Assessing and improving HIV medication Readiness, Depression, HIV Treatment knowledge, and HIV treatment adherence

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NEW HIV medications (HAART) – new reality

- 40 million people in world living with HIV
- HIV = Chronic illness with lifelong drugs
HIV meds: Before and After
Importance of Adherence to HAART

- Expected levels of adherence for most chronic illnesses (e.g., hypertension, diabetes) is 50-80%.

- For HIV medications, the goal of adherence is 90-95%.

- There is also a potential “high cost” to sub-optimal adherence to HIV medications.
Importance of HIV Adherence

HIV non-adherence → Sub-optimal drug levels → HIV drug failure → HIV viral load rebound → HIV drug resistance → Cross-resistance to drugs in same class → Transmission of drug resistant virus
When to Start HIV Medications?

- HIV treatment guidelines suggest starting HIV medications based on *medical markers*:
  - CD4 count (e.g. < than 350)
  - High HIV viral load
  - Opportunistic infections (e.g. PCP)
Ready to Start HIV Medications?

- HIV treatment guidelines also state we need to carefully assess HIV patients’ medication readiness prior to initiating HAART
  (www.hivguidelines.org)
- However, HIV Treatment Guidelines do not indicate how to assess HIV medication readiness
- We developed and validated a brief HIV Medication Readiness scale (Balfour et al 2007)
  - HIV Readiness Scale predicts HIV VL being undetectable vs detectable at 6 months follow-up starting HAART
Readiness for starting HIV meds
Dealing with HIV Medication Challenges

It is better to be prepared ...

Coping with the challenges of starting HIV treatments
Assessing HIV Patients’ Readiness?

QUESTIONS to consider

How do you currently assess your HIV patients’ medical and psychological readiness for starting HIV therapy?

What information do you feel is important to discuss with your HIV patients prior to starting HIV medications?
AREAS to assess/discuss with HIV patient: 
Medical factors including:
(1) CD4 count, HIV viral load
(2) Cardiovascular risk, smoking, lipid profile, family medical history
(3) Experience with previous HIV treatments
  - previous adherence
  - HIV drug resistance profiles
Patient Assessment Process

**HIV treatment factors:**
- Availability of different treatment options
  - Effectiveness of HIV medications
  - Dosing intervals (e.g. once/day; twice/day)
  - Side-effects of different HIV medications (e.g. depression, lipodystrophy, diarrhea)

**Psychological factors:**
- Patients’ perceptions/expectations/beliefs about medications (e.g. belief God cures HIV)
- Patient’s’ current lifestyle and life priorities (e.g. party)
- Patients’ mood/stability (e.g. depression)
- Patients’ HIV treatment knowledge (e.g. adherence)
- Patients’ psychological readiness to take medication
Patient Related Questions

Assess “Psychological Readiness” to Begin New Treatment or Change Treatment: QUESTIONS

• “Is the HIV treatment regimen clear to you?”
• “How might the treatment affect your lifestyle?”
• “Why are you planning on starting HIV Meds? (For whom? Pros/cons?)”
• “How confident are you that you can do this?”
  • Previous Ability to adhere and personal priority

• “HIV Readiness” Measure developed in Ottawa
Development and Validation of the HIV Medication Readiness Scale

L. BALFOUR¹,2,3, G. A. TASCA¹,2,3,4, J. KOWAL¹, K. CORACE¹,3, C. L. COOPER²,3, J. ANGEL²,3, P. A. MACPHERSON²,3, & D. W. CAMERON²,3

¹Ottawa Hospital – General Campus, ²University of Ottawa, ³Ottawa Health Research Institute, ⁴Carleton University

Excellent medication adherence (≥95%) is required for optimal HIV treatment success. This study aimed to develop and validate a brief scale to assess psychological readiness for successfully starting and adhering to HIV medications. HIV-positive men and women (N = 142) from an HIV outpatient clinic completed the proposed HIV Medication Readiness Scale (HMRS) prior to starting HIV medications. The 10-item HMRS demonstrated high internal consistency (alpha = .90), test-retest reliability (r = .83), and sensitivity to change following a standardized 4-session psychoeducational intervention designed to increase readiness for successful adherence. Predictive validity was supported by higher readiness scores on the day starting HIV medications, predicting higher treatment adherence at 1-month follow-up. The HMRS is a brief, easy-to-use, clinically relevant tool that can assist in identifying people living with HIV at high risk of nonadherence, who might benefit from tailored readiness counseling prior to initiating HIV medications.

