About These Slide

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Please contact may.wang@ashm.org.au for details.
• Peer-reviewed medical journal publishing HIV/AIDS research from multiple different disciplines, including psychology and sociology
• **Impact factor 1.994 (2017)**
• Established in 1989 and is published ten times per year
HIV-Related Stigma And Optimism As Predictors Of Anxiety And Depression Among HIV-positive Men Who Have Sex With Men In The United Kingdom And Ireland
Murphy, P.J et.al March 2018

Background
• Psychological stigma persists despite effective ART
• Associated high rates of anxiety and depression

Aim
• To assess association between HIV related optimism, HIV related stigma and anxiety and depression among HIV positive MSM in UK & Ireland
• 278 HIV + men recruited – online questionnaire between May-Nov 2014

Results
• HIGH prevalence of psychological distress:
  • 49% anxiety symptoms AND 58% depression symptoms
  • Anxiety and depression
    • Significantly positively predicted by internalised stigma
    • Negatively predicted by HIV Health optimism (protective factor)

Conclusions
• Continued psychological burden associated with HIV infection in MSM
• Stigma & discrimination play important role in how people cope with diagnosis
• Stigma reduction interventions needed

The People Living With HIV Stigma Survey UK 2015: HIV Related Sexual Rejection And Other Experiences Of Stigma And Discrimination Among Gay & Heterosexual Men
Hibbert et.al. May 2018

Aim
• To understand the difference in stigma and discrimination, particularly sexual rejection, by gay and heterosexual men living with HIV

PLHIV Stigma Survey 2015
• Online survey –HIV clinics and cross sector organisations
  • Based on discrimination – concerns and experienced in previous 12 months

Results
• Compared to heterosexual men, gay men significantly more likely to
  • Worry about workplace treatment in relation to HIV (21 vs. 11%)
  • Worry about social sexual rejection (42% vs. 21%)
  • Avoid sex because of their HIV status (37% vs. 23%)
  • Experience HIV-related sexual rejection (27% vs. 9%)
• Being gay= predictor of reporting HIV sexual rejection in previous 12 months

Conclusion
• Further education needed regarding the low risk of transmission of HIV among ART – to reduce stigma and sexual prejudice towards PLWHIV
Excess Costs Of Non-Infectious Comorbidities Among People Living With HIV – Estimates From Denmark And Sweden
Hjalte, F. et. al. May 2018

Background
• PLWHIV now approaching life expectancy of general population
• Seeing more people age 50 and over
• Increased comorbidities in HIV + people

Aim
To estimate the excess cost of MI, stroke, osteoporotic fractures and chronic kidney disease among HIV infected people in Denmark and Sweden

Methods
• Focused literature search looking at direct & indirect costs; calculated PAR

Results
• Mean excess cost/person/yr
  • €520 EUR in Denmark & €390 EUR in Sweden
• Est. total excess cost for 1 yr
  • €3.4M for Denmark & €2.6M for Sweden
• Excess cost per comorbidity
  • CKD (65%)
  • OP fractures (16%)
  • MI & Stroke = least impact 12 and 7% respectively
• Direct costs accounted 80% of costs; costs highest in men
• Total excess costs highest = 50-59yo group

<table>
<thead>
<tr>
<th></th>
<th>CKD</th>
<th>MI</th>
<th>Osteoporotic fractures</th>
<th>Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>€2.1M</td>
<td>€0.4M</td>
<td>€0.5M</td>
<td>€0.3M</td>
</tr>
<tr>
<td>Sweden</td>
<td>€1.7M</td>
<td>€0.3M</td>
<td>€0.4M</td>
<td>€0.2M</td>
</tr>
</tbody>
</table>

• Conclusion
  • High prevalence of comorbidities in HIV + people associated with substantial excess costs
  • Costs will increase further with aging population
  • Comorbidities included are those for which primary and secondary prevention is available to help improve outcomes and reduce costs
Addressing Smoking Among People Living With HIV: A Cross-sectional Survey Of Australian HIV Health Practitioners’ Practices And Attitudes

