Optimising Quality of Care:
Enmeshing quality improvement into routine HIV Care

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Conflict of Interest

- The Alfred Hospital receives funding for my involvement in Advisory Boards for Gilead Sciences, Merck Sharp & Dohme and ViiV Heathcare.

Outline

- What is Quality of Care?
  - Patient perspective
  - Healthcare Provider perspective
- How to measure Quality of Care
  - Audit → intervention → re-audit example - Syphilis testing
  - HIV Cascade of care
  - Comorbidities
- Call to Action
  - Standards
  - Auditable targets

What is Quality of Care?

- Patient perspective

- Healthcare provider perspective

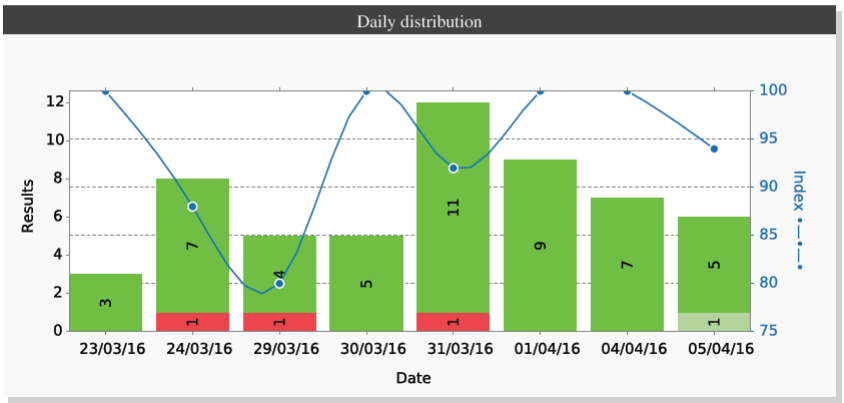
Patient perspective

- Patient Satisfaction Surveys
  - Do these measure Quality of HIV Health Care?
  - Do they measure Patient-Centred Care?

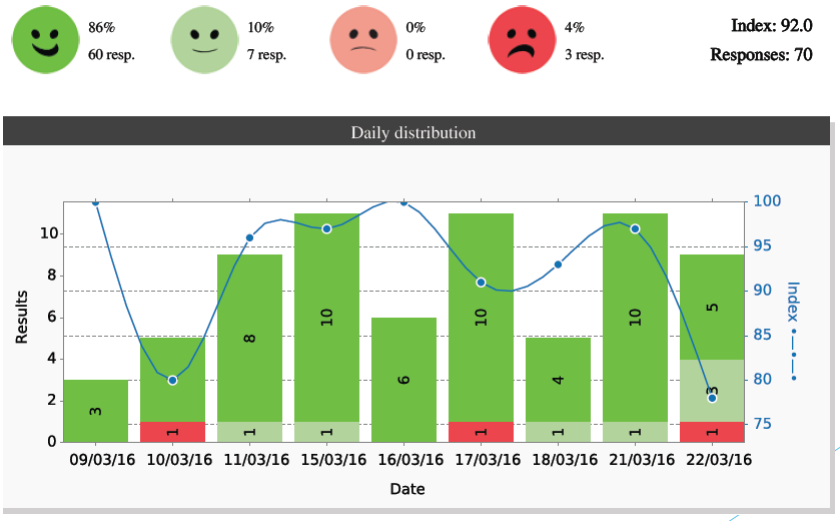
Please rate how well your doctor explained things today?

93% 51 resp. | 2% 1 resp. | 0% 0 resp. | 5% 3 resp.

Index: 94.0
Responses: 55



Did our clinic team address your health concerns today?



Patient perspective

- Patient Satisfaction Surveys – Crude measures of Quality of Care
- What is the future?

