

Additional File 3: Determinants of ITN ownership and use in pregnancy (arranged by country)

Author	Year	Country	n=	Where	Study Summary	Factors significantly associated with ITN ownership/ use (OR/CIs if provided)	Analysis
Pettifor <i>et al</i> [37]	2008	DRC	351p	ANC	Baseline data from a wider longitudinal study. Bed net ownership, use and perceptions among women seeking ANC.	Ownership: \geq Secondary education vs. less education OR 3.4 (1.6-7.3), Use: Education OR 2.8 (1.3-6.0)	MV
Deressa <i>et al</i> [17]	2011	Ethiopia	2874H H	HH	2009 HH survey in 2 districts, 2 years after a free distribution campaign.	Use: $>$ 1 ITN in the household OR 2.9 (2.2-3.9), ITN knowledge OR 1.5 (1-2.3), lack of problems in using ITNs OR 1.9 (1-3.6)	MV
Deribew <i>et al</i> [22]	2010	Ethiopia	4135 HH 242p	HH	HH survey. Baseline results of a cluster randomized trial assessing LLINs distribution program.	Use: Malaria knowledge OR 2.0 (1.4-2.8)	MV
Karunamoorthi <i>et al</i> [39]	2010	Ethiopia	225p	ANC	Survey of women attending ANC.	Use: Women's primary education vs. illiteracy (p<0.001)	Chi
Belay <i>et al</i> [41]	2008	Ethiopia	815p	HH	HH survey.	Use: Education (literate or not) OR 3.1 (2.1-4.6)	MV
Odouro <i>et al</i> [42]	2010	Ghana	2232p	ANC	Baseline data presented here from prospective cohort study.	Use: Older age, more years of education, higher ANC clinic attendance, better IPT coverage, history of miscarriage or the death of a child	UV
O'Meara <i>et al</i> [44]	2011	Kenya	44753 HH 2988p	HH	Data from census to examine the extent of, and factors correlated with, ownership of bed nets.	Ownership: Urban HH animal ownership OR 1.5 (1.2-1.8) Urban nearest facility hospital OR 2.9 (1.3-6.6), Rural nearest facility health centre OR 1.2 (1.1-1.4)	MV
Hightower <i>et al</i> [45]	2010	Kenya	182p	HH	HH surveys relating to use of ITN and ownership in children under 5 and women of reproductive age. Conducted one month after a free distribution campaign.	Ownership: Urban residence OR 1.4 (1.1-1.8) Use: Wealth (OR not provided)	UV
Gikandi <i>et al</i> [47]	2008	Kenya	976	HH	Examining barriers to ITN/ IPT.	Use: IPT use OR 1.4 (1-1.8), wealth OR 2.5 (1.4-4.7), multi-gravid OR 1.5 (1-2.4)	MV
Ouma <i>et al</i> [48]	2007	Kenya	685	ANC	Malaria and anaemia among pregnant women at first ANC visit.	Use: Marital status single RR 0.7 (0.5-1), Education $<$ 8 yrs RR 0.7 (0.5-0.9), Electricity in HH RR 1.5 (1.2-2), Full time employment RR 1.3 (1-1.6), Listening to radio 1/ wk RR 1.2 (1-1.5)	MV
Aluko <i>et al</i> [54]	2012	Nigeria	335	Hosp.	Utilisation of ITN in pregnancy amongst post partum women.	Ownership: Years of education, monogamous families, employment, residence in low population density area, religion (Christian) Use: Monogamous families, Education, Woman dependent (not employed)	MV
Ankomah <i>et al</i> [19]	2012	Nigeria	2348	HH	Determinants of ITN ownership and utilization.	Ownership: ITN Knowledge OR 3.9 (3-4.8), ANC Registration OR 1.3 (1.1-1.6), Urban residence OR 0.8 (0.7-1) Use: Urban residence OR 1.9 (1.3-2.7), ITN Knowledge OR 2.9 (1.9-4.6), No misconceptions OR 1.6 (1.1-2.3)	MV
Auta <i>et al</i> [21]	2012	Nigeria	34070 HH	HH	Demographic factors associated with the use of ITNs among women and pregnant children.	Use: Without formal education OR 2.7 (1.1-6.6), Lowest wealth quintile OR 2.3 (1.1-5)	UV
Akinleye <i>et al</i> [55]	2011	Nigeria	209p	Hosp.	Determining the level of knowledge of malaria and related preventive measures.	Use: ITN knowledge OR 0.9 (1-5.8)	BV

