HOLDSWORTH HOUSE | RESEARCH

Patient Retention in HIV Medical Care in a Primary Care Practice in Sydney, Australia

Avindra F. Jayewardene, Kate Beileiter, Lily Aldridge, Trina Vincent, Shikha Agrawal, Andrew Gowers, Dick Quan & **Mark Bloch**

Holdsworth House Medical Practice, Darlinghurst, Sydney, NSW, Australia

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DISCLOSURES

Advisory Board – ViiV Healthcare, Gilead Sciences, AbbVie, Eli Lilly, Amgen, Bristol Myers-Squibb

Travel Sponsorship – Gilead Sciences, ViiV Healthcare, AbbVie, Eli Lilly, Bristol-Myers Squibb

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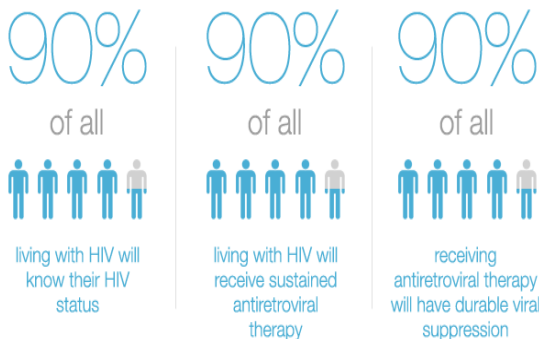

BACKGROUND

THERE IS NEW HOPE TO END ONE OF THE LARGEST EPIDEMICS OF THE LAST 50 YEARS
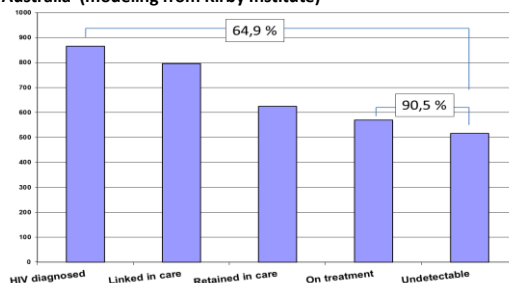

BACKGROUND

- Engagement in HIV care includes HIV diagnosis, linkage to and retention in care, initiating and ongoing adherence to antiretroviral therapy (ART).

- Appropriate continuum in care is relevant both for the prognosis of the single patient and for reducing the HIV transmission in the community.

- Substance use, high CD4 cell counts, being marginalised and younger age have been associated with risk for failure to establish care.

- There has been a lack of real cohort data from clinical practices managing HIV patients in Australia.
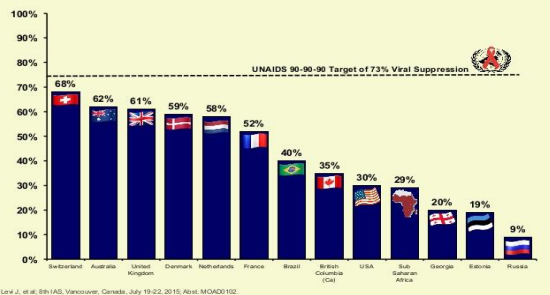

BACKGROUND: UNAIDS 2020 GOAL

90% of all living with HIV will know their HIV status

90% of all living with HIV will receive sustained antiretroviral therapy

90% of all receiving antiretroviral therapy will have durable viral suppression

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BACKGROUND

Engagement, retention in care and HIV RNA suppression in Australia (modeling from Kirby Institute)

64,9 %

90,5 %

HIV diagnosed   Linked in care   Retained in care   On treatment   Undetectable

BACKGROUND

UNAIDS 90-90-90:
Percent of HIV Population w/ Viral Suppression

AIMS

Aim 1:
To assess the current linkage and retention in care for HIV-infected adults at Holdsworth House Medical Practice (HHMP)

Aim 2:
To determine reason for lack of retention in care – death, move to another practice in NSW, move interstate or overseas, other (institutionalisation) and true loss to follow up (LTFU)

Aim 3:
To evaluate factors associated with lack of retention in care and to LFTU

METHODS: STUDY DESIGN

Study design:
• Single centre retrospective audit of records of HIV-infected adults attending a large caseload community practice in Sydney, Australia.

Audit period:
• Audit of patient visits from 1st January 2009 to 31st March 2014.

