Monitoring and Evaluation of the TNVS

Report on 2008 TNVS Household, Facility services and Facility users surveys

T. Marchant[1,2]
J. Bruce[2]
R. Nathan[1]
H. Mponda[1,2]
Y. Sedekia[1]
K. Hanson[1]

[1] Ifakara Health Institute
[2] London School of Hygiene and Tropical Medicine

Table of Contents

List of tables

4

List of figures

Acknowledgements

We wish to acknowledge a number of people who were instrumental in the implementation of this survey and its analysis. Silas Temu from the Ifakara Health Institute was the Data Manager for the project, programmed the questionnaire, accompanied the team in the field, and organised the initial cleaning of the data. He was assisted in this work by Willy Bukulu. Joanna Armstrong Schellenberg provided expert advice on sampling during the design phase and has continued to share her experience of implementing and interpreting the results of large household surveys.

We are grateful to the DMOs and Malaria/*hati punguzo* Focal Persons in the districts who facilitated our work in the field, and to the survey teams who worked under very challenging conditions to implement the fieldwork. And finally, we are indebted to the respondents to the surveys who provided their time and shared their experiences.

1. Introduction

Background to the voucher scheme

The Tanzania National Voucher Scheme (TNVS) was launched in October 2004 to deliver a voucher to currently pregnant women worth TSh2750 as part-payment for an insecticide-treated mosquito net (ITN), funded through a grant from the Global Fund to fight AIDS, tuberculosis and malaria (GFATM). The scheme was rolled out by district and reached the whole country by May 2006. In early 2007 the value of the voucher was increased to Tsh 3250 in keeping with increases in the price of nets in retail outlets.

In October 2006 the infant voucher was launched using the existing pregnancy voucher delivery system, funded by the United States President's Malaria Initiative (PMI). This delivers a discount voucher with a value of Tsh 3250 to all infants attending RCH for a measles vaccination at 9 months of age. All mainland districts were operating the infant voucher scheme by early 2008.

In April 2007 an equity voucher, funded by PMI, was piloted in six districts which aimed to assist the most poor pregnant women and carers of infants who were unable to afford the top-up required by the original vouchers. Early indications from the pilot were that this approach to improve equity had very limited effect and the initiative was not taken to scale.

Monitoring and evaluation activities undertaken 2005-2007 by Ifakara Health Institute (IHI) and the London School of Hygiene and Tropical Medicine (LSHTM) indicated steady increases in net household ownership, and steady increases in personal use of ITNs by pregnant women and children. However, coverage estimates remained far below the national target of 60% by end of 2006. In 2005 18% of households owned at least one ITN, rising to 36% in 2007. Personal use by pregnant women rose from 11% in 2005 to 23% in 2007, and by children under 5 from 12% in 2005 to 26% in 2007. Process indicators for the voucher scheme had been positive, but it was apparent that the voucher scheme alone was insufficient to increase coverage quickly nationwide. Data from multiple sources led to the conclusion that the voucher scheme was an effective mechanism for 'keep up' of ITN coverage but that a 'catch up' strategy was required to boost overall levels.

Funding for the Tanzanian National Voucher Scheme was renewed in 2008 following a successful application to the GFATM Rolling Continuation Channel for the National ITN Strategy (NATNETS). The NATNETS proposed work aims to scale up access to ITNs to 80% coverage by combining the pregnant women and infant voucher schemes with the introduction of a 'catch up' mass distribution of free ITNs to under-fives in 2009, in collaboraton with the World Bank and the United States' Presidents Malaria Initiative. A sizable mass media and community-based behavioural change communication (BCC) effort supports the translation of mass distribution into actual usage of nets.

The Ifakara Health Institute and the London School of Hygiene and Tropical Medicine submitted a new monitoring and evaluation plan and were again contracted to undertake the Monitoring and Evaluation M+E of the NATNETS strategy. The M+E plan continues to be multifaceted and includes repeat national household and facility surveys to examine changes in ITN coverage indicatorsand includes process indicators related to both voucher and free net distribution. In addition, the prevalence of anaemia and of malaria amongst pregnant women and children under five are estimated.