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Wagbatsoma <i>et al</i> [58]	2010	Nigeria	385p	ANC	ITN utilization amongst those women attending ANC.	<i>Use:</i> Small family size	Fisher's
Bennett <i>et al</i> [28]	2012	Sierra Leone	4620 HH 609p	HH	National survey 6 months post LLIN distribution campaign (universal coverage aim) + hang up campaign.	<i>Use:</i> Older age 35-49 yo vs 15-24 yo OR 6.1 (1.9-19.3), having a hanging ITN, >1 ITN/ 2ppl in HH	MV
Napoleon <i>et al</i> [65]	2011	South Sudan	334p	ANC	Cross sectional survey at a tertiary hospital.	<i>Use:</i> Having bought an ITN OR 504.1 (91.5-2777.9), use of indoor spray OR 16.6 (1.3-206.2), higher HH income OR 0.17 (0.04-0.7)	MV
Hassan <i>et al</i> [66]	2008	Sudan	19p	HH	HH survey 1 year post distribution, looking at retention and use of ITNs.	<i>Ownership:</i> Lower education, more nets <i>Retention:</i> Higher in those with formal education <i>Use:</i> higher in those who received ITN education	Chi
Ambrose <i>et al</i> [67]	2011	Tanzania	222p	ANC	Knowledge Attitude Practice surveys regarding malaria/ bed net use amongst women attending ANC.	<i>Ownership:</i> Multigravid OR 2.1 (1.2-4.8), married OR 1.9 (1.2-5.2) <i>Use:</i> Education, gravidity, fear of malaria	BV
Marchant <i>et al</i> [25]	2010	Tanzania	2027 707p	HH	Assessment of voucher scheme amongst post partum women (n=1320) and currently pregnant women (n=720).	<i>Use:</i> Socioeconomic status 7% ownership amongst poorest (CI 4-13), 48% amongst richest (CI 38-59)	Chi
Sangare <i>et al</i> [70]	2012	Uganda	500p	HH	HH surveys of women post partum and pregnant, to examine determinants of ownership and use.	<i>Use:</i> Ownership of >1 ITN RR 1.13 (1-1.3), media advertising bigger influence on use than provision of free ITNs RR 1.5 (1.2-1.8), wealthiest quintile RR 0.77 (0.6- 1), acquisition in pregnancy associated with 100% use.	MV
Ahmed <i>et al</i> [20]	2010	Uganda	10234 HH	HH	Possession and use of ITNs in HH with pregnant women and children <5 yo. Assessing equity of an NGO program.	<i>Use:</i> Wealth, urban setting	Chi
Kolaczinski <i>et al</i> [31]	2010	Uganda	328p 520 547	HH	Comparing 3 ITN delivery channels to target groups: Routine ANC/ Global Fund for Aids Tuberculosis Malaria funded targeted HH campaign/ USAID funded targeted HH campaign.	<i>Use:</i> Public distribution source of ITN OR 8.4 (4-17.8), large family size >7 OR 1.4 (1.1-1.9)	MV

Legend: p Pregnant women, ANC Antenatal clinic, HH Household, Hosp. Hospital, IPT Intermittent Preventive Treatment, OR Odds Ratio, RR Risk Ratio, CIs 95% Confidence Interval, MV Multivariate, BV Bivariate, UV Univariate, Chi Chi squared analysis, Fisher's Fischer's exact test.