METHODS: INCLUSION/EXCLUSION

Inclusion criteria
1. Documented HIV-1 infection
2. Attendance during the study period for at least 2 visits, >3 months and <12 months apart
3. Each study visit defined by measured laboratory virological or immunological markers (either on-site or at a co-management site).

Exclusion criteria
1. Incomplete/inaccessible patient records
2. Initial visit after 1st January 2014.
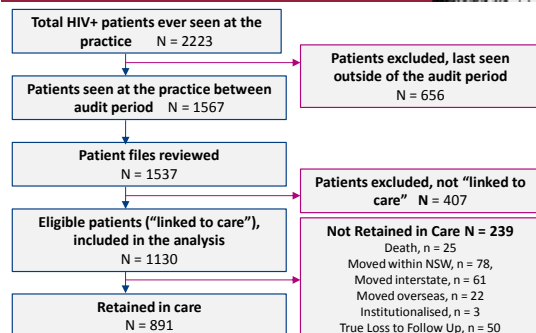
METHODS: DATA COLLECTION & ANALYSIS

Data Collection:
• Baseline visit (closest to 1st Jan 2009) baseline demographic data collected
• Continuity of care – attendance for ≥2 visits per year
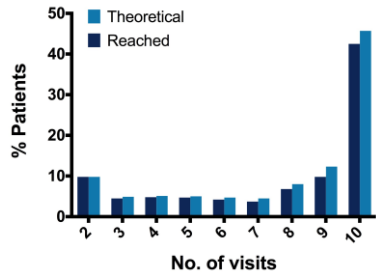• Outcome visit (closest to 1st Mar 2014) outcome data collected

Statistics:
• Statistical significance was set at p<0.05.
• Binary logistic regression models were used to calculate the odds ratios (ORs) for being retained in care using dependent variables collected during data analysis.
• All statistical analyses were performed using SPSS v22.0 (SPSS Inc., IL, USA).

RESULTS: TRIAL PROFILE

Total HIV+ patients ever seen at the practice N = 2223 → Patients excluded, last seen outside of the audit period N = 656

Patients seen at the practice between audit period N = 1567

Patient files reviewed N = 1537 → Patients excluded, not "linked to care" N = 407

Eligible patients ("linked to care"), included in the analysis N = 1130 → Not Retained in Care N = 239 (Death, n = 25; Moved within NSW, n = 78; Moved interstate, n = 61; Moved overseas, n = 22; Institutionalised, n = 3; True Loss to Follow Up, n = 50)

Retained in care N = 891

RESULTS: ATTENDANCE FOR VISITS

Percentage (%) of cohort with the theoretical number of visits (2/year) between the baseline (first) visit and outcome (last) visit.

RESULTS: BASELINE

Baseline participant characteristics - overall

Dependent Variable		
Age (years)		43.5 ± 10.0
Gender (% males)		99.4
Sexual preference (% MSM)		87.3
CDC Category (%)		
	A	73.8
	B	11.8
	C	14.4
HIV VL (% <50 copies/mL)		55.8
CD4+ (cells.μL^{-1})		601 ± 286
Ethnicity (% White)		88.5
Treatment status (%)		
	Treatment naïve	26.9
	On-treatment	70.3
	Off-treatment	2.8

Data presented as % or mean ± SD.

RESULTS: BASELINE

Baseline visit characteristics for patients retained in care & not retained in care: Odds ratio (OR)

Dependent Variable		Retained (n = 891)	Not Retained (n = 239)	OR	95% CI	P-Value
Age (years)		44.1 ± 9.9	41.5 ± 10.1	1.03	(1.01 - 1.04)	**0.001**
CDC Category C (%)		14.6	13.8	1.05	(0.70 - 1.60)	0.806
Ethnicity (%)						
	White	89.3	82.7	1.75	(0.99 - 3.13)	0.055
	Other	10.7	17.3	-	-	-
HIV VL (% UD)		56.6	52.3	0.84	(0.63 - 1.11)	0.219
CD4+ (%)						
	<200 cells.μL^{-1}	3.7	6.3	-	-	-
	200 - 499 cells.μL^{-1}	37.1	36.8	1.71	(0.89 - 3.29)	0.108
	>499 cells.μL^{-1}	56.9	59.1	1.76	(0.93 - 3.33)	0.083
Treatment status (%)						
	Treatment naïve	26.2	29.4	-	-	-
	On-treatment	71.1	67.3	1.19	(0.87 - 1.64)	0.286
	Off-treatment	2.7	3.3	0.91	(0.39 - 2.11)	0.825
cART pill burden (pills.day^{-1})		3.7 ± 2.1	3.9 ± 2.1	0.97	(0.89 - 1.05)	0.402

Data presented as % or mean ± SD.