Bell, S.K et. al July 2018

Background:
- high rates of tobacco smoking in PLHIV (2x that of general population)
- Smoking related mortality has increased
- The 5A’s framework facilitates development of individual management plans and best use of all schemes and services
- Little research on HIV HCP facilitation of smoking cessation practices

Aim:
- To understand the practices and attitudes of HIV healthcare providers (HCP) to addressing smoking in their patients

Online survey:
- Sent to HIV related clinical networks & professional bodies – 179 participants (Australian HCP providing care to PLHIV) – 61% doctors (84% ART prescribers), 39% nurses and allied health

Results
- Most practicing at least one of the 5A’s
  - Ask 94%; Assess 78%; Advise 82%; Assist 89%; Arrange 73%
- 62% practiced the full 5A framework
- 80% regularly advised to quit
- Only 17% provided self help resources – always or most of the time
- 85% provided health education on health effects of smoking and benefits of quitting
- 65% addressed cessation pharmacotherapy
  - 43% prescribed varenicline (always/most of time) and 7% prescribed bupropion

How is this clinically relevant for us?
- need for the development of effective smoking cessation training and resources to improve the attitudes and confidence of HCP → better facilitate and support patients with HIV to quit

Best practice for smoking cessation
- The 5A’s framework
  - evidence supports its use for all smokers
- Continued encouragement to patients
  - improves the chance the patient will be interested in quitting
- Pharmacotherapy and counseling
  - improves the chances of attempting to quit and higher quit rates
- Awareness and use of resources to facilitate quit success
Role Of Pre-stroke Immunity In Ischemic Stroke Mechanism Among Patients With HIV
Gutierrez J et.al AUGUST 2018

Background
• Role of HIV related immunosuppression in stroke mechanism is uncertain
• Mechanisms of stroke have changed since introduction of effective ART

Aim
• To test the hypothesis that stroke mechanisms among HIV + individuals vary according to preceding CD4 counts at tertiary center in USA

Methods
• Retrospective chart review inpatient admissions for TIA & Strokes in HIV+ individuals (2002-2016)
• Stroke mechanisms determined by:
  • Radiographic imaging + clinical presentations (team's assessment)
  • Confirmed by separate assessment by vascular neurologist
• Vascular risk factors, use of ART, nadir CD4 and current CD4 were assessed

Results
• Total 115 ischaemic strokes
  • Most frequent mechanism of stroke = LAA
  • Median nadir CD4 was 153 and 312 at time of STROKE; 53% were on ART
  • LAA
    • more common with
      • longer duration of HIV infection and nadir CD4 counts <200
      • Nadir CD4 counts <200 who had higher CD4 one year prior to stroke (this did not occur with SAD)
    • Dyslipidaemia remained associated with LAA
  • SAD
    • more common in men and those with HCV co-infection, less common in those with nadir CD4 <200

Conclusion
• LAA = most frequent stroke mechanism in those with low nadir CD4 (<200) and higher CD4 counts near time of stroke
• Low nadir CD4 counts = increase systemic arterial susceptibility to atherosclerosis
• Dyslipidemia remained associated with LAA

How can this help us clinically?
• Having knowledge of the association between pre-stroke immune status and stroke mechanism
  • May allow targeted approach to stroke prevention e.g. those with low CD4 nadir – increased monitoring screening lipids, other risk factors
**HIV Care Continuum Outcomes Of Pregnant Women Living With HIV With And Without Depression**
Momplaisir F.M. Et Al August 2018

- **Effect of perinatal depression on care continuum outcomes during pregnancy and postpartum**
- Retrospective cohort study
  - HIV surveillance data pregnant WLWH enrolled in perinatal case management in Pennsylvania
  - Evaluated association between possible or definite depression with:
    - viral suppression at delivery
    - care engagement within 3 months postpartum
    - Retention AND viral suppression at 1-year postpartum
- 337 deliveries (2005–2013) from 281 WLWH