The national surveys were designed to collect baseline information (2005), 12 month follow-up of the pregnancy voucher (2006), and further follow-up of the pregnancy voucher together with early monitoring of the effects of the infant and equity vouchers (2007). The fourth national survey for the NATNETS programme of work (2008) provides continued evaluation of progress towards ITN goals, plus a baseline

for the planned 2009 campaigns: mass distribution of free long lasting insecticidal nets for all children under five years and mass re-treatment with longer lasting insecticide of all existing polyester nets used by children under five.

Preliminary findings from the 2008 survey were presented to the ITN cell of the National Malaria Control Programme and to the TNVS partners on 24th November 2008. The results in this report supersede those in prior presentations and reports. Where possible this report presents results from previous surveys for comparison.

2. Methodology

The 2008 survey design replicated the 2005-7 surveys as closely as possible in order to maximise the comparability for key indicators over time (or across surveys). . A number of changes were made to the design, namely an increase in sample size from 21 to 24 districts, a resampling of districts, and the inclusion of testing for malaria parasitaemia and measurement of haemoglobin levels amongst children under five and pregnant women.

Timing: The 2008 survey started at around the same time as previous surveys (July) but continued approximately 3 weeks longer (to early September) – in part due to the additional districts sampled, and additional workload.   There are no implications for seasonality, with implementation remaining within the the long dry season.

Survey tools: The 2008 survey tools were modified from 2007 where necessary to reflect the need for new indicators and to explore relevant areas arising from the 2007 monitoring and evaluation activities. Implementation of the tools was by personal digital assistant (PDA).

The main aims of the 2008 household and facility surveys were:

1. To assess the national coverage and redemption of discount vouchers for insecticide treated nets
2. To assess the national impact of the NATNET strategies on ITN coverage of pregnant women, children < 1 and national and district level for children < 5
3. To determine the impact of the voucher scheme on the provision and use of antenatal services
4. To estimate the prevalence of malaria in children <5 and currently pregnant women.

2.1 Survey Modules
The 2008 survey questionnaires consist of 3 instruments: household, facility services and facility users. The instruments were composed of the following modules:

(1) Household survey
Household module (HH) for a sample of 7200 households –
- Identifiers
- Household roster for all residents
- Household assets (markers of socioeconomic status)
- Education and occupation of the household residents
- Location of the household using a GPS
- Household net ownership and use of net/ITN by all household members

Women's module (W) for all women aged 15-49 in a sample of 7200 households –

- Knowledge of the voucher scheme
- Current pregnancies
- Use of antenatal services
- Pregnancies in the previous 24 months
- Use of antenatal services during these pregnancies
- Use of voucher scheme during these pregnancies
- Coverage of ITNs and IPTp in pregnancy
- Episodes of fever amongst children born to past pregnancies

Children's module (C) for all children aged 0-59 months in a sample of 7200 households
- ITN use
- Behaviour communication and change indicators for carers of children 0-59 months

Infant module all infants aged < 2 years in a sample of 7200 households
- Exposure to and uptake of the infant voucher scheme

(2) Health Facility Survey
Health facility survey for the facility serving each cluster (240 facilities in total)
- Equipment, supplies and provision of antenatal services

(3) Facility users Survey
An exit survey for women who have used RCH facility services on the day of the survey (7 women X 240 facilities = 1470 women in total)
- Exit interviews of RCH users on their pregnancy history, use of RCH services this pregnancy, voucher knowledge and use, ITN use, and attitudes towards timing of antenatal use.

2.2 Sampling process
Household survey
The 2008 household survey design is based on a multi-stage cluster random sample of households. All districts in mainland Tanzania were stratified by Zone and 24 districts drawn. Full details of the sampling strategy are shown in Appendix 1.

The rational for stratification was:
(1)to ensure a wide distribution of all geographical areas of the country included in the survey
(2)to assist in comparability of reporting with other data collection activities. NATNETS/TNVS will now be able to report on indicators at both the district and the Zonal level.
The 24 districts randomly sampled for 2008 survey are shown in table 1.

