

# The Rapid ART Program Initiative for HIV Diagnoses (RAPID) in San Francisco

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# Background

- 2017 WHO Guidelines: On basis of international randomized trials<sup>1-6</sup>, immediate (within 7 days of diagnosis) ART initiation endorsed for all willing persons diagnosed with HIV<sup>7</sup>
- 2017 DHHS Treatment guidelines: Immediate ART initiation an investigational approach<sup>8</sup>
- 2018 IAS-USA Guidelines: Immediate ART recommended if safe and feasible<sup>9</sup>
- 2015 San Francisco Getting to Zero (SFG2Z) Consortium: Citywide RAPID (accelerated ART initiation for newly HIV-diagnosed persons) prioritized, after a successful pilot<sup>10</sup>.

# Objectives

- Describe ART initiation in all persons newly diagnosed with HIV in San Francisco before and during early implementation of the RAPID initiative
- Examine RAPID outcomes stratified by gender, race/ethnicity, age, and housing status
- Examine RAPID uptake by different HIV care providers

# Methods

# Program Design and Implementation

## Citywide RAPID Protocol:

All new confirmed HIV diagnoses linked to care  $\leq$  5 working days;

At 1<sup>st</sup> care visit: Baseline labs collected, counseling, medical/psychosocial assessment, **ART offered/started unless medically contraindicated**

[TFV+FTC] + [INSTI *or* DRV/r] with option for 4-drug regimen if HIV infection suspected on PrEP

## Dissemination:

**HIV clinics** identified using HIV surveillance data, trained on RAPID procedures by in-service (2015) and individual provider detailing (2016)

**Linkage navigators** used **RAPID Provider Directory** to identify optimal HIV clinic for each newly-diagnosed patient, by insurance coverage, psychosocial needs.

**Full protocol and RAPID detailing brochure** for clinicians disseminated electronically at <http://www.gettingtozerosf.org/rapid-committee/> and at open quarterly SFGTZ consortium meetings

# Pre-specified Outcomes, 2013-2016

Using HIV Case Registry Data from Surveillance Unit at SFDPH, including sex, age, race/ethnicity, housing status:

- Time (median days) from Diagnosis to VL<200 c/mL
  - Diagnosis to 1<sup>st</sup> Care Visit
  - 1<sup>st</sup> Care Visit to ART Initiation
  - ART to VL<200 c/mL
  - Kruskal-Wallis test for differences in medians 2013-2016
- Proportion of new cases linked  $\leq 5$  days AND started ART  $\leq 1$  day
- Rapid ART initiation by Care Site (public vs. private)
- INSTI use in 1<sup>st</sup> ART

# Collection of HIV Surveillance data

- New HIV cases identified through active and passive surveillance
- At initial case report: HIV serology, HIV RNA, CD4, sociodemographics, date of ART, date of diagnosis, sites of diagnosis and care
- Systematic chart review at 6-18 month intervals: HIV RNA, CD4, date of ART, any data missing from initial case report
- Completeness of case and laboratory reporting >95%
- Data not systematically collected: mental illness, substance use
- All data de-identified for this analysis

# Results



# Study Population: New HIV Diagnoses 2016 -2013

Category	2013 N (%)	2016 N (%)
All	399 (100)	265
Male	361 (90)	229 (86)
Female	27 (7)	29 (11)
13-29 years old	130 (33)	96 (36)
White	178 (45)	97 (37)
Black	51 (13)	34 (13)
Latino	100 (25)	73 (28)
Asian/Pacific Islander	51 (13)	47 (18)
Homeless	30 (8)	29 (11)

# Linkage to Care and ART Initiation Following HIV Diagnosis

Metric	2013	2014	2015	2016
Diagnosed (%)	399	329	295	265
In Care (%)	372 (93)	318 (97)	282 (96)	258 (97)
Started ART (%)	311 (78)	276 (84)	244 (83)	215 (81)
ART included INSTI (%)	145 (47)	203 (74)	195 (80)	159 (74)
Met RAPID definition (%)*	23 (6)	45 (14)	50 (17)	80 (30)