Assessment, Volume 14, No. 4, December 2007 408-416
HIV Medication Readiness Scale

- Brief, 10-item self report scale
- Higher scores = higher levels of readiness
- Higher Readiness score → 6 month VL undetectable

How ready are you to:

1. Deal with bringing your HIV pills to social activities (e.g., restaurant, friend’s house).
   (not at all ready) 0...1 ...2...3...4 (extremely ready)

2. Accept the idea of taking these HIV pills for a very long time (e.g. years).
   (not at all ready) 0...1 ...2....3...4 (extremely ready)

3. Continue taking your HIV pills even if you experience unpleasant side-effects (e.g. diarrhea, body fat changes)
   (not at all ready) 0...1 ...2...3...4 (extremely ready)
If you were to start taking HIV pills today, how ready would you be to:

<table>
<thead>
<tr>
<th></th>
<th>Not at all Ready</th>
<th>Mildly Ready</th>
<th>Moderately Ready</th>
<th>Quite Ready</th>
<th>Extremely Ready</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Make the necessary changes in your diet (i.e. eat at regular times, take pills with certain foods)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Accept the idea of taking these HIV pills for a long time (e.g., years)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Change your work, school or home schedule to help you take your HIV pills (e.g., take a lunch break)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Si usted tuviera que comenzar a tomar medicamentos para el VIH hoy mismo, ¿qué tan listo o dispuesto estaría usted a lo siguiente?

<table>
<thead>
<tr>
<th>CUESTIÓN</th>
<th>NIVEL DE LISTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hacer los cambios necesarios en su dieta (Por ejemplo: comer en un horario regular o tomar pastillas con ciertos alimentos).</td>
<td>No estoy listo Un poco listo Moderadamente listo Muy listo Extremadamente listo</td>
</tr>
<tr>
<td>2. Aceptar la idea de tener que tomar los medicamentos para el VIH por un largo período de tiempo (Por ejemplo por varios años).</td>
<td></td>
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<tr>
<td>3. Cambiar el horario de trabajo, de la escuela o de la casa para poder cumplir con el horario del tratamiento del VIH (Por ejemplo, tomar las pastillas a una hora exacta y con alimentos).</td>
<td></td>
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</tbody>
</table>
Assessing level of HIV Patients’ preparation for starting HIV Treatment

Research studies indicate that knowledge is important for adherence

Poor HIV treatment Knowledge → poor HIV medication adherence

How do we assess HIV patients’ HIV treatment knowledge ??

We did a literature review, and although there existed validated HIV general knowledge scale (i.e. assessing safe sex) there did not exist any validated HIV treatment knowledge scale (i.e. assessing factors such knowledge about HIV medications, adherence, drug resistance)

So, we developed and validated an HIV treatment knowledge scale and published this scale
Development and psychometric validation of the HIV Treatment Knowledge Scale

L. BALFOUR¹,²,³, J. KOWAL¹, G. A. TASCA²,³,⁴, C. L. COOPER¹,²,³, J. B. ANGEL¹,²,³, P. A. MACPHERSON¹,²,³, G. GARBER¹,²,³, L. BÉIQUE¹,²,³, & D. W. CAMERON¹,²,³

¹Division of Infectious Diseases, Ottawa Hospital-General Campus, ²University of Ottawa, ³Ottawa Health Research Institute, and ⁴Carleton University, Ottawa, Ontario, Canada