**Results:**
- High prevalence of possible or definite depression among HIV positive women during pregnancy = 46.9%
- No differences by depression status across all four HIV care continuum outcomes
- Findings are likely due to supportive services and intensive case management provided to women with possible or definite depression

**Evaluation Of A Computer-based And Counseling Support Intervention To Improve HIV Patients’ Viral Loads**
O’Daniels, C. et. al. AUGUST 2018

**Aim**
- To integrate a brief computer and counselling support intervention into the routine practices of of HIV clinics and assess the effects on patients’ viral loads

**Study design**
- HIV+ patients with VL >1000 at time of recruitment from 6 HIV clinics in the USA
- 3 clinics initiated immediately; 3 delayed for 16mo (controls)
- All clinics continued to offer pre-existing standard of care services

**Intervention:**
- Brief CBI focusing on ART, ART adherence, clinic attendance and safer sex; Health coaching from project counselors for those whose VL’s did not improve
- VL measured 270 days before recruitment, @ recruitment; 270 days after

**Results**
- No evidence that this intervention reduced VL

**Conclusion**
- CBI and health coaching does not reduce VL beyond that achieved by standard of care in well resourced HIV clinic
Single Tablet HIV Regimens Facilitate Virological Suppression And Retention In Care Among Treatment Naïve Patients

Hemmige et.al. FEB 2018

BACKGROUND

• Once daily regimens have now become standard of care for patients
• Prior studies
  • Mainly focus on patient preference for single tablet once daily regimens
  • Most (but not all) showed higher self-reported adherence
• Limited research looking into treatment outcomes between single vs. multiple tablet daily regimens
**AIM**

- To assess adherence of ART, retention in care and virological outcomes in patients receiving once daily STRs and MTRs in publically funded Texas HIV clinic

**STUDY DESIGN**

- Retrospective cohort study
- >1000 treatment naïve HIV positive patients at a publically funded clinic, commencing ART
- Followed for one year
- Comparison of once daily Single tablet regimens (STR) to once daily Multiple tablet regimen (MTR) on clinical outcomes
METHODS

1028 patients met inclusion criteria

622 started on STR
(100% TDF/FTC/efavirenz)

406 on MTR
(65% TDF/FTC/atazanavir; 35% TDF/FTC/darunavir/ritonavir)

Outcomes
Retention in care
Adherence
Virological suppression

Inclusion criteria
- Initiating 1 of 5 first line Tenofovir based once daily regimens between 1 Jan 2009- 31 December 2011
- Filled scripts at in house pharmacy (for clinic)

Both taken once daily

Data collected from 2008-2011

REGIMENS

- Both regimens were Tenofovir based (TDF/FTC)
- Different combinations
  - STR = 100% Efavirenz based (NNRTI)
  - MTR = Ritonovir boosted PI
    - 65% Atazanavir based
    - 35% Darunavir based

ACTG 5202:
Compared TDF/FTC with either efavirenz or ritonovir boosted atazanavir
- similar virologic, tolerability and safety outcomes
Lennox et. al, 2014
RCT comparing darunavir to atazanavir
- virological outcomes similar
- higher adverse reactions with atazanavir→ high discontinuation rates
OUTCOMES

• Adherence
  • Calculated based on prescriptions filled
  • 80% or greater for the year = considered adherent
  • If UDVL despite not filling script for 90 days prior to VL measurement = counted as change in pharmacy

• Retention of care
  • 2 VL measurements 3 months apart during first year

• HIV suppression
  • Proportion patients reached virological suppression at least once during the 12 month period (VL <400; cut off for assay in 2008; analysis stratifying by year where a cutoff of 50 was used in 2009-2011)

RESULTS

STR
Retention in care 80.7%
Virological suppression 84.4%

MTR
Retention in care 72.7%
Virological suppression 77.6%

1028 patients met inclusion criteria

No statistically significant difference in proportion of patients achieving 80% adherence (33 vs. 30%)
adjusted OR 1.04, CI 0.79-1.38

