# **Malaria:** Studies Reporting Behavioral Factors Outcomes

Title	Journal & Link	Location	Population	Intervention Description	Outcomes	Design	Sampling Method	SOE Score <sup>1</sup>	SMBC <sup>2</sup>
Access to artemisinin-based anti-malarial treatment and its related factors in rural Tanzania	Malaria Journal, 2013, 12(155): 1-8 http://www.malariajou rnal.com/content/12/1 /155	Kilombero- Ulanga and Rufiji Districts in Tanzania	Rolling household surveys from 2009-2011	Social marketing of ACTs and private and accredited drug dispensing outlets (ADDOs) were implemented in certain districts	Behaviorial Factors  No significance difference in 24 hour access to ACT outlets for households experiencing fever between a district with ADDOs plus social marketing and one without.	Quasi- experimental	Probability	4	0
Narrowing the treatment gap with equitable access: Mid-term outcomes of a community case management program in Cameroon	Health Policy and Planning, 2013, 28 (7): 705-716 http://heapol.oxfordjournals.org/cgi/pmidlookup?view=long&pmid=23144228	East region of Cameroon	Households with children under 5	Community case management for childhood ilnesses. CCM package provided community-based diagnosis, treatment and referral for suspected malaria with artemisinin combination therapy (ACT) and diarrheal disease with ORS and zinc through community health workers (PSI)	Behaviorial Factors  Awareness, access and attitudes towards CHW services among caregivers improved with intervention  Behaviors  Children living in intervention vs comparison areas were significantly more likely to receive treatment at a public health facility or through a CHW for fever and diarrhoea Appropriate treatment was significantly higher among children in intervention vs comparison areas including: antimalarial treatment for fever, ACT for fever, ORS for diarrhoea and zinc for diarrhoea	Quasi- experimental	Purposive	4	1: Behavior, Method mix
Improvements in access to malaria treatment in Tanzania following community, retail sector and health facility interventions: A user perspective	Malaria Journal,2010, 9(163): 1-16 http://www.malariajou rnal.com/content/9/1/ 163/	Ifakara, Tanzania	Treatment-seeking survey of people who had suffered a fever case in the previous 14 days	Social marketing for improved treatment seeking	Behaviorial Factors Improvements in understanding causes of malaria (from 62% to 84%); higher treatment coverage with anti-malarials (86% to 96%)  Behaviors Increases in health facility attendance as first treatment option for patients older than five years (27% to 52%); more timely use of anti-malarials (80% to 93-97% treatments taken within 24 hrs).	Observational	Probability	4	3: Behavior, Segmentation, Methods mix

#### Notes

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Household ownership and use of insecticide treated nets among target groups after implementation of a national voucher programme in the United Republic of Tanzania: Plausibility study using three annual cross sectional household surveys	British Medical Journal, 2009, 339: 1-10 http://www.bmj.com/c ontent/339/bmj.b2434	Tanzania	Household survey	Social marketing combined with the National Voucher Scheme targeting mothers of young children at antenatal clinics	Behaviorial Factors ITN ownership increased from 18% to 36% Behaviors Among infants under 1 year of age, use of an ITN increased from 16% to 34%	Observational	Probability	4	3: Exchange, Segmentation, Methods mix
Distribution systems of insecticide- treated bed nets for malaria control in rural Burkina Faso: Cluster- randomized controlled trial	PLoS ONE, 2008, 3(9): e3182 http://www.ncbi.nlm.ni h.gov/pmc/articles/P MC2527521/	Burkina Faso	Households	Subsidized ITN distribution through social marketing with or without free ITN distribution (free distribution took place through antenatal clinics)	Behaviorial Factors ITN ownership increased in SM with free distribution areas more than in SM only areas from baseline to follow-up  Behaviors Increases in Bednet use in previous night was similarly higher in both groups from baseline to follow-up; use among pregnant women and children under five increased in SM with free distribution from 44% to 50% and in SM only from 37% to 44%.	Experimental	Probability	6	3: Behavior, Segmentation, Methods Mix
Health microinsurance, social marketing, and disease prevention: Perspectives from the field	Intl Journal of Public Administration, 2007, 30: 791–812 http://www.tandfonline .com/doi/abs/10.1080 /01900690701226935 #.UtBtqtJDtQg	Kisiizi and Ishaka in southwestern Uganda	Microinsurance organization clients over the age of 18	Comparison of health microinsurance organization clients who only had basic health education verus those exposed to social marketing of SmartNet ITN	Behaviorial Factors  knowledge, perceptions, barriers, sources of information; perceptions of ITNs were more positive and rates of ownership were higher among those exposed to social marketing	Observational	Purposive	1	4: Behavior, Customer orientation, Theory, Method mix