Table 1: NATNETS 24 district sample 2008

Zone	Region 2008	District 2008	Overlap with 05-07 Sample
Central	Manyara	Simanjiro	*
	Dodoma	Bahi	* (was Dodoma R)
	Singida	Singida rural	
Coast	Coast	Kisarawe	
		Rujifi	*
	Dar es salaam	Kinondoni	
Lake	Mara	Rorya	
	Kagera	Chato	*
		Karagwe	

	Mwanza	Sengerema	
Northern	Arusha	Arusha rural	
	Kilimanjaro	Rombo	
		Moshi rural	
	Tanga	Muheza	
Southern	Mtwara	Mtwara urban	
	Lindi	Nachingwea	*
	Ruvuma	Namtumbo	
Southern Highlands	Mbeya	Mbeya urban	
	Rukwa	Sumbawanga rural	*
	Iringa	Makete	
		Iringa rural	
Western Lake	Shinyanga	Bariadi	
		Shinyanga urban	
	Kigoma	Kigoma urban	

RCH Facility survey sampling:
For each of the 240 household survey clusters the RCH facility designated to serve that cluster was surveyed.

RCH Facility users sample
At each facility the facility users' interview was administered to the first 7 women to leave the facility on the day of survey.

2.3 Sample size
The sample size for the household survey was set to estimate net use in the night before the survey in children under five years.

Assuming an average household size of 5 people, 16% of the population below 5 years, 2.6% under 1 year, and a design effect of 2.0, Table 2 below gives the number of households to be visited in the survey area to estimate each indicator to within a given degree of precision.

Table 2. Sample size calculations for household survey

Indicator	Expected level to be estimated	Numbers of households required for estimating with given precision in percentage points (standard error)*		
		5	10	12.5
Net use in previous night in children < 5	0.50	250	63	40

*Limits of 95% confidence interval will be plus or minus twice the standard error

With 300 households per district, therefore, we would expect to be able to estimate district net use by under-fives plus-or-minus 10%.

The sample size for the facility users' survey is based on a convenience sample following experience from other surveys. A broad range of facility levels are represented across the household sample and many see only a few women each day. In practice the average number of women interviewed in 2005-07 surveys was 5 per facility.   As such the facility user survey sample size is sufficient to measure antenatal care uptake indicators with high levels of precision at national level but insufficient precision at district level.

2.4 Logistics
The survey was carried out by 10 teams composed of 6 interviewers, 1 blood letter, a supervisor and a driver. The teams were combined into two groups of 5 teams, with each group working in one district, completing 2 clusters per team. One group followed a "Northern Route" (12 districts) and one a "Southern Route" (12 districts). In each team two of the interviewers worked on the facility surveys and four worked on the household survey.

Each interviewer carried a personal digital assistant (PDA) (a small, hand-held computer) for data collection and GPS for recording the location of each household and facility. Each supervisor carried one laptop computer so that data from each day could be downloaded from the PDAs and written to a CD.

Blood letting
If consent was given, one finger prick was done to all children under five and all currently pregnant women from sampled households for estimation of haemoglobin (using haemocue machine) and for malaria testing (using the rapid diagnostic test PARAHIT®). In addition, a thick film blood slide was prepared plus blood spot filter paper, marked with personal identity numbers to link with household questionnaire data, packed and transported to the IHI laboratory for future analysis. Full details are available in the survey protocol.

2.5 Quality control
- Training

Experienced interviewers were selected and trained for 14 days. Training included household selection, the consent process, interview technique, and probing for dates using local event calendars. A detailed interviewers' guide was prepared, piloted during the training sessions and carried in the field by all interviewers. Recruitment to the survey team was dependent on the outcome of 2 short in-house assessments plus observed interviews during piloting. Dedicated members of the team were given three days additional training on the finger prick and testing procedure.

- Field supervision

The team supervisor repeated key aspects of 3-4 household interviews independently each day, through accompanied interview and re-interview. Twenty percent of all health facilities received a visit from the team supervisor on the day of interview.
Blood letting activities were conducted by one dedicated member of the team and closely monitored by supervisors with at least one blood letting observed each day. Check forms were completed for each cluster.

