**Appendix 5: Overview of determinants studied**

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| **Determinant** | **Number of studies** | **In meta analysis** | **Comments / studies not in meta-analysis**  |
| **Sociodemographic** |
| Sex | 68 | 66 | Four studies with overlapping cohort. Data was included from Evans 2012a (not Evans 2012) and Toure 2008 (not Auld2014b)  |
| Age | Categorical | 40 | X | Very variable age categories (years of age); e.g. ≤25 vs >25; ≤20; 21-25; 26-30 etc; ≤15; 16-30; 31-45 etc. |
| Continuous | 17 | 11 | Aliyu 2015; Cichowitz2017; VanCutsem2011 used intervals of 5 years; Auld2015, Balogun2019 and Hermanides2013 10 years. |
| Education | 16 | 11 | Agaba 2017, Honge 2013, Moyo 2016 did not differentiate education levels; Akilimali 2017 combined different levels; Blevins 2015; Gesesew 2017; Teshome 2015; Tiruneh 2016 all did not differentiate between secondary and tertiary education. |
| Marital status | 16 | 16 |  |
| Employment | 8 | 6 | Meloni 2014b distinguished 2 categories of employment; no analysis was performed on students (only 2 studies). Balde2019 differentiated between various professional activities |
| Other (1-3 studies): income, literacy, number of children, religion, housing, partner status, no of people in household, nationality, monogamy or polygamy;  |
| **Clinical** |
| CD4 count | 52 | 23 | Four studies with overlapping cohort. Data was included from Toure 2008 (not Auld 2014b) and Grimsrud 2015 (not Moyo 2016). Fatti 2016a excluded because the reference was unclear. Koole 2014a and Vinikoor2014 excluded because of continuous scale. For 25 studies not enough similar categories could be identified to perform meta-analyses |
| WHO stage | 41 | 38 | Data of Toure 2008 and not Auld 2014b was used because of overlapping cohort. |
| Weight | KG | 6 | X | Van Cutsem 2011 and Auld 2015 used a continuous scale; Allam 2014, Auld 2014b, Auld 2016a and Dalhatu 2016 a categorical one. |
| BMI | 21 | 15 | Data of Evans 2012a and not Evans 2012 because of overlapping cohort; 4 others excluded because of varying categories. |
| Functional status | 13 | 9 | Auld 2015 used continuous scale; Assemie 2018 and Dalhatu 2016 categorized 'asymptomatic vs symptomatic'. Gesesew2017 excluded because of conjoining ambulatory and bedridden |
| Tuberculosis at baseline / pre – ART | 19 | 19 |  |
| Hemoglobin | 10 | X | Toure 2008 and Blevins 2015 continuous scale; Dalhatu 2016 and Moyo 2016 worked with 3 categories; other studies had different cut-offs (≤8; ≤10; ≤11 g/L). |
| Other (1-4 studies): weight loss, opportunistic infections, viral load, pregnancy, ASAT, HIV type, baseline symptom, peripheral neuropathy, late initiation (WHO and CD4 combined), INH prophylaxis, psychiatric illness  |
| **Patient behaviour related** |
| Adherence | 8 | 6 | Karcher 2007 used continuous scales and McGuire 2013 distinguished 3 different categories |
| Alcohol use | 5 | X | Akilimali 2017, Pecoraro 2015, Gross 2016 and Cichowitz 2017 worked with yes vs no, but different time frames (past year; past 30 days); Deribe 2008 used a scale (sometimes/never/most of the time). |
| Disclosure | 9 | 8 | Cichowitz 2017 excluded because of continuous stigma scale; Tiruneh 2016 ‘stigma concern’ included. |
| Other (1-4 studies): drug use, unsafe sex practice, mode of transmission, missed visits, medication possession ratio, becoming pregnant on ART, clinic attendance |
| **Treatment related** |
| Regimen | 16 | 14 | Blevins 2015 excluded because of comparing D4T vs other. Bernard2018 excluded because other references  |
| Cotrimoxazol | 6 | 6 |  |
| Other (1-4 studies): IPT, previous ART, down-referral, Rx supporter, time to initiation, treatment success, start of ART, pre-ART, referral site, time on ART, regimen change, nutritional supplements, referred to adherence club |
| **System/program related** |
| Geographical setting | 13 | 13 |  |
| Level of care | 14 | 7 | Zhu2012: many different categories (eg. CDC, prison hosp, village clinic, health centre); Toure 2008: any clinic vs the mother clinic; Khumalo 2016, Rachlis 2016 and Nawugaba2018 differentiate primary/secondary/tertiary. Odafe 2012 only secondary vs tertiary; Opio 2019 HC III, HC IV and hospital |
| Clinic size | 8 | X | Some studies work with low vs high volume or caseload; some with patient numbers in different categories; Auld2016a with quintiles. |
| Year of initiation  | 33 | 11 | Many studies excluded for meta-analysis due to large variety of categories.  |
| Other (1-4 studies): proximity clinic, travel time, sector, phase of enrollment, adherence intervention, community supp group, physician/nurse/bed density, staff experience, program design, staff turnover, staff burnout, age of program, patient-provider relationship score, drug dispensing in community, CD4 test on site, clinic opening hours, waiting time lab results, program, nutritional support, outreach/ telephone contact.  |
| X: no meta-analysis could be performed due to variability of categoriesAbbreviations: ART = antiretroviral therapy; BMI = Body Mass Index; IPT= isoniazide prophylactic therpay; KG = kilograms; Rx = treatment; VL = viral load.  |