(1) Quality of Life Surveys – Maybe the only way to distinguish contemporary ART regimens in clinical trials

(2) Patient Reported Outcome Measures – **PROMs** – computerized collection of patient reported measures (eg mental health measures, drug and alcohol use, adherence, symptoms) at the point of clinical care – enables comparison with other data collected in electronic health record

Clinician and HealthCare Perspective
Why we should be concerned with Quality of Care

- Health care needs of PLHIV evolving with the transition of HIV to a chronic condition
- Management of HIV as a chronic complex condition moving from the specialist domain to primary care

- How to ensure quality of care is delivered?
- Identify both HIV disease-specific metrics as well as comprehensive care measures which marry with patient-centred health concerns .....measure and report them

Johnston et al PLoS One 2015

Clinician and HealthCare Perspective
Why we should be concerned with Quality of Care

- Search of the literature from USA and Canada – 588 unique indicators for measuring Quality of Care in HIV medicine
  - Too many .....
- In partnership with PLHIV – agree on a manageable number of targets and performance indicators
- Cycles of Audit, intervention, audit, systems issues intervention, more audit

Johnston et al PLoS One 2015

Example: Victorian Department of Health response to marked increase in syphilis notifications (2014)

- Chief Health Officer sent out Advisory to all Department of Health funded clinics that syphilis testing should be performed 3 monthly in sexually active HIV positive MSM in an opt-out approach, that all HIV VL tests be accompanied by syphilis testing
- Challenge issued from Kit Fairley – prove your patients (Alfred Hospital) are different from ours (MSHC)

Syphilis testing with HIV viral loads in MSM

Audit of syphilis and VL testing in MSM

	Total VL tests	Total syphilis tests	%
Oct 2013-Feb 2014	762	175	23.0%

Intervention:

Enhanced education re screening and need to increase syphilis testing

Syphilis testing with HIV viral loads in MSM

Baseline syphilis and VL testing

	Total VL tests	Total syphilis tests	%
Oct 2013-Feb 2014	762	175	23.0%

Intervention:

Enhanced education re screening and need to increase syphilis testing

Re-assess combined syphilis and VL testing in MSM

Feb–Jun 2014	743	417	56.1% p<0.0001

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Tested durability of testing response

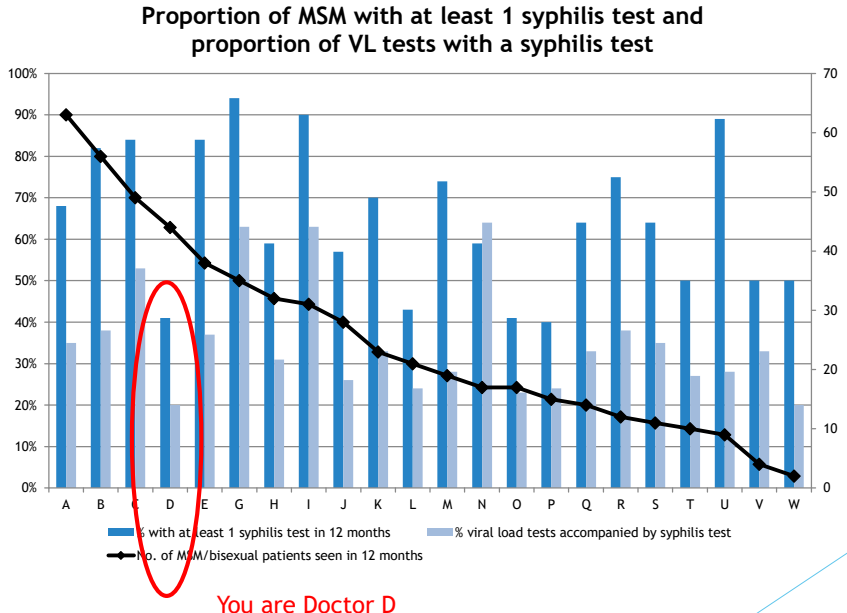
Feb 2014-Jan2015	1734	635	36.6%

Audit of Syphilis testing in HIV+ MSM

Next Approaches

- Number of MSM seen in 12 months, number of viral load tests performed, number of syphilis tests performed and proportion of patients with at least 1 syphilis test and proportion of VL accompanied by a syphilis test broken down by individual doctor and presented to the Unit
- Then each doctor received an email notifying them which doctor they were on the graph

There is room for improvement!