- Checking and storing data

At the end of each day supervisors synchronized the PDAs to their PC and ran two sets of checks using purpose-written MS Access programmes. The Quality Control check compared the original interview and re-interview and identified discrepancies. The Reporting programme produced a summary of the data collected for each cluster, including specific problems with, e.g. household numbers, GPS readings, etc.

When a data entry error was encountered, the supervisors were asked to produce a Data Error Form. These were provided to the Data Manager for subsequent data cleaning.

2.6 Data processing
All survey data were entered into handheld computers at the point of data collection. Data cleaning was undertaken by the Data Manager using information from the Data Error Forms, supervisor summary forms, daily Access-generated reports and standard range and consistency checks.

11

Blood slide reading data was double entered into a database at the Ifakara Health Institute in a MS Access programme on completion of slide reading. This was subsequently integrated to the main master survey database to link participant information.

2.7 Ethical aspects and informed consent

For all three surveys an information sheet about the study was drawn up in Swahili, explaining why it was being carried out, by whom, and what it involved. A copy of the information sheet was left with each household. Respondents were asked if they had any questions and whether they agreed to take part in the study. Written consent of all respondents was obtained before proceeding with interview. For the household survey this consent was sought from the household heads (or appointed representative) and from each woman interviewed aged 15-49.

Further, permission was requested to make a finger prick from all resident children under five and all currently pregnant women. Written consent was sought for each child (from the carer) and for each woman separately. During the consent process participants were informed of all procedures and outcomes from the finger prick activity.

For the facility user survey the information and consent process was carried out with each respondent individually, away from the clinic site. Respondents were given a study number; no names or physical addresses were recorded. For the facility survey the district medical officer was contacted in the first instance and district level activities were described and consent sought to visit any of the RCH facilities within that District. At individual sampled facilities this process was then repeated with the Head of facility. Confidentiality of all study participants was assured. As a means of enhancing this for facility employees the names of facilities interviewed within any district were not recorded at any time and feedback is restricted to District level – never facility level – issues.

2.8 Timing

Data collection took place between 16 July and 18 September 2008. Cleaned data were provided by the Data Manager on 7th November. Preliminary results were presented to the TNVS partners at meetings at NMCP on 24 November 2008.

2.9 Data analysis

Data were analyzed using Stata software according to an analytical plan. The "*svy*" commands were used to allow the confidence intervals of estimated parameters to be adjusted for the cluster structure of the survey.

The analysis included in this report concentrates on bivariate analysis. This means that the tables showing disaggregation of outcomes by explanatory factors are relatively crude and potentially confounded where there is correlation between variables e.g. between socioeconomic status and urban/rural residence. Where possible comments to contextualise findings are made in the text.

At the outset of the monitoring and evaluation activities in 2004/5 an important element was to define time exposure to the voucher scheme. As the scheme has bedded down the influence of operating time has been become less relevant and residential and socio-economic characteristics of the survey population more predictive of outcomes. The different time exposures to the scheme are summarized in appendix 2 but are not presented further in this report.

Socio-economic status. In order to examine the relationship between key coverage outcomes and socioeconomic status, an index of socioeconomic status was constructed using principal components

analysis. The same approach was used in each survey year. Results of the SES analysis are presented in Appendix 3.

Net treatment status. In 2008 the following definition of an ITN was applied (as for the 2007 data):
- conventional net treated with ordinary insecticide within 12 months of the survey date
- conventional net ever-treated with longer-lasting insecticide
- long lasting insecticidal net

