Supplement 1: Search strategy

November 12 & 13, 2018: N = 2420

DATABASES:
- CINAHL, N = 195 (Nov-13)
- Cochrane Library of Systematic Reviews, N = 217 (Nov-13)
- Embase, N = 947 (Nov-12)
- PsycINFO, N = 105 (Nov-12)
- PubMed, N = 304 (Nov-13)
- Web of Science, N = 652 (Nov-13)

SEARCH METHODS (as per protocol manuscript):
- From 1995 to present (when combination ART was introduced), no language restrictions:
  Systematic review OR meta-analysis
  + Adhere*nce OR complian*ce OR retention OR dropouts OR los*s adj2 to follow-up OR attrition OR nonadheren* OR uncompliant* OR treatment refusal OR persistence OR non-persistence OR initiat*
  OR start* OR uptake
  + HIV OR human immune-deficiency virus OR human immuno-deficiency virus
  + Antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR Highly Active Antiretroviral Therapy OR ART or HAART

Librarian Consult (November 12, 2018)

Q: Verify adequate capture of HIV SRs
- impossible to get MeSH for all keywords but make sure to get good subject headings for the main concepts at the very least (e.g. antiretroviral treatment, HIV)
- fix truncated terms ‘adherence’, ‘uncompliant**’
- could add adj2 for los* to follow-up
- good practice to use explode throughout

Q: Verify CINAHL searching
- doesn’t use MeSH, need to look up subject headings (uncheck box to get the key word)
- re: WoS – use ‘SU’ to ~ represent search in all fields
**Database:** CINAHL via EBSCOhost Research Databases  
**Completed on:** November 13, 2018  
**Search Strategy:**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>(MH &quot;Systematic Review&quot;)</td>
<td>68,246</td>
</tr>
<tr>
<td>S2</td>
<td>(MH &quot;Meta Analysis&quot;)</td>
<td>35,345</td>
</tr>
<tr>
<td>S3</td>
<td>S1 OR S2</td>
<td>87,072</td>
</tr>
<tr>
<td>S4</td>
<td>(MH &quot;Patient Compliance+&quot;) OR (MH &quot;Treatment Refusal&quot;) OR (MH &quot;Medication Compliance&quot;)</td>
<td>46,042</td>
</tr>
<tr>
<td>S5</td>
<td>(MH &quot;Research Subject Retention&quot;)</td>
<td>692</td>
</tr>
<tr>
<td>S6</td>
<td>(MH &quot;Research Dropouts&quot;) OR (MH &quot;Patient Dropouts&quot;)</td>
<td>2,506</td>
</tr>
<tr>
<td>S7</td>
<td>(MH &quot;After Care&quot;)</td>
<td>11,133</td>
</tr>
<tr>
<td>S8</td>
<td>adhere* OR nonadhere* OR complian* OR uncomplian* OR retention OR dropout OR lost to follow-up OR attrition OR treatment refusal OR persistence OR non-persistence OR initiat* OR start* OR uptake</td>
<td>339,844</td>
</tr>
<tr>
<td>S9</td>
<td>S4 OR S5 OR S6 OR S7 OR S8</td>
<td>349,538</td>
</tr>
<tr>
<td>S10</td>
<td>(MH &quot;Human Immunodeficiency Virus+&quot;)</td>
<td>8,168</td>
</tr>
<tr>
<td>S11</td>
<td>(MH &quot;HIV-Infected Patients+&quot;) OR (MH &quot;HIV Infections+&quot;)</td>
<td>80,662</td>
</tr>
<tr>
<td>S12</td>
<td>HIV OR human immun* deficiency virus</td>
<td>96,874</td>
</tr>
<tr>
<td>S13</td>
<td>S10 OR S11 OR S12</td>
<td>104,864</td>
</tr>
<tr>
<td>S14</td>
<td>(MH &quot;Antiretroviral Therapy, Highly Active&quot;)</td>
<td>5,519</td>
</tr>
<tr>
<td>S16</td>
<td>antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR anti-HIV agents OR anti-retroviral agents OR Highly Active Antiretroviral Therapy OR HAART</td>
<td>24,400</td>
</tr>
<tr>
<td>S17</td>
<td>S14 OR S15 OR S16</td>
<td>26,013</td>
</tr>
<tr>
<td>S18</td>
<td>S3 AND S9 AND S13 AND S17</td>
<td>195</td>
</tr>
</tbody>
</table>