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The impact of a hybrid social marketing intervention on inequities in access, ownership and use of insecticide-treated nets	Malaria Journal, 2007, 6(13): 1-11 http://www.ncbi.nlm.ni h.gov/pmc/articles/P MC1794246/	Eastern Province, Zambia	Household survey of men and women ages 15-49	ITN subsidy and social marketing intervention to increase knowledge, access, and use of ITNs as part of the Roll Back Malaria Campain.  Distribution was through public health facilities.	Behaviorial Factors  Knowledge of malaria and ITNs, access to ITNs, beliefs about malaria protection, ownership (number of ITNs in the household)  Behaviors  Usage of ITNs (respondent usually sleeps under a net)	Quasi- experimental	Probability	5	7: Customer orientation, Behavior, Insight, Exchange, Competition, Segmentation, Methods mix
Lessons learned from bednet distribution in Central Mozambique	Health Policy Plan, 2007, 22(2):103-10 http://heapol.oxfordjo urnals.org/content/22/ 2/103.long	Sofala and Manica, Central Mozambique	Household survey	Commericial shopkeepers and community leaders were trained to promote and sell ITNs in 19 sites between 2000-2004	Behaviorial Factors ITN ownership;	Observational	Probability	3	2:Exchange, Methods mix
Sustained high coverage of insecticide-treated bednets through combined catch-up and keep-up strategies	Tropical Medicine and International Health, 2007, 12(7): 815–822 http://onlinelibrary.wil ey.com/doi/10.1111/j.1 365-3156.2007.01862 .x/abstract	Ghana	Households with at least one child less than 5 years of age	Mass, free distribution (Catch-up) of insecticide-treated bednets (ITNs) during measles vaccination campaigns, followed by antenatal clinic-based social marketing for routine Keep-up on ITN coverage and use	Behaviorial Factors  95.7% of children slept in a household that had a net, 86.1% slept in a household that had a campaign net  Behaviors  59.6% of children slept under an ITN	Observational	Probability	4	4: Behavior, Exchange, Segmentation, Method mix
Comparison of coverage with insecticide-treated nets in a Tanzanian town and villages where nets and insecticide are either marketed or provided free of charge	Malaria Journal, 2006, 5(44): 1-6 http://www.malariajou rnal.com/content/5/1/ 44/	Northeast Tanzania	Household survey of men and women	Social marketing of ITNs and insecticide	Behaviorial Factors % of households that purchased a net, % of households with intact treated nexts  Behaviors % of households reporting usage in urban and rural areas that had social marketing were compared to areas with free distribution	Observational	Purposive	2	0

### Notos

Title	Journal & Link	Location	Population	Intervention Description	Outcomes	Design	Sampling Method	SOE Score <sup>1</sup>	SMBC <sup>2</sup>
Socially marketed insecticide-	Tropical Medicine and	Ndirande,	Children age 6-59	ITN social marketing by PSI	Behaviorial Factors	Observational	Probability	4	2:
treated nets effectively reduce Plasmodium infection and anaemia	International Health, 2006, 11(9):	Blantyre, Malawi	months		Knowledge of ITNs				Segmentation, Methods mix
among children in urban Malawi	1367-1374				Behaviors				
	http://onlinelibrary.wil				42% of children reported ITN use the previous night				
	365-3156.2006.01684 .x/abstract				Health				
					42% of children reported ITN use the previous night				
Reduction of childhood malaria by	The American journal	Blantyre, Malawi	Case-control study of	ITN social marketing (PSI)	Behaviorial Factors	Quasi-	Probability	5	2:
social marketing of insecticide- treated nets: A case-control study	of tropical medicine and hygiene, 2005, 73(3): 622-625 http://www.ajtmh.org/ content/73/3/622.long	ne, 2005, -625 .ajtmh.org/	children under age 5 with history of fever within last 48 hours		ITN coverage	experimental			Segmentation, Methods mix
of effectiveness in Malawi					Health				
					Individual effectiveness of ITN use was 40% (95% confidence interval [CI] 10–60%) when				
					cases were compared with clinic controls				
					and 50% (95% CI 0–60%) in comparison with community controls; 1,480 malaria				
					cases averted by the intervention in a				
					population of 15,000 children				
Spatial effects of the social	Tropical Medicine and	Tanzania	Households	Social marketing of ITNs	Behaviorial Factors	Observational	Probability	4	0
marketing of insecticide-treated nets on malaria morbidity	International Health, 2005, 10(1): 11–18				Coverage, distribution pattern and resultant spatial effects				
	http://onlinelibrary.wil ey.com/doi/10.1111/j.1				Behaviors				
	365-3156.2004.01354				Percent of children using a treated net				
	.x/abstract				Health				
					Prevalence of parasitaemia, mild anaemia (Hb <11 g/dl) and moderate/severe anaemia				
					(Hb <8 g/dl) in children under five; children				
					living in areas of moderately high ITN				
					coverage were				