\*Both diagnosis to care w/in 5 days AND ART w/in 1 day

# Median Time to Care, ART, and Virologic Suppression

Metric	2013	2014	2015	2016	%Δ 2013-16
In Care within 1 year (%)	372 (93)	318 (97)	282 (96)	258 (97)	
Diagnosis to care (days)	8	7	7	5	-38%
1 <sup>st</sup> Care Visit to ART (days)	27	17	6	1	-96%
ART to VL<200c/mL (days)	70	53	50	38	-46%
Diagnosis to VL<200 c/mL (days)	134	92	77	61	-54%

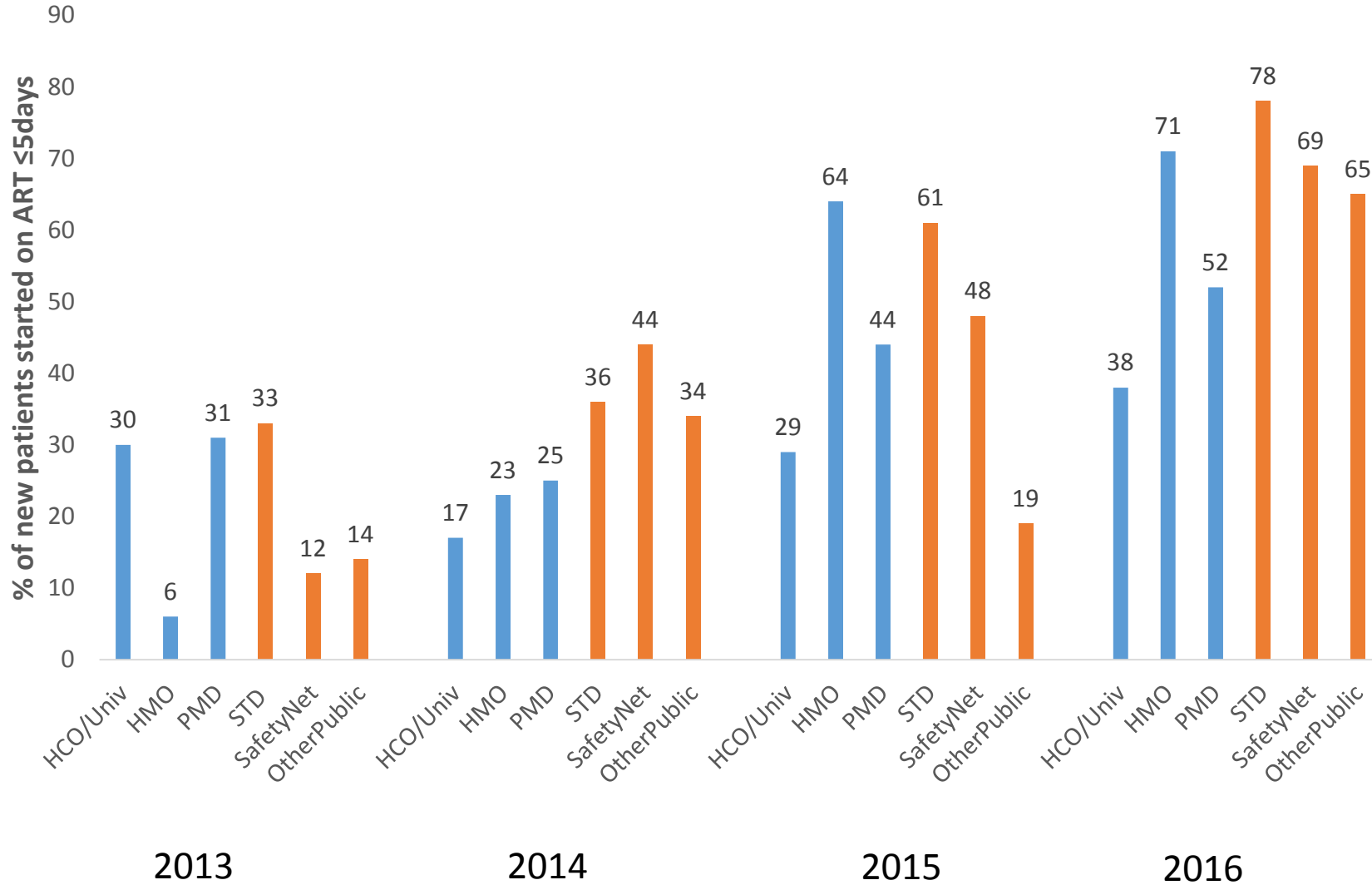
- **Time from diagnosis to VL<200** decreased significantly in all groups
- **Time from diagnosis to first care visit** decreased significantly for males, whites, Latinos, youth (13-29) and the housed
- **Time from first care visit to ART** decreased significantly in all groups
- **Time from ART to VL<200** decreased significantly for males, under 40 y.o., whites, Latinos, Asian/Pacific Islanders, and the housed

