

Table S1: Assessment of individual studies on support groups (SGs) by outcome

Study Characteristics				Key Findings (Magnitude of effect (HR, OR, RR, RD & 95% CI) or other description)	Quality of evidence for individual studies			Evidence from Economic Evaluation (Yes or No)	Comments
Citation	Study Design	Study Period, Country	Participants and outcomes		Validity (Good, Fair, or Poor)		Quality of Evidence (Strong, Medium, Weak)		
					Internal	External			
Mortality									
Decroo J, et al. ¹⁷	Cohort	2/2008-12/2012 Mozambique	5729 community adherence group (CAG) members	Mortality rates among 5729 CAG members was, 2.1 per 100 person-years (PYs). Of the 5729 adult CAG members, only 208 (3.6%) died after a median follow-up time of 19 months (IQR 10–29). Factors associated with LTFU and mortality were presented together.	Fair	Good	Medium	No data	There was no comparison group; instead the authors in their discussion quoted mortality from a cohort in Mozambique, 17.4% (14.9–20.0) were known to have died (Wandeler et al).
Morbidity									
Wouters E, et al. ¹⁵	Prospective cohort	2004–2007, S. Africa	268, Assessed community support (CHWs, SGs, Treatment buddies on VL, CD4)	At 12 months, SG participants were significantly more likely (β 0.12, $P < 0.001$) to have an undetectable viral load and a CD4 cell count above 200 cells/mL than those who did not participate in a SG. Similar outcomes were maintained 24 months after enrolment (β 0.13, $P < 0.01$)	Fair	Good	Medium	No data	SG meetings were at the clinic-67.3%, church-6.0%, home of a SG member-9.7%, hospice-3.9% Most met once a week-59.6%, 21.2% met 2–3 times/month 19.2% only once a month. VL
Achieng L, et al. ²³	Prospective observational cohort	11/2009-4/2010, Kenya	301 assigned to various adherence interventions incl. SGs. End points: time to treatment failure, stoppage of ART; death; or loss to follow-up	Time to treatment failure was longer in patients participating in SGs (448 days vs. 337 days, $P = 0.001$). SGs were associated with better adherence (89% vs. 82%, $P = 0.05$) and risk of treatment failure was significantly reduced by SGs ($HR = 0.43$, $P = 0.003$), the impact being higher with the number of SG sessions attended (3 vs. 2, $p=0.01$ $p=0.01$). Women were more likely than men to be retained (74% vs. 6%, $p=0.027$)	Fair	Fair	Medium	No data	