(Limiter: Published Date: 19950101-20181231)
Database: Cochrane Database of Systematic Reviews
Completed on: November 13, 2018 (updated search from 216 results on Nov-7)

Search Strategy:

'systematic review OR meta-analysis in All Text AND adherence OR compliance OR retention OR dropouts OR loss to follow-up OR attrition OR nonadheren* OR uncompliant* OR treatment refusal OR persistence OR non-persistence OR initiat* OR start* OR uptake in All Text AND HIV OR human immune-deficiency virus OR human immuno-deficiency virus in All Text AND antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR Highly Active Antiretroviral Therapy OR ART or HAART in All Text - with Cochrane Library publication date Between Jan 1995 and Dec 2018 (Word variations have been searched)' (216)

'adhere* OR nonadhere* OR complian* OR uncomplian* OR retention OR dropout OR lost to follow-up OR attrition OR treatment refusal OR persistence OR non-persistence OR initiat* OR start* OR uptake in All Text AND HIV OR human immun* adj2 deficiency virus in All Text AND antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR anti-HIV agents OR anti-retroviral agents OR Highly Active Antiretroviral Therapy OR ART OR HAART in All Text - with Cochrane Library publication date Between Jan 1995 and Dec 2018 (Word variations have been searched)' (217)

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Database: Embase <1974 to 2018 November 09> via Ovid
Completed on: November 12, 2018 (updated search from 720 results on Nov-7)

Search Strategy:
--------------------------------------------------------------------------------
1 systematic review.mp. or exp "systematic review"/ (241913)
2 meta analysis.mp. or exp "meta analysis"/ (232198)
3 (complian* or uncomplian*).mp. or exp "medication compliance"/ (306191)
4 retention.mp. (225178)
5 dropout.mp. or exp "patient dropout"/ (10447)
6 (los* adj2 to follow up).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (35898)
7 attrition.mp. (14277)
8 (adhere* or nonadhere*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (255209)
9 treatment refus*.mp. or exp "treatment refusal"/ (17490)
10 persistence.mp. (102883)
11 initiat*.mp. (789288)
12 start*.mp. (634133)
13 uptake.mp. (461506)
14 1 or 2 (366337)
15 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 (2578956)
16 (HIV or human immune-deficiency virus or human immuno-deficiency virus).mp. (367212)
17 exp "human immunodeficiency virus"/ or exp "human immunodeficiency virus infection"/ or exp "human immunodeficiency virus infected patient"/ (452990)
18 16 or 17 (501218)
19 antiretroviral therapy.mp. or exp "antiretroviral therapy"/ (69407)
20 antiretrovirals.mp. (4928)
21 antiretroviral treatment.mp. (9740)
22 exp "antiretrovirus agent"/ (178047)
23 highly active antiretroviral therapy.mp. or exp "highly active antiretroviral therapy"/ (38980)
24 (ART or HAART).mp. (170581)
25 19 or 20 or 21 or 22 or 23 or 24 (340645)
26 14 and 15 and 18 and 25 (948)
27 limit 26 to yr="1995 -Current" (947)
*******************************************************************************
Database: PsycINFO <1987 to November Week 1 2018> via Ovid
Completed on: November 12, 2018 (updated search from 101 results on Nov-7)
Search Strategy:

1 systematic review.mp. (21950)
2 meta analysis.mp. or exp "meta analysis"/ (25527)
3 1 or 2 (41919)
4 exp "compliance"/ or exp "treatment compliance"/ (16310)
5 (complian* or uncomplian*).mp. (32297)
6 dropout.mp. or exp "treatment dropout"/ (7191)
7 retention.mp. (34515)
8 attrition.mp. or exp "experimental attrition"/ (6818)
9 (los* adj2 to follow up).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (1103)
10 adhere*.mp. (31235)
11 treatment refus*.mp. or exp "treatment refusal"/ (886)
12 persistence.mp. (16819)
13 initiate.mp. (9915)
14 start*.mp. (82553)
15 uptake.mp. (13475)
16 nonadherence.mp. (1750)
17 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 (215604)
18 HIV.mp. or exp "HIV"/ (6071)
19 (human immunodeficiency virus or human immune-deficiency virus or human immuno-deficiency virus).mp. (6071)
20 18 or 19 (53288)
21 exp "drug therapy"/ (121212)
22 (antiretroviral or antiretroviral therapy or antiretroviral treatment or ART or HAART).mp. (40678)
23 21 or 22 (158296)
24 3 and 17 and 20 and 23 (105)
25 limit 24 to yr="1995 -Current" (105)

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Database: PubMed <1995/01/01 to 31-Dec-2018>
Completed on: November 13, 2018 (updated search from 282 results on Nov-7)
Search Strategy:
--------------------------------------------------------------------------------
(((((((systematic review OR meta-analysis)) AND (adherence OR compliance OR retention OR dropouts OR loss to follow-up OR attrition OR nonadherent OR noncompliant OR treatment refusal OR persistence OR non-persistence OR initiat* OR start* OR uptake)) AND (HIV OR human immune-deficiency virus OR human immuno-deficiency virus)) AND (antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR Highly Active Antiretroviral Therapy OR ART or HAART)) AND systematic[sb]) AND systematic review[ti] (282)

((((((systematic review OR meta-analysis)) AND (adhere* OR nonadhere* OR complian* OR uncomplian* OR retention OR dropout OR lost to follow-up OR attrition OR treatment refusal OR persistence OR non-persistence OR initiat* OR start* OR uptake)) AND (HIV OR human immune-deficiency virus OR human immuno-deficiency virus)) AND (antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR Highly Active Antiretroviral Therapy OR ART OR HAART OR anti-HIV agents OR anti-retroviral agents)) AND systematic[sb]) AND systematic review[ti] Filters: Publication date from 1995/01/01 to 2018/12/31 (304)

MeSH headings [mh], captured via ‘All Fields’ search:
meta-analysis [publication type], meta-analysis as topic / review, systematic patient dropouts / patient compliance (patient adherence/nonadherence) / treatment adherence and compliance (therapeutic adherence/compliance) / medication adherence (nonadherence, compliance/noncompliance) / lost to follow-up HIV / anti-HIV agents / anti-retroviral agents / antiretroviral therapy, highly active (HAART)
<table>
<thead>
<tr>
<th>therapy</th>
<th>“therapy”[Subheading] OR “therapy”[All Fields] OR “therapeutics”[MeSH Terms] OR “therapeutics”[All Fields]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART</td>
<td>“art”[MeSH Terms] OR “art”[All Fields]</td>
</tr>
</tbody>
</table>

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Database: Web of Science
Completed on: November 13, 2018
Search Strategy:

#1  TS=(systematic review OR meta-analysis)  271,168
#2  TS=(adhere* OR nonadhere* OR complian* OR uncomplian* OR retention OR dropout OR los* follow-up OR attrition OR treatment refusal OR persistence OR non-persistence OR initiat* OR start* OR uptake)  2,512,891
#3  TS=(HIV OR human immun* deficiency virus)  306,952
#4  TS=(antiretroviral therapy OR antiretrovirals OR antiretroviral treatment OR anti-HIV agents OR anti-retroviral agents OR ART OR Highly Active Antiretroviral Therapy OR HAART)  461,846
#5  #4 AND #3 AND #2 AND #1  652