You are Doctor D

Audit of Syphilis testing in HIV+ MSM

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- Then each doctor received an email notifying them which doctor they were on the graph
- Systems issue approach needed – all Pathology Request slips had a syphilis test included – doctor had to cross off the syphilis test for it not to be done with a Viral load

Syphilis testing with HIV viral loads in MSM

	Total VL tests	Total syphilis tests	%
Oct 2013-Feb 2014	762	175	23.0%
Enhanced education re screening and need to increase syphilis testing			
Feb-Jun 2014	743	417	56.1%
Tested durability of testing response and whether further increased testing			
Feb 2014-Jan2015	1734	635	36.6%
Individual results fed back to each OP doctor			
Pathology slips pre-stamped with syphilis and HIV VL			
March 2015-Sept 2015	782	480	61.4%

Cascade or Care: Do you know where your patients are?

- Patients admitted over a few months with severe immunosuppression and opportunistic infections – after ceasing ART and lost to follow up
- Created a list of all Alfred HIV Service patients seen by individual doctors and highlighted those not seen in the last 6 months
- Each clinician went through their list to determine if the highlighted patients were truly lost to follow-up – contacted them

- **Activity led to VIPER**

Victorian Initiative for Patient Engagement and Retention (VIPER)

- 2014 – mutual interest by Primary care GPs, MSHC and tertiary hospitals in establishing whereabouts of patients
  - ➔ Collaboration to assess retention, **transfer of care and LTFU** across major HIV care sites

- Hospitals (Alfred, MMC, RMH), MSHC, High caseload clinics – (PMC, NSC, CC)

VIPER Aims

- Determine whether people previously engaged in HIV care and who now have 'unknown outcomes' (not seen in the last 12 months) have died, transferred their care or become disengaged from care
- Obtain site-level estimates of the proportion retained in HIV care and lost to follow-up
- Identify reasons for disengagement
- Results used as basis of Cascade of Care for Fast Track City cascade results for Melbourne/Victoria

Clinic Network Collaboration and Patient Tracing to Maximize Retention in HIV Care

James H. McMahon[1,2,3]*, Richard Moore[4], Beng Eu[5], Ban-Kiem Tee[6], Marcus Chen[7,8], Carol El-Hayek[3], Alan Street[9], Ian Woolley[1,2], Andrew Buggie[7], Danielle Collins[6], Nicholas Medland[7], Jennifer Hoy[1], for the Victorian Initiative for Patient Engagement and Retention (VIPER) study group[¶]

PLOS ONE | DOI:10.1371/journal.pone.0127726 May 26, 2015

VIPER Results

		Individuals in care[a]	Outcome									
			Unknown[b] n (%)		Unconfirmed transfer[c] n (%)		Confirmed transfer[d] n (%)		Retention[e] %		Retention inc. confirmed transfer[f] %	
Pre- or Post-intervention			Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Site	**SPC 1**	805	11 (1.4)	1 (0.1)#	23 (2.9)	6 (0.7)#	30 (3.7)	51 (6.3)#	92.0	92.5	95.8	98.8#
	SPC 2	1102	14 (1.3)	4 (0.5)#	40 (3.6)	32 (2.9)#	25 (2.3)	40 (3.6)#	89.9	90.1	92.2	93.7#
	SPC 3	464	13 (2.8)	5 (1.1)#	5 (1.1)	1 (0.2)	39 (8.4)	49 (10.6)#	84.7	84.7	93.1	95.3#
	TMC 1	1188	61 (5.1)	13 (1.2)#	23 (1.9)	11 (0.9)#	114 (9.6)	161 (13.6)#	80.6	81.2	90.2	94.8#
	TMC 2	255	14 (5.5)	6 (2.4)#	12 (4.7)	5 (2.0)*	4 (1.6)	16 (6.3)#	84.3	85.1	85.9	91.4#
	SHC	1152	57 (4.9)	18 (1.7)#	34 (3.0)	16 (1.4)#	126 (10.9)	166 (14.4)#	80.1	81.3#	91.1	95.7#