Strength of Evidence Score 2. Social Marketing Benchmark Criteria

Title	Journal & Link	Location	Population	Intervention Description	Outcomes	Design	Sampling Method	SOE Score <sup>1</sup>	SMBC <sup>2</sup>
The economics of social marketing: The case of mosquito nets in Tanzania	Social Science & Medicine, 2005, 60: 369–381 http://www.sciencedir ect.com/science/articl e/pii/S027795360400 2291	Kilombero and Kilosa, Uganda	Household survey of men and women	Kilombero and Ulanga insecticide- treated net (KINET) project used social marketing to promote Zuia Mbu nets and insecticide treatment kits	Behaviorial Factors  Knowledge about ITNS and insecticide treatment, coverage (proportion of households with at least one net)  Health  About half as likely to have moderate/severe anaemia	Observational	Probability	3	4: Customer orientation, Behavior, Segmentation, Methods mix
Mosquito nets and the poor: Can social marketing redress inequities in access?	Tropical Medicine and International Health, 2004, 9(10):1121–1126 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2004.01309.x/abstract	Rural Tanzania	Households	Social marketing of treated nets over three year period	Behaviorial Factors  Ownership increased 37% to 73%; among poorest households ownership of at least one net increased 20% to 54%	Observational	Probability	3	5: Customer orientation, Insight, Competition, Segmentation, Methods mix
Insecticide-treated bednet use, anaemia, and malaria parasitaemia in Blantyre District, Malawi	Tropical Medicine and International Health, 2002, 7(3): 220–230 http://onlinelibrary.wiley.com/doi/10.1046/j. 1365-3156.2002.0084 6.x/abstract	Blantyre District, Malawi	Households with at least one child less than 5 years of age	Social marketing of ITNs by PSI	Behaviorial Factors  Bednet ownership was low (20.5% of households)  Behaviors  Only 3.3% of rural children under 5 had slept under a net the previous night, compared  Health  Health: rural children under 5 in households without nets experienced a statistically significant higher prevalence of malaria parasitaemia [RR 4.9] than children in households with at least one bednet	Observational	Probability	4	6: Behavior, Customer orientation, Insight, Exchange, Segmentation, Methods mix

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Impact of malaria morbidity of a programme supplying insecticide treated nets in children aged under 2 years in Tanzania: Community cross sectional study	British Medical Journal, 2001, 322: 270-273 http://www.bmj.com/c ontent/322/7281/270	Tanzania	Children under age 2	Social marketing of ITNs and insecticide	Behaviorial Factors  Net ownership of treated nets increased 10% to 61%  Behaviors  with 24.0% of urban children  Health  Prevalence of parasitemia and haemoglobin levels; prevalence of anemia decreased from 49% to 26%; Treated nets had a protective efficacy of 62% on prevalence of parasitaemia and of 63% on anaemia.	Observational	Probability	4	1: Methods mix
Effect of large-scale social marketing of insecticide-treated nets on child survival in rural Tanzania	Lancet, 2001, 357(9264): 1241-7 http://www.thelancet.c om/journals/lancet/arti cle/PIIS0140-6736(00 )04404-4/fulltext	Kilombero and Ulanga Districts in southwestern Tanzania	Case-control study among children age 1 month to 4 years and a demographic surveillance system survey of households	ITN social marketing	Behaviorial Factors Insecticide-treated net coverage of infants in the study area rose from less than 10% at baseline to more than 50% 3 years later.  Health  18 months after launching, 46% of 312 families with children aged under 5 years reported that their children were sleeping under treated nets	Quasi- experimental	Purposive	4	6: Behavior, Customer orientation, Insight, Exchange, Segmentation, Methods mix
Socially-marketed rapid diagnostic tests and ACT in the private sector: Ten years of experience in Cambodia	Malaria Journal, 2001, 10(243): 1-14 http://www.malariajou rnal.com/content/10/1 /243	Cambodia	Providers and households	Social marketing of RDTs and ACT	Behaviorial Factors  Providers knowledge of RDTS and ACT, product availablity, sales/selling price; Consumer awareness of RDTS and ACT  Behaviors  18 months after launching, 46% of 312 families with children aged under 5 years reported that their children were sleeping under treated nets	Observational	Purposive	2	7: Behavior, Customer orientation, Insight, Exchange, Competition, Segmentation, Methods mix



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KINET: A social marketing programme of treated nets and net treatment for malaria control in Tanzania, with evaluation of child health and long-term survival	Trans R Soc Trop Med Hyg, 1999, 93(3): 225-31 http://www.sciencedir ect.com/science/articl e/pii/S003592039990 0019	Kilombero and Ulanga Districts in southwestern Tanzania	Cross-sectional survey among households	ITN and insecticide social marketing	Behaviorial Factors  24% of households had at least one treated net  Behaviors  18 months after launching, 46% of 312 families with children aged under 5 years reported that their children were sleeping under treated nets	Observational	Probability	3	6: Behavior, Customer orientation, Insight, Exchange, Segmentation, Methods mix

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Strength of Evidence Score 2. Social Marketing Benchmark Criteria