Dageid, W, et al. ¹⁸	Mixed methods- Qualitative & Quantitative , program evaluation	2003-2005, South Africa	44 Kudu SG Members were compared to 23 non- members	SG membership was associated with statistically significant reduction in; somatic symptoms [10.54 to 7.08 (p=0.05)], anxiety and insomnia [10.35 to 7.96 (p= 0.05)]; and social dysfunction [6.38 to 2.46 (p=0.01)], but a non-significant decrease in depression scores [4.85 to 3.38, (P>0.05)]; while non-SG members showed only non-significant reductions on somatic scores on the somatic scale and social dysfunction scale but an increase in scores for anxiety, insomnia and for depression respectively	Poor	N/A	Weak	No data	Results from the quantitative component are limited by the small sample size
Elul, B, et al. ²⁴	Cross sectional survey	9/2008-4/2009, Rwanda	1472 participants at 20 sites. 53% were enrolled in SGs. Outcomes; adherence and viral load	Participating in an association of PLHIV was associated with decreased risk of non-adherence and of having detectable viral load (AOR = 0.60, 95% CI [0.42–0.87]). After adjusting for duration on ART, age and CD4 count at ART initiation, participating in an association for PLHIV showed an inverted association with having a viral load of more than 40 copies/mL (AOR= 0.39, 95% CI [0.24–0.65]).	Fair,	Good	Medium	No data	The article did not directly report on morbidity or mortality but adherence and VL
Kaaya, S, et al. ²¹	Unblinded RCT	10/ 2001 – 2/2004, Tanzania	331 , randomized to SG (n= 168) and control (n =163)	A SG intervention was associated with a marginal reduction in depressive symptoms. Fewer women in the intervention (60%) were depressed compared to control (73%), RR=0.82, 95% CI, 0.67-1.01 (p= 0.066). There was a 20% increase in disclosure among women in the intervention arm compared with those in the control arm (56% vs. 46%), RR=1.2, 95% CI: 0.91-1.6, (p= 0.19). 88% of SG participants were satisfied with results of disclosure versus 62% in the control arm (RR 1.4, 95% CI: 1.1-1.8, p0.004).	Fair	Fair	Strong	No data	Over 30% randomized to intervention did not initiate intervention or SOC. Intervention lasted only six weeks.
Ndu, A, et al. ²⁵	Cross Sectional	6/2007 Nigeria	122 ART clinic attendees	Participants who belonged to a SG (only 46.2%) were less likely to be depressed than those who did not (66.7% vs. 54.3% P=0.236) (not statistically significant)	Poor	Poor	Medium	No data	Causality between symptoms of anxiety and depression and their correlates could not be firmly established.
Pappin M, et al. ²⁶	Cross Sectional	2007-08, S. Africa	716 starting ART at 12 public health facilities	Participating in a SG was associated with decreased symptoms of depression (OR = 0.21, CI 0.05-0.99)	Poor	Fair	Medium		
Retention in care									
Decroo, J, et al. ¹⁶	Observational Cohort Study	2/2008-5/2010, Mozambique	1384 CAG members, program data	During follow up 1301 patients still remained in community groups, 1269 (97.5%) were remaining in care, 30 (2%) had died, and 2 (0.2%) were LTFU. Proportion of patients LTFU was lower (0.1%, range 0-0.5%) than the Mozambique national average (15%) and that reported in the literature (1.2-26%). Mortality was low. There was no comparison group. Only 3.5% decided to transfer back to conventional care.	Poor	Fair	Medium	No data	

Decroo J, et al. ¹⁷	Same as above. Longer follow up	2/2008-12/2012, Mozambique	5729 CAG members, program data (No comparison)	Long term retention was very high (91.8%) at 4 years of follow-up. Retention at one year on ART was 97.7% (95% CI 97.4–98.2); at 2 years, 96.0% (95% CI 95.3–96.6); at 3 years, 93.4% (95% CI 92.3–94.3); and at 4 years, 91.8% (95% CI 90.1–93.2). Overall attrition was 2.2/100 PYs (3.9%); mortality and LTFU rates were 2.1 and 0.1/100 PYs respectively compared to; 5/100 PYs among patients more than 2 years on ART in Sub-Saharan Africa (Fox & Rosen 2010); 19.8 per 100 PYs in Mozambique [27]; and 48.6% at 3 years [38]	Poor	Fair	Medium	No data	
Wouters E, et al. ³⁷	Prospective cohort/ program data	2004–2007, S. Africa	268 patients enrolled in the public sector ART. No statistical measures reported	Having a treatment buddy, CHW, or participation in SG at 6 months positively influenced patient retention at time 12 months. Having a TrB, CHW, or participation in a SG at 12 months positively influenced patient retention at 24 months after starting ART.	Fair	Good	Medium	No data	Findings may reflect the inherent differences between the patients lost and those retained.
Lamb MR, et al. ¹⁹	Cohort study	Jan 1, 2005-Sept 30, 2011	312,335 patients (10-24 yrs) at 160 HIV clinics: Kenya-41, Mozambique-31, Rwanda-41, Tanz-47	<u>Pre-ART</u> : There was no association between Pre-attrition and attending clinics that offered adolescent SGs (Data not reported). <u>ART</u> : Youth attending clinics that offered adolescent SGs experienced lower attrition after ART initiation than youth attending clinics not offering these services (AHR=0.73, 95% CI: 0.52–1.0)	Good	Good	Medium	No data	
Muchedzi A et al. ²⁷	Cross-sectional	6-8,2008 Zimbabwe	147 PMTCT clients were interviewed and included in the survey.	Women enrolled in a SG were twice as likely to access care and treatment (OR = 2.34, 95% CI 1.13-4.88). On multivariate analysis, access to HIV care and treatment were associated with participants enrolled in a SG (OR = 2.34, CI 1.13-4.88).	Poor	Poor	Medium	No data	Assessed factors associated with enrolment in care and not morbidity directly
Quality of life									
Dageid W, et al. ¹⁸	Mixed methods Program evaluation	See above	44 Kudu SG Members and 23 non- members	<u>From FGDs</u> : SG members reported that they had lived positively 35/44, felt stronger (50%) compared to non-members. Negative findings included gossip and stigmatization from other SG members and from the community and inadvertent disclosure. <u>From Surveys</u> : (40/44)90% of SG members reported that the SG had a positive impact, all SG participants felt stronger. Statistically significant improvement in scales from baseline for somatic symptoms, anxiety and insomnia and social dysfunction, see above.	Poor	N/A	Weak,	No data	
Gillet HJ, et al. ³⁰	Qualitative	5-6/2009, Kenya	21 HIV-positive women	Women believed they had gained emotional support at their SG.	N/A	N/A	Weak	No data	