Abstract
Accurate treatment knowledge is required for patients to successfully manage complex medical conditions. Existing HIV knowledge scales focus on disease transmission and risk factors. This is the first study to develop and validate a scale to measure HIV treatment knowledge about complex treatment issues such as adherence, side-effects and drug resistance. A total of 346 participants were recruited into this cross-sectional study. Participants included HIV-positive patients (n = 130), HIV-hepatitis C co-infected patients (n = 22), hepatitis C patients, (n = 78), community healthcare providers (n = 35) and college students (n = 81). Participants completed the proposed HIV Treatment Knowledge Scale and a validated measure of general knowledge about HIV transmission and risk factors. Two-week test-retest data were collected. Results demonstrated that the HIV Treatment Knowledge Scale was significantly correlated with general HIV knowledge across all samples. Among HIV-positive patients, the HIV Treatment Knowledge Scale was positively associated with time since HIV diagnosis. HAART-experienced patients had significantly higher treatment knowledge than HAART-naïve patients. HIV-positive patients scored significantly higher than hepatitis C patients and college students on HIV treatment knowledge. Test-retest reliability (r = 0.83) and internal consistency (reliability coefficient = 0.90) were both satisfactory. The HIV Treatment Knowledge Scale is a novel, easy-to-administer measure demonstrating high levels of validity and reliability. It has important applications as a clinical teaching tool with patients and healthcare workers and it could be used as an outcome indicator in HIV educational intervention studies.
1. Once the HIV viral load results are “undetectable”, HIV medications should be stopped. | True | False | Don’t Know |
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<th></th>
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<tbody>
<tr>
<td>X</td>
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</table>

2. If HIV medications are not taken at the right time of day, HIV drug resistance can occur. | True | False | Don’t Know |
<table>
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<tbody>
<tr>
<td></td>
<td>X</td>
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</table>

3. HIV is cured when the HIV viral load blood test result is “undetectable.” | True | False | Don’t Know |
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<td>Verdadero</td>
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<td>---</td>
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</tr>
<tr>
<td>1. Tan pronto como los resultados de carga viral se vuelvan “indetectables”, uno debe parar de tomar los medicamentos para el VIH.</td>
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<tr>
<td>2. Si los medicamentos para el VIH no se toman a la hora debida, esto puede resultar en la aparición de resistencia del VIH a los medicamentos.</td>
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<tr>
<td>3. El VIH está curado cuando los resultados de carga viral del VIH son “indetectables.”</td>
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</tr>
<tr>
<td>Sample HIV treatment knowledge scale items</td>
<td>Guyana (HIV) % correct</td>
<td>Ottawa (HIV) % correct</td>
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<td>------------------------------------------</td>
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<td></td>
<td>Men (N=56)</td>
<td>Women (N=100)</td>
</tr>
<tr>
<td>1. If HIV medications are not taken at the right time of day, HIV drug resistance can occur. (T)</td>
<td>72%</td>
<td>64%</td>
</tr>
<tr>
<td>2. Treatments are available to reduce HIV medication side effects. (T)</td>
<td>55%</td>
<td>76%</td>
</tr>
<tr>
<td>3. If sexual partners are both HIV+, condoms are no longer needed. (F)</td>
<td>83%</td>
<td>77%</td>
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</tbody>
</table>
Assessing Readiness for Starting HIV medications - Depression

Depressed Mood $\iff$ Non-Adherence

- Symptoms of depression include …
  (Sadness and Hopelessness, poor concentration and poor memory, low energy/motivation, sleep problems)

Depression is the most consistent predictor of poor adherence across medical conditions

Depression worsens HAART adherence and treating depression improves adherence

Horberg et al 2008, JAIDS, 47(3), 384-390
HIV and Depression

- 40%-60% of people living with HIV experience periods of depression
HIV and Depression?

- HIV Stigma, double stigma
- Assess HIV stigma with stigma scale
- Disclosure, rejection, isolation
- Identity, shame, future?, work?
Assessing Depression

It is also important to assess for depression
# CES-D Depression Scale (Radloff, 1977)

## CES-D Mood Scale

(CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE)

**Patient name:**

**Date:**

Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the past week. Circle one number on each line.