NOTES: SPC, specialist primary care; TMC, tertiary medical centre; SHC, sexual health centre; * p<.05 for comparison to pre-intervention figure (McNemar's test); # p<.01 for comparison to pre-intervention figure (McNemar's test)

[a] individuals with at least one HIV viral load from 1/3/2011 to 31/5/2013 at the site excluding individuals who had not received HIV care at the site and were known to be in HIV care at an external site

[b] Individuals with unknown outcomes

[c] Individuals thought to have transferred care but no evidence in medical records to confirm that transfer occurred

[d] Evidence in medical records that care was transferred

[e] Individuals in care at the site or sharing with another site as a proportion of all individuals in care

[f] Defined as for retention but considers confirmed transfers also retained in care

7 re-engaged in care, 4 declined returning to care despite contact

Commonly Used indicators of Quality of Care

Victorian HIV service Key Performance Indicators 2016

- 905 patients actively managed with both T cells and HIV VL measured in 2015-2016

Cascade of care: 98.9% on ART 10/905 (1.1%) not on ART

Cascade of Care: Virologically suppressed

- 867/895 **(96.9%)** have <200 copies/ml HIV and on ART
- 62/895 (6.9%) episode of LLV (20 and 200 copies/ml)

Do these indicators really focus on Quality of Care?

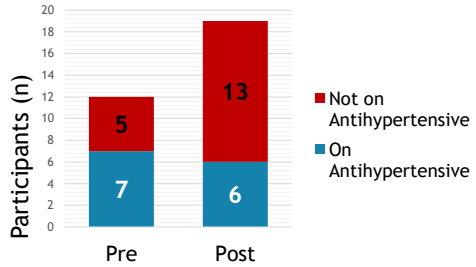
Progressing beyond Virological suppression 4th 90%

UNAIDS 90 90 90 targets
Lazarus, et al, BMC Medicine 2016

Screening and Management of Hypertension

- Audit: ID doctors not taking Blood Pressure in routine clinic visits
- Intervention – Development of Annual Visit Proforma for clinic and HIV Service Guidelines
- Re-Audit: ID doctors now taking Blood Pressures – but not doing anything about the results!
- Further intervention with Guidelines

Patients with SBP ≥ 140mmHg



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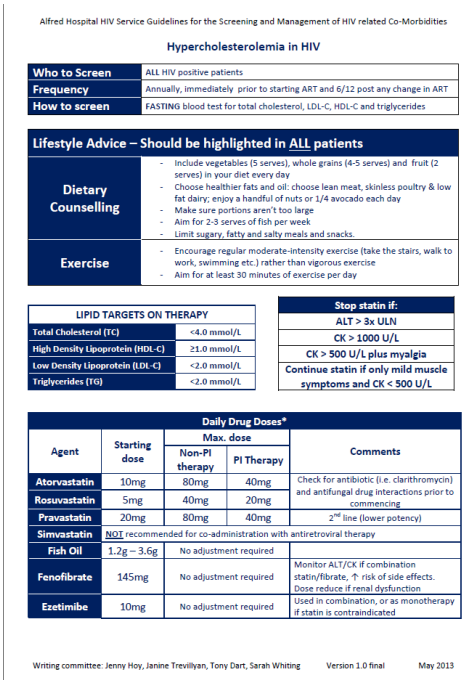
Development of HIV Service Guidelines

Screening and Management of HIV related Co-Morbidities

- Cholesterol
- Hypertension
- Diabetes
- Kidney Injury
- Bone Health



Alfred Hospital HIV Service Guidelines for the Screening and Management of HIV related Co-Morbidities

Hypercholesterolemia in HIV

Who to Screen	ALL HIV positive patients
Frequency	Annually, immediately prior to starting ART and 6/12 post any change in ART
How to screen	**FASTING** blood test for total cholesterol, LDL-C, HDL-C and triglycerides