RESULTS: OUTCOMES

Other variables

Dependent Variable		Retained (n = 891)	Not Retained (n = 239)	OR	95% CI	P-Value
cART Adherence (% issues recorded)		13.7	23.8	0.51	(0.33 - 0.78)	**0.002**
Clinical Research Participation (% yes)		46.3	25.0	2.59	(1.83 - 3.67)	**<0.0005**
Heath Care Card (% yes)		25.8	25.5	1.02	(0.73 - 1.41)	0.927
Substance Abuse (%)						
	None	74.6	70.3	-	-	-
	Alcohol	7.6	8.8	0.82	(0.49 - 1.38)	0.451
	Crystal	8.0	10.5	0.72	(0.44 - 1.17)	0.183
	Crystal & Alcohol	3.4	3.3	0.95	(0.43 - 2.11)	0.897
	Other	6.4	7.1	0.85	(0.48 - 1.50)	0.57
Co-morbidities (% yes)						
	Liver disease	12.5	15.1	0.80	(0.53 - 1.21)	0.289
	Kidney disease	8.9	7.1	1.27	(0.74 - 2.19)	0.389
	Cancer	8.2	10.9	0.73	(0.46 - 1.17)	0.194
	Heart disease	5.9	4.6	1.31	(0.67 - 2.56)	0.425
	Other CVD	28.5	22.6	1.37	(0.98 - 1.91)	0.069

Data presented as % or mean ± SD.

RESULTS: OUTCOMES

Outcome visit characteristics between patients retained in care & not retained in care: Odds Ratio (OR)

Dependent Variable		Retained (n = 891)	Lost to care (n = 239)	OR	95% CI	P-Value
HIV VL (% undetectable)		88.8	69.9	3.40	(2.41 - 4.81)	**<0.0005**
CD4+ (%)						
	<200 cells.μL^{-1}	2.2	4.2	-	-	-
	200 - 499 cells.μL^{-1}	23.8	30.7	1.50	(0.67 - 3.37)	0.327
	>499 cells.μL^{-1}	74.9	65.1	2.19	(1.00 - 4.81)	**0.05**
Treatment status (%)						
	Treatment naïve	3.1	14.4	-	-	-
	On-treatment	95.6	83.1	5.40	(3.18 - 9.15)	**<0.0005**
	Off-treatment	1.4	2.5	2.52	(0.84 - 7.59)	0.101
cART pill burden (pills.day^{-1})		3.1 ± 2.0	3.6 ± 2.4	0.90	(0.84 - 0.96)	**0.002**

Data presented as % or mean ± SD.

RESULTS: LTFU

Retained in care (n = 891) vs. Lost to Follow UP (n = 50)

Dependent Variable	OR	95% CI	P-Value
Age	1.08	(1.05 - 1.11)	**<0.0005**
Ethnicity (%)	3.04	(0.94 - 9.80)	0.062
Drug Abuse*	0.44	(0.20 - 0.99)	**0.048**
HIV VL (Baseline)	0.51	(0.28 - 0.91)	**0.022**
Treatment status (Baseline)**	2.61	(1.44 - 4.71)	**0.002**
cART Adherence	0.19	(0.08 - 0.48)	**<0.0005**
Clinical Research Participation	3.78	(1.73 - 8.28)	**0.001**
Co-morbidities (Other CVD)	6.25	(1.93 - 20.3)	**0.002**
HIV VL (Outcome)	0.16	(0.09 - 0.29)	**<0.0005**
Treatment status (Outcome)**	16.13	(7.90 - 32.97)	**<0.0005**

* Crystal use;
**Treatment Naïve vs. On-treatment.

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CONCLUSIONS

1. Retention in Care in a large HIV caseload community practice in Sydney was relatively high
   Of those patients linked to care, 21.1% were not retained in care at HHMP through death or move; 4.3% were totally LFTU
2. Patients not retained in care and those LTFU were younger, have more likely not on therapy, have issues with adherence, have detectable viral load, and not been on a clinical trial
3. Patients LFTU were additionally associated with crystal use
4. Recall systems within the practice, team care support, and inter-practice communication could assist in reducing the number totally lost to care

ACKNOWLEDGEMENTS