# Median Time to ART, Virologic Suppression, by Group

Diagnosis to VL<200 c/mL (days)						
	2013	2014	2015	2016	P Value	
All	134	92	77	61		-54.5%
Male	133	91	77	60	<0.0001	-54.9%
Female	205	87	85	66	0.0035	-67.8%
13-29	153	91	76	56	<0.0001	-63.4%
30-39	123	102	74	50	<0.0001	-59.3%
>40	133	89	79	69	<0.0001	-48.1%
White	134	94	82	69	<0.0001	-48.5%
Black	135	131	100	66	0.0152	-51.1%
Latino	126	80	70	57	<0.0001	-54.8%
Asian/PI	145	106	62	43	<0.0001	-70.3%
Housed	133	91	75	57	<0.0001	-57.1%
Homeless	154	187	148	71	0.0428	-53.9%

First care to ART initiation (days)						
	2013	2014	2015	2016	P Value	
All	27	17	6	1		-96%
Male	27	16	6	0	<0.0001	-100%
Female	49	16	17	2	0.0006	-96%
13-29	26	18	6	0	<0.0001	-100%
30-39	27	14	5	0	<0.0001	-100%
>40	28	21	7	3	<0.0001	-89%
White	27	21	7	5	<0.0001	-81%
Black	34	42	7	6	0.0008	-82%
Latino	25	14	5	0	<0.0001	-100%
Asian/PI	30	22	6	0	<0.0001	-100%
Housed	27	16	6	0	<0.0001	-100%
Homeless	25	63	21	6	0.0132	-76%

### ART Initiation Within 5 days of 1st visit, by Care Site



Proportion of ART starts by Site, 2016	
Site	ART Starts(%)
All	215
HCO/Univ	24 (11)
HMO	35 (16)
PMD	29 (13)
STD	18(8)
<b>Safety Net</b>	<b>83(39)</b>
Other Public	17(8)
Out of Jurisdiction	9 (4)

# Summary: What worked, what didn't

- During a citywide, multisector initiative to optimize ART initiation:
  - time to first virologic suppression cut by more than half
  - time to ART cut 96% from 27 days to 1 day
  - significant improvements in traditionally vulnerable populations, including racial and ethnic minorities and the homeless
  - **disparities remain in some groups**
  - RAPID uptake by care providers improved in the public and private health care sectors.
- 30% of new HIV diagnoses in 2016 started ART  $\leq$  6 days from diagnosis
  - sociodemographic analysis of RAPID vs. non-RAPID ongoing
- **16% of persons diagnosed with HIV in 2016 were not started on ART**
  - sociodemographic analysis of nonstarters vs. ART starters ongoing

# Thoughts on Using Surveillance data for Program Planning, Evaluation

- Routinely collected HIV surveillance data, plus case-based review (ART start date):
  - Central to map care pathway and identify areas for improvement
  - Used to prioritize traditionally vulnerable populations for programmatic support
  - Ecological data: cannot show an association between program and outcomes
  - Collects a limited number of variables.....
  - .....But collects data rigorously, completely, systematically

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