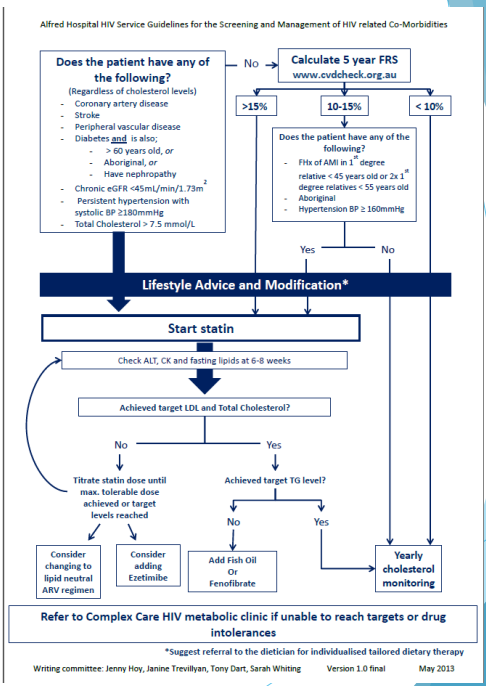
Lifestyle Advice – Should be highlighted in ALL patients	
Dietary Counselling	- Include vegetables (5 serves), whole grains (4-5 serves) and fruit (2 serves) in your diet every day - Choose healthier fats and oil: choose lean meat, skinless poultry & low fat dairy; enjoy a handful of nuts or 1/4 avocado each day - Make sure portions aren't too large - Aim for 2-3 serves of fish per week - Limit sugary, fatty and salty meals and snacks.
Exercise	- Encourage regular moderate-intensity exercise (take the stairs, walk to work, swimming etc.) rather than vigorous exercise - Aim for at least 30 minutes of exercise per day

LIPID TARGETS ON THERAPY	
Total Cholesterol (TC)	<4.0 mmol/L
High Density Lipoprotein (HDL-C)	≥1.0 mmol/L
Low Density Lipoprotein (LDL-C)	<2.0 mmol/L
Triglycerides (TG)	<2.0 mmol/L

Stop statin if:
ALT > 3x ULN
CK > 1000 U/L
CK > 500 U/L plus myalgia
Continue statin if only mild muscle symptoms and CK < 500 U/L

Daily Drug Doses*				
Agent	**Starting dose**	**Max. dose**		**Comments**
		Non-PI therapy	**PI Therapy**	
Atorvastatin	10mg	80mg	40mg	Check for antibiotic (i.e. clarithromycin) and antifungal drug interactions prior to commencing
Rosuvastatin	5mg	40mg	20mg	
Pravastatin	20mg	80mg	40mg	2nd line (lower potency)
Simvastatin	NOT recommended for co-administration with antiretroviral therapy			
Fish Oil	1.2g – 3.6g	No adjustment required		
Fenofibrate	145mg	No adjustment required		Monitor ALT/CK if combination statin/fibrate, ↑ risk of side effects. Dose reduce if renal dysfunction
Ezetimibe	10mg	No adjustment required		Used in combination, or as monotherapy if statin is contraindicated

Writing committee: Jenny Hoy, Janine Trevillyan, Tony Dart, Sarah Whiting Version 1.0 final May 2013



How can we improve the Quality of Care delivered

- Clinical audit - the key driver to improve the quality of care being delivered
- Audit can identify shortfalls in care delivery at different levels:
  - individual healthcare provider
  - healthcare setting
  - state and national levels
- Integrate a culture of Quality Improvement into the HIV clinic
- Sustainability of change is biggest challenge – usually requires Health Systems change

Victorian HIV Clinical Care Network

- Steering committee clinicians from Victorian HIV Service, hospitals, Melbourne Sexual Health Centre, high case load GPs and Victorian AIDS Council and Living Positive Victoria representation.
- Membership – all sites/clinicians involved in HIV Care in Victoria
- Aims:
  - Agreed hierarchy of auditable measures of Quality of HIV Care
  - Support all sites in improving Quality of Care for PLWHA in Victoria