Adjusted OR 1.49, 95% CI 1.10-2.0
Adjusted OR 1.41; 95% CI 1.02-1.96
RESULTS

Results statistically significant for the 1st two factors in both the adjusted and unadjusted OR

LIMITATIONS

- Once daily MTR regimens – were PI based
  - preferentially given to those who were more likely to be non adherent (due to higher barrier to resistance)
- Differences in baseline characteristics between the two groups= selection bias
  - e.g. fewer patients visiting psychiatric clinics received STR (22.5% vs. 28.3%)
  - avoiding EFV based regimen due to neuropsychiatric effects
- Pharmacy fill data was used to assess adherence
  - No data on why patient stopped filling medication
  - Unknown who switched pharmacies vs. who was lost to follow up
- Lack data for reason for loss to follow up from the clinic
  - Any missing data = appears as non-adherence
**STRENGTHS**

- Large population sample
- Analysis by intention to treat
- Adjusted for potential confounders

**IS THE STUDY CLINICALLY RELEVANT?**

- Some weak evidence that STR improve treatment outcomes – virological suppression and retention in care; difficult to eliminate confounding
- **Can we apply the results to our patients?**
  - Study population
    - Ethically diverse population with varying degrees of access to health care/insurance
    - High barriers to accessing care
  - In Australia better access to care for all and this makes our population different from those of the study
- Further research needed
THE END

Thank you 😊

ADDITIONAL SLIDES
BASELINE CHARACTERISTICS

Table 1. Demographics of the study cohort, 2008–2011 (n = 1,238).

<table>
<thead>
<tr>
<th>Baseline Characteristics</th>
<th>Multi-tablet regimen (n = 400)</th>
<th>Single-tablet regimen (n = 427)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>62.7 (6.4)</td>
<td>63.7 (7.1)</td>
<td>0.16</td>
</tr>
<tr>
<td>Sex</td>
<td>Male: 300 (75.0)</td>
<td>Female: 100 (25.0)</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>Single: 350 (87.5)</td>
<td>Single: 390 (91.5)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Caucasian: 370 (92.5)</td>
<td>Caucasian: 410 (96.5)</td>
<td></td>
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<tr>
<td>Education</td>
<td>High school: 380 (95.0)</td>
<td>High school: 410 (96.0)</td>
<td></td>
</tr>
<tr>
<td>Smoking status</td>
<td>Current: 380 (95.0)</td>
<td>Current: 410 (96.0)</td>
<td></td>
</tr>
<tr>
<td>Body mass index</td>
<td>Normal: 380 (95.0)</td>
<td>Normal: 410 (96.0)</td>
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</tr>
<tr>
<td>Blood pressure</td>
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<td>Normotensive: 410 (96.0)</td>
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<tr>
<td>Diabetes</td>
<td>Yes: 380 (95.0)</td>
<td>Yes: 410 (96.0)</td>
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<tr>
<td>Chronic kidney disease</td>
<td>No: 380 (95.0)</td>
<td>No: 410 (96.0)</td>
<td></td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>No: 380 (95.0)</td>
<td>No: 410 (96.0)</td>
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<tr>
<td>Stroke</td>
<td>No: 380 (95.0)</td>
<td>No: 410 (96.0)</td>
<td></td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>No: 380 (95.0)</td>
<td>No: 410 (96.0)</td>
<td></td>
</tr>
<tr>
<td>Fractures</td>
<td>No: 380 (95.0)</td>
<td>No: 410 (96.0)</td>
<td></td>
</tr>
</tbody>
</table>

EXCESS COSTS BY COMORBIDITY

Figure 1. Excess cost attributed to HF in chronic kidney disease, osteoporotic fractures, myocardial infarction, and stroke in Denmark and Sweden (€, 2015 prices).

Notice: CKD = chronic kidney disease; MI = myocardial infarction.
The total excess costs were highest in the 50-59 year old age group.