Kim YM, et al. ³¹	Qualitative	2007-2008, Uganda	113 key informants, 16 FGDs (11 with SG members & 5 with non-SG community members).	SGs helped to reduce the stigma and discrimination that previously deterred PLHIV from seeking care. The project helped transform the role and self-image of PLHIV. PLHIV trained as network support agents (NSAs) compensated for staffing shortages at health facilities, reducing client wait time and increasing attention to each client.	N/A	N/A	Weak	No data	More people in the community accessed care with potential mortality & prevention benefits. NSAs also conducted home visits to encourage adherence and retention
Mfecane S, et al. ³²	Qualitative	2/2006-5/2007, S. Africa	25 men attending a rural S. African health facility	SGs enabled most participants to accept their HIV diagnosis, resist HIV stigmatization, and gain confidence that they would live longer despite having HIV. Helped participants to dispense of feelings of helplessness and suicidal tendencies. Enabled adherence to ARVs. <u>Negative effects</u> : Men felt pressure was imposed on them in the SGs to be disciplined and responsible patients.	N/A	N/A	Weak	No data	Some negative comments: SGs assist in the transformation of PLHIV into docile and passive bodies in order to facilitate their adherence to treatment
Mundell JP, et al. ²²	Quasi-experimental	4/2005 – 9/2006, S. Africa	361 pregnant women, (144 participated in the 10-session weekly psychosocial SG [intervention] and 217 who declined (control)	At 2- and 8-month follow-ups, the rates of disclosure in the intervention group was significantly higher than in the comparison group ($p < 0.001$). At follow up, the intervention group displayed higher levels of active coping (t-score, $t = 2.68$, $p < 0.05$) and lower levels of avoidant coping ($t = 2.02$, $p < 0.05$) compared to control, and those who attended at least half of the intervention sessions exhibited improved self-esteem ($t = 2.11$, $p < 0.05$).	Poor	Poor	Medium	No data	
Nguyen TA, et al. ³³	Qualitative	2004-2007 Vietnam	30 women access HIV-related postnatal care	Involvement in self-help groups improved the women's self-esteem, increased knowledge about HIV, and had a positive effect on both felt and enacted stigma from family, community, and health services. Many mothers in the group actively sought care and started to help others to access services.	N/A	N/A	Weak	No data	
Oosterhoff P, et al. ³⁴	Qualitative methods applied to a Case Study	4/2004 - 6/2007, Vietnam	153 (84 HIV+ women 47 HIV+ men, and 22 household members)	By participating in SGs, PLHIV gained access vital social, medical and economic support and services for themselves, their children and partners. They gained self-confidence, and learned to communicate with their peers and voice their needs to service providers. More members were able to access ARVs including for PMTCT.	N/A	N/A	Weak		Most outcomes were programmatic and not individual.
HIV Transmission									
Gaede B, et al. ³⁵	Descriptive cross sectional	Year not specified, S. Africa	262 HIV positive pregnant and non-pregnant women (165 urban and 97 rural)	The findings supported positive benefits of counseling and SGs among women. Membership in a SG also showed a positive association with condom use (Spearman's correlation Coeff=0.394; $p < 0.001$). The overall SG membership was only 12% (7% in urban and 21% in rural ($p = 0.001$))	Poor	Fair	Medium		

