Appendix 7 GRADE Evidence Profiles

Question: Should multi-faceted community support (vs. standard care) be used for improving retention in antiretroviral therapy (ART) programs in ADULTS with HIV infection in resource-limited settings?
Settings: Mozambique, Peru, Rwanda, South Africa
Bibliography: RCT: Pearson 2007. Observational studies: CASA (Muñoz 2010, Muñoz 2011), Franke 2013, Kheth'Impilo (Fatti 2012)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multi-faceted community support	Standard care	Relative (95% CI)	Absolute		
Retention in care: Pearson 2007 RCT data (12 months)												
1	randomised trials[1]	serious[2]	no serious inconsistency[3]	no serious indirectness	no serious imprecision	none	148/175 (84.6%)	130/175 (74.3%)	RR 1.14 (1.02 to 1.27)	104 more per 1000 (from 15 more to 201 more)	ÅÅÅO MODERATE	CRITICAL
Mortality (60 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	1770/19668 (9%)	5012/47285 (10.6%)	RR 0.85 (0.81 to 0.89)	16 fewer per 1000 (from 12 fewer to 20 fewer)	ÅÅOO LOW	CRITICAL
Mortality (24 months)												
1[4]	observational studies	no serious risk of bias	no serious inconsistency[3]	no serious indirectness	very serious[5]	see footnotes[6,7]	6/60 (10%)	17/60 (28.3%)	RR 0.35 (0.15 to 0.83)	184 fewer per 1000 (from 48 fewer to 241 fewer)	ÅOOO VERY LOW	CRITICAL
Mortality (12 months)												
2	observational studies	no serious risk of bias	no serious inconsistency[3]	no serious indirectness	serious[8]	none[7]	19/364 (5.2%)	37/366 (10.1%)	RR 0.52 (0.30 to 0.87)	49 fewer per 1000 (from 13 fewer to 71 fewer)	ÅOOO VERY LOW	CRITICAL
Retention in care (60 months)												

1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	15557/19668 (79.1%)	34801/47285 (73.6%)	RR 1.07 (1.07 to 1.08)	52 more per 1000 (from 52 more to 59 more)	ÂÅOO LOW	CRITICAL

Retention in care (24 months)												
1	observational studies	no serious risk of bias	no serious inconsistency[3]	no serious indirectness	serious[8]	see footnotes[6,7]	52/60 (86.7%)	31/60 (51.7%)	RR 1.68 (1.29 to 2.18)	351 more per 1000 (from 150 more to 610 more)	ÅOOO VERY LOW	CRITICAL
Retention in care (12 months)												
2[9]	observational studies	no serious risk of bias	no serious inconsistency[3]	no serious indirectness	no serious imprecision	none	334/364 (91.8%)	306/366 (83.6%)	RR 1.10 (1.04 to 1.16)	84 more per 1000 (from 33 more to 134 more)	ÅÅOO LOW	CRITICAL
Lost to follow-up (60 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	2596/19668 (13.2%)	8369/47285 (17.7%)	RR 0.75 (0.72 to 0.78)	44 fewer per 1000 (from 39 fewer to 50 fewer)	ÅÅOO LOW	CRITICAL
Lost to follow-up (12 months)												
1	observational studies	no serious risk of bias	no serious inconsistency[3]	no serious indirectness	very serious[5]	none[6]	3/304 (0.99%)	10/306 (3.3%)	RR 0.30 (0.08 to 1.09)	23 fewer per 1000 (from 30 fewer to 3 more)	ÅOOO VERY LOW	CRITICAL
Lost to follow-up or died (12 months)												
1	observational studies	no serious risk of bias	no serious inconsistency[3]	no serious indirectness	very serious[5]	none[6]	16/304 (5.3%)	32/306 (10.5%)	RR 0.5 (0.28 to 0.9)	52 fewer per 1000 (from 10 fewer to 75 fewer)	ÅOOO VERY LOW	CRITICAL

[1] Numerators back-calculated from reported proportions.

[2] Trial not blinded. Graded down by 1.

[3] Although systematic review and meta-analysis by Ford and colleagues (2009) found no benefit of directly observed therapy (DOT) in ART care, this is a multi-faceted, community-based type of intervention that also includes psychosocial and other support. Not graded down.