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The total excess costs were highest in the 50-59 year old age group.
ASK
ALL PATIENTS ABOUT SMOKING

ASK
Ask all patients
Do you still smoke tobacco?
- Record smoking status (current smoker)
Yes

Ask all patients
Check every 5 years, or more frequently if under 25 years of age or an ex-smoker

No

Affirm choice not to smoke and record smoking status (never smoker)
Yes

Affirm decision to quit and record smoking status (ex-smoker)
- Give relapse prevention advice if quit < 1 year
- Ongoing encouragement up to at least 5 years quit

Do you smoke??

ASSESS
READINESS TO QUIT

ASSESS
Assess
- Assess stage of change: ‘How do you feel about your smoking at the moment?’ and ‘Are you ready to stop smoking now?’
- Record stage of change
- Assess nicotine dependence

Assess nicotine dependence:
- Nicotine dependence can be assessed by asking:
  1. ‘How many minutes after waking to first cigarette?’
  2. ‘Number of cigarettes per day?’
  3. ‘What cravings or withdrawal symptoms in previous quit attempts?’
- Smoking within 30 minutes of waking, smoking more than 10 cigarettes per day and history of withdrawal symptoms or cravings in previous quit attempts are all markers of nicotine dependence.
- Pharmacotherapy for dependent smokers is proven to double the chances of successfully quitting.
ADVISE ALL SMOKERS TO QUIT

ADVISE

Advise

All smokers should be advised to quit in a way that is clear but nonconfrontational eg. “The best thing you can do for your health is to quit smoking.”

Brief, repeated, consistent, positive reminders to quit and reinforcing recent quit efforts by a number of health professionals can increase success rates.

ASSIST

ASSIST

Assist – not ready
- Discuss the benefits of quitting and risks of continued smoking
- Provide information about not exposing others to passive smoking
- Advise that help is available when they’re ready

Assist – unsure
- Do motivational interviewing: “What are the things you like and don’t like about your smoking?”
- Explore their doubts
- Explore barriers to quitting
- Offer written information (eg Quit Pack) and referral to Quitline 13 7848 or a tobacco treatment specialist

Assist – ready
- Affirm and encourage
- Provide a Quit Plan and discuss a quit plan
- Recommend pharmacotherapy to nicotine-dependent smokers (see Assess)
- Discuss relapse prevention
- Offer referral to Quitline 13 7848 or a tobacco treatment specialist

Assist – action and maintenance:
- Congratulate
- Discuss relapse prevention
- Review and reinforce benefits of quitting
- Offer written information (eg Quit Pack) and referral to Quitline 13 7848 or a tobacco treatment specialist
ARRANGE FOLLOW-UP

Successful quitter
- Congratulate and affirm decision to quit
- Discuss relapse prevention
- Offer ongoing encouragement for at least 5 years after quitting

Arrange follow-up
- For clients attempting to quit, arrange follow-up visit, if possible
- At these visits:
  - Congratulate and affirm decision
  - Review progress and problems
  - Encourage continuation of pharmacotherapy
  - Discuss relapse prevention
  - Encourage use of support services
- OR
- Refer to Quitline 13 7849 or a tobacco treatment specialist

Relapse
- Offer support and reframe as a learning experience
- Explore reasons for relapse and lessons for future quit attempts
- Offer ongoing support
- Ask again at future consultations

Selection of patients at intervention clinics
N = 1209
Patients who attended clinic for primary care during the recruitment period and were eligible based on most recent viral load (>1000 copies/ml) in the clinic’s medical record at the time of their primary care visit

N = 527
Patients who agreed to participate and completed the first CB

N = 520
Patients who declined to participate

N = 502
Total number of eligible patients not enrolled (dropped = refused)

N = 855
Patients who did not enroll and remained eligible based on an on-check of latest viral load within a window 40 days before to 4 days after the primary care visit during recruitment

N = 562
Overall cohort of viral load eligible patients at intervention clinics. This cohort was compared with the cohort of eligible patients at control clinics

Selection of patients at control clinics
N = 566
Patients at control clinics were selected from medical records based on having a primary care visit during the recruitment period and an eligible viral load within a window 305 days before to 7 days after that visit