<table>
<thead>
<tr>
<th>Item</th>
<th>During the past week...</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was bothered by things that usually don't bother me.</td>
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<tr>
<td>2. I felt that everything I did was an effort.</td>
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<tr>
<td>3. I felt that my appetite was poor.</td>
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<td>4. I had trouble keeping my mind on what I was doing.</td>
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<tr>
<td>5. I felt that anything I did was no use.</td>
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<tr>
<td>6. I felt depressed.</td>
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<tr>
<td>7. I felt that everything I did was an effort.</td>
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<tr>
<td>8. I felt hopeless about the future.</td>
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<tr>
<td>9. I thought my life was not worth living.</td>
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<tr>
<td>10. I felt empty.</td>
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<td>11. My work was meters.</td>
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<tr>
<td>12. I felt happy.</td>
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<tr>
<td>13. I felt that I was lost.</td>
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<tr>
<td>15. People were alien to me.</td>
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<tr>
<td>16. I enjoyed life.</td>
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<tr>
<td>17. I had things to look forward to.</td>
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<tr>
<td>18. I felt sad.</td>
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<tr>
<td>19. I felt empty.</td>
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<tr>
<td>20. I felt that people disliked me.</td>
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<tr>
<td>21. I could not &quot;get going&quot;.</td>
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</tbody>
</table>

Thank you for completing this questionnaire.

Used by HCP with patient
<table>
<thead>
<tr>
<th>MOOD SCALE (CES-D)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rarely or none of the time (&lt;1 day)</strong></td>
</tr>
<tr>
<td>1. I was bothered by things that usually don’t bother me.</td>
</tr>
<tr>
<td>2. I did not feel like eating: My appetite was poor.</td>
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<tr>
<td>3. I felt that I could not shake off the blues even with help from my family or friends.</td>
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</tr>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</table>
Assessing Depression

Clinical cut-off score of >16 on the CES-D scale indicates a screening for moderate levels of depression.
1. HIV Medication Readiness Scale (Balfour et al., 2007)

2. HIV Treatment Knowledge Scale (Balfour et al., 2007)

3. CES-D Depressed Mood Scale (Radloff et al., 1977)
Pre-Treatment Questionnaires

**HIV Treatment Knowledge Scale**

Patient name: 

Date: 

Please check True, False or Don't know for each item.

<table>
<thead>
<tr>
<th>Item</th>
<th>True</th>
<th>False</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HIV treatment is not the only treatment available.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. If HIV medication is not taken according to the instructions, HIV drug resistance can occur.</td>
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<td></td>
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<tr>
<td>3. If HIV test result on the blood test is positive, it is really HIV.</td>
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<tr>
<td>4. Conditions during care are not required when the HIV test is positive.</td>
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<tr>
<td>5. It is better to take a short course of HIV medication than to take a long course of time.</td>
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<tr>
<td>6. One can start treatment with a diagnosis of HIV.</td>
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</tr>
<tr>
<td>7. HIV medication can cause side effects.</td>
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<tr>
<td>8. Emotional problems are both HIV positive, conditions are no longer needed.</td>
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</tr>
<tr>
<td>9. Treatment is available to reduce HIV medication side effects.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Emotional problems can affect other parts of patients.</td>
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<tr>
<td>11. Preventing HIV medication to a pregnant woman reduces the risk of HIV transmission from HIV.</td>
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<tr>
<td>12. Prophylaxis is an HIV medication to prevent HIV infection.</td>
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<tr>
<td>13. HIV medications can be taken at a different time of day or on weekends or holidays.</td>
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</tr>
<tr>
<td>14. HIV medication is effective even if you are feeling better.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. HIV medication is not effective even if you are feeling better.</td>
<td></td>
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<tr>
<td>16. HIV medication can affect the amount of resistance to HIV.</td>
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<tr>
<td>17. After a few months, it becomes less important to take HIV medication at the right time of day.</td>
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<tr>
<td>18. HIV medication should be taken immediately if symptoms do not improve.</td>
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<td></td>
</tr>
<tr>
<td>19. HIV medication should not be taken immediately.</td>
<td></td>
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<tr>
<td>20. Fasting before medication protects patients from getting medication.</td>
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<tr>
<td>21. Physical exercise (e.g., yoga, tai chi) can help reduce stress levels in HIV patients.</td>
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</tr>
</tbody>
</table>

Thank you for completing this questionnaire.

