
  - Acute HIV?





Objectives & Methods

- Examine the impact of 4th generation testing platform on:
  - **# of screening tests performed**
  - **# of new diagnoses**
  - **# of acute HIV infection**
- EMR Review - 15 months before/after converting from a point-of-care testing to lab-based 4th gen platform

Results

- # HIV tests increases
  - **8,983 → 22,593**
- # New HIV dx's increased
  - **36 (0.4%) → 115 (0.5%)**
- Acute HIV Identified
  - **0 → 14 cases**
  - 12.2% of new diagnoses
  - 12/14 (86%) attended ≥ 1 outpatient HIV follow up

Description of Acute HIV Cases

	Gender	Age	Race	Viral Load	Complaint
1	M	26	Latino	4005643	Headache
2	M	22	Latino	>10,000,000	Nausea
3	M	35	Latino	1498554	Fever
4	M	43	Latino	498000	SOB
5	M	24	Black	>10,000,000	Weak
6	F	30	Latino	204000	Weak
7	M	41	Latino	1939557	Fever
8	M	36	Latino	736448	Rectal Pain
9	M	37	Latino	377000	Fever
10	M	45	Black	>10,000,000	Chest Pain
11	M	24	Black	Not obtained	Headache
12	M	41	Latino	Not obtained	STD check
13	M	37	Latino	1223220	Confusion
14	M	46	Latino	3388814	Body aches

Conclusion

- Conversion to 4th generation increased
  - # individuals tested (250%)
  - # of new HIV diagnosed (350%)
  - # of Acute HIV cases identified
- Full potential of 4th gen testing required
  EHR Integration with 'pop up reminders'
- **Future Directions for Acute HIV**

ED-based ART, Earlier Engagement

'Dx 2 Rx'