[4] Muñoz 2011's 24 month retention data based on Table 3, "On HAART."

[5] Very few events (<50); optimal information size not met. Graded down by 2.

[6] Strong association, but not graded up +1 due to concerns about imprecision (few events).

[7] Intervention group in CASA had markedly worse socioeconomic status, but still had better outcomes. Not graded up +1 due to concerns about imprecision (few events).

[8] Few events (<200); optimal information size not met. Graded down by 1.

[9] Muñoz 2010's 12 month retention data based on Table 4, "On HAART."

Question: **Should multi-faceted community support (vs. standard care) be used for improving retention in antiretroviral therapy (ART) programs in CHILDREN with HIV infection in resource- limited settings?**
Settings: South Africa
Bibliography: Kheth'Impilo (Grimwood 2012)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multi-faceted community support	Standard care	Relative (95% CI)	Absolute		
Mortality (36 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	strong association[1]	12/323 (3.7%)	259/3240 (8%)	RR 0.46 (0.26 to 0.82)	43 fewer per 1000 (from 14 fewer to 59 fewer)	ÅÅÅO MODERATE	CRITICAL
Retention in care (36 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	296/323 (91.6%)	2773/3240 (85.6%)	RR 1.07 (1.03 to 1.11)	60 more per 1000 (from 26 more to 94 more)	ÅÅOO LOW	CRITICAL
Retention in care (24 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	299/323 (92.6%)	2854/3240 (88.1%)	RR 1.05 (1.02 to 1.09)	44 more per 1000 (from 18 more to 79 more)	ÅÅOO LOW	CRITICAL
Retention in care (12 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	310/323 (96%)	2974/3240 (91.8%)	RR 1.05 (1.02 to 1.07)	46 more per 1000 (from 18 more to 64 more)	ÅÅOO LOW	CRITICAL
Lost to follow-up (36 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	16/323 (5%)	195/3240 (6%)	RR 0.82 (0.5 to 1.35)	11 fewer per 1000 (from 30 fewer to 21 more)	ÅÅOO LOW	CRITICAL

[1] Large effect. Graded up by 1.

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Adherence support groups**	**standard care**	**Relative (95% CI)**	**Absolute**		
Lost to follow-up or died (40 months)												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[1]	no serious imprecision	Very strong association.[2]	15/502 (3%)	348/2327 (15%)	RR 0.2 (0.12 to 0.33)	120 fewer per 1000 (from 100 fewer to 132 fewer)	ÅÅÅO MODERATE	CRITICAL

[1] Retrospective analysis. Graded down by 1.
[2] Very large effect. Graded up by 2.

Pearson CR, Micek MA, Simoni JM, Hoff PD, Matediana E, Martin DP, et al. Randomized control trial of peer-delivered, modified directly observed therapy for HAART in Mozambique. J Acquir Immune Defic Syndr 2007; 46: 238–44.

Grimwood A, Fatti G, Mothibi E, Malahlela M, Shea J, Eley B. Community adherence support improves programme retention in children on antiretroviral treatment: a multicentre cohort study in South Africa. J Int AIDS Soc 2012; 15: e17381.

Fatti G, Meintjes G, Shea J, Eley B, Grimwood A. Improved survival and antiretroviral treatment outcomes in adults receiving community-based adherence support: 5-year results from a multicentre cohort study in South Africa. J Acquir Immune Defic Syndr 2012; 61: e50–58.

Muñoz M, Finnegan K, Zeladita J, Caldas A, Sanchez E, Callacna M, et al. Community-based DOT-HAART accompaniment in an urban resource-poor setting. AIDS Behav 2010; 14: 721–30.

Muñoz M, Bayona J, Sanchez E, Arevalo J, Sebastian JL, Arteaga F, et al. Matching social support to individual needs: a community-based intervention to improve HIV treatment adherence in a resource-poor setting. AIDS Behav 2011; 15: 1454–64.

Franke MF, Kaigamba F, Socci AR, Hakizamungu M, Patel A, Bagiruwigize E, et al. Improved retention associated with community-based accompaniment for antiretroviral therapy delivery in rural Rwanda. Clin Infect Dis 2013; 56: 1319–26.