**CES-D Mood Scale**

(Center for Epidemiologic Studies Depression Scale)

Patient name: 

Date: 

Below is a list of some of the ways you may have felt or behaved in the past week: circle one number on each list.

<table>
<thead>
<tr>
<th>Item</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was bothered by things that usually don't bother me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I felt that I could not get along with people.</td>
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<tr>
<td>3. I felt the need to get away from everything or everybody.</td>
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<tr>
<td>4. I felt that I was as good as other people.</td>
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<td></td>
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<tr>
<td>5. I had trouble keeping my mind on what I was doing.</td>
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<tr>
<td>6. I was depressed.</td>
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<tr>
<td>7. I talked a lot.</td>
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<tr>
<td>8. I was bothered by things that usually don't bother me.</td>
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</tr>
<tr>
<td>9. I felt that I could not get along with people.</td>
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<tr>
<td>10. I felt the need to get away from everything or everybody.</td>
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</tr>
</tbody>
</table>

Thank you for completing this questionnaire.

**HIV Medication Readiness Questionnaire**

Patient name: 

Date: 

As you probably know, taking HIV medication can make people to make changes to their daily routines and behaviors. For the reasons, it is important for people to have some feelings about HIV medications. The following questions are how you feel you would feel if you were to start taking HIV medications TODAY.

Please read each of the following statements, and then, on a scale of 0 to 4, rate how ready you feel you are today to make the following changes (a 0 means you would not do it; a 4 means you would do it).

Please tell us how you are feeling (not what you think you want to hear).

If you were to start taking HIV pills today, how ready would you be to:

- Not do it at all ready?
- Mostly ready?
- Very ready?
- Extremely ready?

Example:

1. Things you need to do to start taking HIV pills for a long time (e.g., go to the doctor for HIV pills)
   - Not do it at all ready 0
   - Mostly ready 1
   - Very ready 2
   - Extremely ready 3

2. Things you need to do to start taking HIV pills for a long time (e.g., go to the doctor for HIV pills)
   - Not do it at all ready 0
   - Mostly ready 1
   - Very ready 2
   - Extremely ready 3

3. Things you need to do to start taking HIV pills for a long time (e.g., go to the doctor for HIV pills)
   - Not do it at all ready 0
   - Mostly ready 1
   - Very ready 2
   - Extremely ready 3

4. Things you need to do to start taking HIV pills for a long time (e.g., go to the doctor for HIV pills)
   - Not do it at all ready 0
   - Mostly ready 1
   - Very ready 2
   - Extremely ready 3

5. Things you need to do to start taking HIV pills for a long time (e.g., go to the doctor for HIV pills)
   - Not do it at all ready 0
   - Mostly ready 1
   - Very ready 2
   - Extremely ready 3

6. Things you need to do to start taking HIV pills for a long time (e.g., go to the doctor for HIV pills)
   - Not do it at all ready 0
   - Mostly ready 1
   - Very ready 2
   - Extremely ready 3

Thank you for completing this questionnaire.
Pre-treatment Questionnaires

- 3 brief, easy-to-use questionnaires
- Validated, evidenced-based tools
- Self-report measures (i.e. patient fills them out in the waiting room in 5-10 minutes)
- Easy Scoring sheet used for health care providers to score in 5 minutes (scoring is on the back of the each questionnaire sheet)
- So the Health Care Provider can provide real time feedback to patients
- Spanish Translations of 3 scales available
What do we do with research knowledge?