Hardon A, et al. ²⁰	Descriptive cross sectional	2008-09, Burkina Faso, Kenya, Malawi, Uganda	3659 for the quantitative component and 157 for the qualitative component	Membership to a SG was strongly associated with not disclosing to partners (uRR 0.53 [95% CI 0.39-0.72], p < 0.001) even after adjustment (aRR 0.67 [95% CI 0.51-0.88], p = 0.004). In the qualitative component, interviews and focus group discussions suggested that SGs advocated caution when disclosing to partners.	N/A	N/A	Medium		Few HIV positive members answered open ended questions
Skogma S, et al. ³⁶	Mixed (qualitative & quantitative)	9-12, 2003, South Africa	144 (118 women and 26 men) two HIV clinics in central Johannesburg	The disclosure rate was generally high (92%). No significant differences in disclosure between the patients with only pre- and post-test counseling vs. those attending professional counseling or SGs, and to those not attending any form of counseling.	Poor	Fair	Medium		In the setting, disclosure was high (92%). Sample size used in the study may have been too small
Wouters E, et al. ³⁷	Prospective cohort/ routine data	2004–2007, S. Africa	268 patients enrolled in the public sector ART.	Public disclosure at six-month follow-up was significantly associated with bonding social capital measures including support groups Participating in an HIV/AIDS SG group at 12 months and 24 months were associated with public disclosure. (β = 0.22 and β = 0.22 respectively).	See above	See above	See above		Potential confounders such as psychosocial and socio-behavioral factors were not available in the dataset and were not controlled for. We assumed for purposes of this review that disclosure and VL are associated with less transmission
Gillet HJ, et al. ³⁰	Qualitative	5-6/2009, Kenya	21 HIV-positive women	Women gained confidence to disclose to relatives and partners after meeting other PLHIV in their SG. No data on impact of SG on disclosure to non-SG members	N/A	N/A	Weak	No data	Did not investigate the impact of support groups on disclosure to people outside the SG
Kim YM, et al. ³¹	Qualitative	2007-2008, Uganda	113 key informants, 16 FGDs (11 with SG members & 5 with non-SG community members).	NSAs trained from the SGs contributed to an increase in the disclosure of HIV-positive status to spouses, family members, PLHIV group members, service providers, and community members.	N/A	N/A	Weak	No data	Disclosure to family members has prevention benefits within discordant couples
Kaaya, S, et al. ²¹	Unblinded RCT	10/ 2001 – 2/2004, Tanzania	331 , randomized to SG (n= 168) and control (n =163)	There was a 20% increase in disclosure among women in the intervention arm compared with those in the control arm (56% vs. 46%), RR=1.2, 95% CI: 0.91-1.6, (p= 0.19). 88% of SG participants were satisfied with results of disclosure versus 62% in the control arm (RR 1.4, 95% CI: 1.1-1.8, p=0.004).	Fair	Fair	Strong	No data	Intervention lasted only six weeks.

*Level of Evidence; **Strong** (Systematic Review/meta-analysis of RCTs with consistent findings; High-quality individual RCT), **Medium** (Systematic Review/meta-analysis of lower-quality clinical trials or of studies with inconsistent findings; Lower-quality clinical trial; Cohort study; Case control study or **Weak** (Consensus guidelines; Usual practice; Opinion; Case series) Abbreviations: SG, Support Groups; VL, Viral load; CHWs, Community Healthcare Workers; FGD, Focus Group Discussion