Victorian HIV Clinical Care Network

- Initially education/forums (eg language around HIV transmission and the Law), website – currently hosted by The Alfred, sharing resources, experience – (eg syphilis testing with all HIV VL in sexually active MSM, hypertension)
- HIV database sharing between hospital sites with minimal to no EMRs
- Assessment of needs of low case load sites
- Move to audit of activity – eg proportion of PLHIV in receipt of influenza vaccine in 2017, proportion of HIV positive MSM undergoing STI screening

British HIV Association guidelines for routine investigation and monitoring of HIV positive individuals, 2016

- Recommendations for screening, diagnosis and monitoring based on GRADE evidence
- Recommendations to stop performing tests of little relevance
  - Reduce/stop CD4 cell measurements in stable patients CD4>500
- Greater emphasis on age related conditions – measuring cardiovascular risk and fracture risk

British HIV Association guidelines for routine investigation and monitoring of HIV positive individuals, 2016

- Auditable Targets described in each section
  - Patients on ART should have a list of all concurrent medications recorded in last 15 months (target 97% of all patients)
  - Patients>40 years should have 10 year CVD risk calculated within 1 year of first presentation (target 90%) AND within the last 3 years if on ART (target 90%)
  - Patients should have smoking history (target 90%) and BP recorded in the last 15 months target 90%)

Australia: A Call to Action

- The UK audit and quality improvement cycles are a partnership
- Prominent role of government and medical HIV association
- Also must have Partnership with Community, AIDS Councils, People Living with HIV

Public Health England

BASHH

British HIV Association BHIVA

ashm
Supporting the HIV, Viral Hepatitis and Sexual Health Workforce

napwha

living positive victoria

VAC

- National Leadership from Ministerial Advisory Committee on Blood Borne Viruses – with institution and support for monitoring and surveillance nationwide
- Individual clinics doing audit activities related to KPIs and targets is not enough

Australian Government
Department of Health

Standards of Care for People Living with HIV, 2013

British HIV Association
Standards of Care
for People Living with HIV
2013

- 12 standards of Care outlined, e.g. HIV testing and Diagnosis, Provision of outpatient treatment and care for HIV, Access to Care for Complex Comorbidity, Safe Antiretroviral Prescribing, Inpatient Care, Sexual Health, Self-management
- Each standard includes Quality Statements, Measurable and Auditable Outcomes, based on National Guidelines, and with targets to be achieved

- AUSTRALIA has no Standards of Care delineated, no measurable audits or targets

Barriers to Quality of Care Improvement

- No National Set of Standards – do we adopt others?
- No National Leadership in Quality of Care for PLHIV – especially those aging with HIV
- No national data systems or registries that can inform quality of care – need to collect more than numbers of HIV tests performed, incidence of HIV, proportion on ART, proportion virologically suppressed – this is all about prevention not living with HIV
- How will measures of quality of care be measured, captured and incorporated into healthcare systems – and be paid attention to?
- Need "champions" to progress the agenda
- Respect and care for our HIV survivors, experiencing the legacy of the early ART drugs, aging with HIV.

7th National Strategy – Quality of Life

Objective	Indicator
Improve quality of life of people living with HIV	Proportion of people with HIV who report their general health status and their general wellbeing to be excellent or good

While this Strategy includes an indicator to report against quality of life for people living with HIV, it is acknowledged that the current indicator is not the best measure. Further work should consider international surveillance tools,

Australian Government
Department of Health

SEVENTH
National
HIV Strategy

Strategy is silent on Quality of Care for PLHIV
Can we expect a change in the 8th National Strategy?

- *"Evidence-based strategies are needed to address the growing complexity of care of those ageing with HIV so that as life expectancy is extended, quality of life is also enhanced"*

  Althoff et al, Curr Opin HIV/AIDS, 2016

- *Quality of Life is linked to the Quality of Care delivered*

Acknowledgements

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