“What happens in R&D stays in R&D.”
Patient 1 (Mary)

- 28 year old woman from Rwanda
- Diagnosed HIV+ on immigration to Canada in 2004
- CD4 count: 350
- Viral load: 10,842 copies/ml
- 2 young children (both are HIV negative)
- Mary previously took HIV medications during pregnancy but then was non-adherent after her children were born
Pre-Treatment Questionnaires

1. HIV Treatment Knowledge Scale

2. CES-D Mood Scale

3. HIV Medication Readiness Questionnaire

Each scale is designed to assess different aspects of a patient's knowledge, mood, and readiness for HIV treatment, respectively. These tools are used by healthcare providers (HCP) with patients to evaluate their understanding of HIV treatment, mood status, and readiness for medication adherence.
Case 1 – Mary’s Psychological Questionnaire Scores

- HIV treatment Knowledge Scale - **85% correct**
  - Address gaps in HIV treatment knowledge regarding items which were answered incorrectly (e.g., lack of information about adherence and drug resistance) – provide this education ASAP

- HIV Medication Readiness Score - **Scored 14 out of 40**
  - This patient is **not** psychologically ready for starting HAART
  - Need score of 31 as cut-off score for readiness
  - Provide counselling to increase HIV treatment readiness and address potential barriers to adherence (e.g. HIV pills and stigma)

- CES-D Depression Scale - **Scored 7 in the non-depressed range**
  - This patient is **not** depressed and from a depression perspective could start HAART

**Recommendation:**
Provide STAART 4 session readiness/adherence counselling to increase HIV treatment readiness

Psychological measures should be completed again in 4 weeks and then she would hopefully be ready to start her HIV medications
4 weeks later….

You did your 

**STAART readiness adherence intervention** with Mary and it showed good results

- In counselling you discovered that Mary was non-adherent in the past due to fears of stigma associated with taking HIV medications.

- Addressing the feelings about HIV stigma and offering Mary the possibility of a once/day HIV pill to be taken at home at night, increased Mary’s confidence in being able to be adherent to HAART this time.

- As well, you did a one week pre-HIV treatment pill taking practice exercise in which the patient “swallowed one jelly bean” at 9 PM every night and she was able to be completely adherent to this pill taking schedule

- Also, Mary now realizes she needs to take her HIV pills so that she can be healthy and live a long life to take care of her children

• The patient re-completes the readiness scale again at 4 weeks and now scores 31 on the readiness scale.

• This patient is now more ready to start her HIV therapy and she will have a better chance at succeeding
A randomized controlled psycho-education intervention trial: Improving psychological readiness for successful HIV medication adherence and reducing depression before initiating HAART


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Abstract
The purpose of this study was to evaluate a novel psycho-educational intervention intended to increase patients’ medication preparedness and treatment adherence skills before initiating highly active antiretroviral therapy (HAART). Sixty-three HIV-positive patients not currently on antiretroviral therapy participated in a randomized controlled trial of a standardized, four-session psycho-educational intervention (Supportive Therapy for Adherence to Antiretroviral Treatment; STAART). Session topics included learning techniques to increase medication adherence and learning effective strategies to cope with stress and depression. Patients completed psychological questionnaires assessing psychological readiness to initiate HAART and depressed mood. They completed both measures at study baseline and at four-weeks post-baseline. After controlling for baseline medication readiness scores, intervention patients (n = 30) reported significantly higher mean medication readiness following the STAART intervention (four-weeks post-baseline) (27.3 ± 6.9) compared to controls (n = 33; 24.6 ± 9.9; p < 0.05). Among depressed patients (n = 27), those receiving the intervention (n = 15) reported significantly lower mean depression scores at four-weeks post-baseline (22.5 ± 12.9) compared to controls (n = 12; 27 ± 9.9; p < 0.05). The STAART intervention enhanced HIV treatment readiness by better preparing patients prior to initiating HAART. It was also beneficial for reducing depressive symptoms in depressed, HIV-positive patients.

AIDS Care, October 2006; 18(7): 830–838
Supportive Therapy for Adherence to Anti Retroviral Treatment (STAART) Balfour et al 2006

Randomized controlled adherence intervention study

Goal is to help better prepare patients *before* starting treatment by:

- Building adherence skills
- Increasing health belief self-efficacy
- Increasing psychological readiness to start treatment
- Empowering HIV patients to feel more engaged and in control of their treatment
STAART Adherence Study

STAART Sessions (91 page Adherence Manual)

• Session 1
  • Living with HIV and the meaning of HIV medications

• Session 2
  • HIV medications and adherence practice exercise

• Session 3
  • Identifying Barriers to HIV medication adherence and strategies to improve adherence

• Session 4
  • Coping with stress and depression
Decisional Balance (informed choice)

Decisions about Starting HIV Meds

Pros

Cons
Collaboration
Web based adherence education toolkit

www.staarttohaart.com
How about interventions to increase adherence after starting HIV medication?

Literature Review on recent HIV adherence Interventions studies: (Dr O’Cleirigh, 2011)

(1) Recent meta analyses reviewing HIV adherence interventions

- Simoni et al., JAIDS 2006
- De Bruin et al Arch Intern Med 2010
- Hart et al., JAIDS, 2010

**Conclusions:** Adherence interventions can be effective in improving adherence and improving medical outcomes (< viral load)
Intervening to Improve HIV medication Adherence – What do we Know?

- Recently Reported RCTs on Interventions to Increase HIV medication adherence

**List of RCT Adherence Studies**
- Ingersoll, et al., *Drug Alcohol Dep*, 2011
- Johnson et al., *Ann Behav Med*, 2011
- Fisher et al., *AIDS Behav*, 2011
- Safren et al., *Health Psychology*, 2010
- De Bruin et al., *Health Psychology*, 2010
- Webel et al., *AIDS Care*, 2010
- Simoni et al., *JAIDS*, 2009
Safren et al 2009, Health Psychology, Vol 28, 1, 1-10

Title: A Randomized Controlled trial of Cognitive Behavioral Therapy (CBT) for adherence and depression in HIV infected Individuals

Subjects: 45 HIV+ men and women with depression

Design: Randomized to Group 1 or Group 2
(1) Adherence “life steps” and CBT (12 sessions) for depression vs (2) Usual HIV care

Overall Results:
Those receiving the adherence and CBT depression intervention had
- Lower depression scores, Increased adherence, reduced VL
Results of HIV adherence interventions

• New Technology Based HIV Adherence Interventions

Studies using Text Messages on cell phones

Lester et al., 2010 published in *Lancet*

Cell phone adherence intervention associated with significantly more reports of >95% adherence and higher proportion of HIV patients achieving an undetectable viral load at 6 months follow up.

Pop-Eleches., et al., 2011 published in *AIDS*

Significant treatment effect on HIV medication adherence (MEMS caps) for those receiving weekly cell phone reminder messages across 48 weeks of follow up.
Conclusions: HIV Adherence Interventions

Several different methodologies are associated with the acquisition of significantly improved adherence, including:

1. Educational interventions that deal with increasing understanding and motivation for adhering to HIV medications.

2. Life Steps (Adherence Problem Solving) and CBT for depression.

3. Cell Phone Based Interventions – text message reminders increase adherence levels (in low resources countries).
Summary of HIV medication Adherence

1. It is important to first assess and address HIV patients’ levels of (1) HIV medication readiness (2) HIV treatment knowledge (3) Depression (with easy to use tools)

2. Provide adherence interventions to increase adherence skills before starting HIV medications

3. When starting HIV medications, providing adherence support with low cost innovative technology (cell phone text reminders) can assist with adherence and treatment outcomes (< viral load)
Gracias ! Thank you !
Team Effort !

• Gracias “CORPORACION DE LUCHA CONTRA EL SIDA”
• Thank CIHR who supported this research & collaborators
• Thank our HIV study participants
A Good STAART to HAART

An HIV Treatment Readiness Toolkit