An organisational chart is shown in figure 1 which maps the process towards ascertaining effectively treated net status. Throughout this report these are referred to as **ITN.**
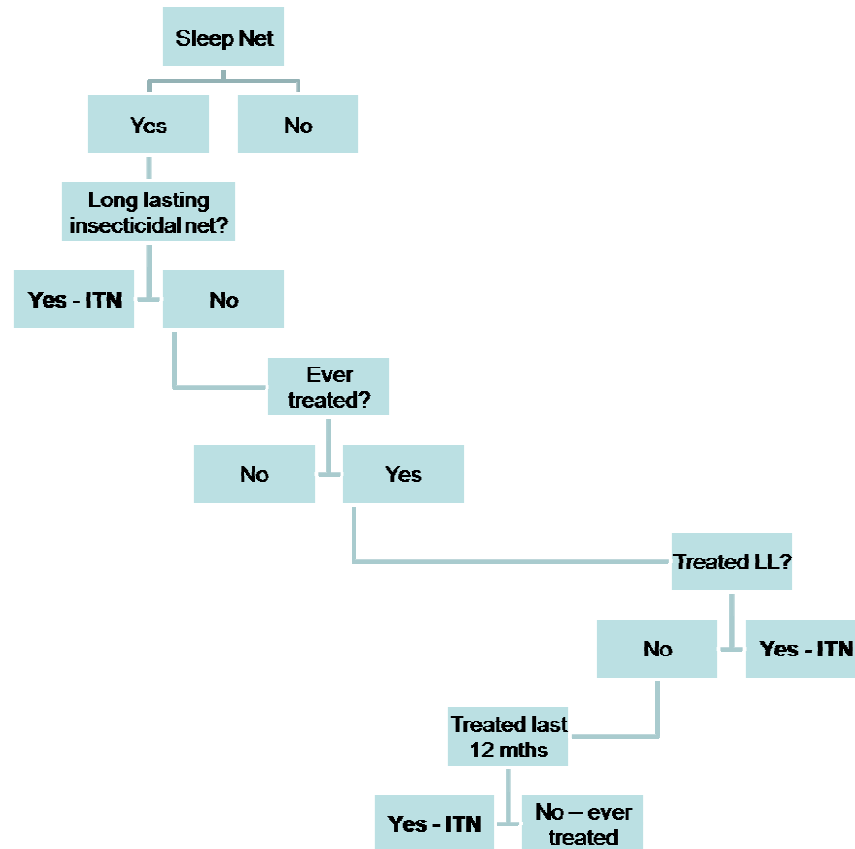
Figure 1. Process of determining effective treatment status of nets

Weighting for national estimates. The sample of M&E districts was randomly sampled from all districts in the country and the indicators can be interpreted as being nationally representative. Since the districts were not chosen with probability proportionate to population size and an equal number of households were taken from each district, the results contained here are weighted to account for the difference district size. The effect of the weighting is to give greater weight to the estimates from larger (in terms of population) districts and less weight to those from smaller districts.

3. Results

PART 1: BACKGROUND AND DENOMINATORS

3.0 Characteristics of the sample

The characteristics of the samples for 2005-2008 household surveys are shown in Table 3. The 2008 sample had the same residential distribution of households as the previous years. The overall number of households and resident individuals interviewed is greater than previous years (due to the larger sample size), but not the number of children under 5 and women with live births in the previous 12 months. There was an increase in the proportion of women who refused to be interviewed in 2008; it is not known whether this is related to the new blood testing activity.

Table 3. Population of sampled households/individuals (after cleaning), TNVS June 2008

	2005	2006	2007	2008
	Household	Household	Household	Household
Districts	21	21	21	24
Total sampled households	6300	6300	6300	7200
Census definition of residence (Ward)				
Rural	4066 (65%)	4146 (66%)	4089 (65%)	4419 (61%)
Semi-urban	1413 (22%)	1460 (23%)	1460 (23%)	1855 (25%)
Urban	636 (10%)	654 (10%)	649 (10%)	648 (9%)
Total number of households interviewed	6199	6260	6198	6922
Number of household refusals (%)	86 (1.4%)	25 (0.4%)	67 (1.1%)	46 (0.6%)
Number of clusters	210	210	209	240
Total individuals in households	31164	30273	31381	32246
Number of women 15-49	6287	6624	6867	7326
Number of children < 5	5567	5815	6186	5701
Number of children < 1	1180	1265	1317	1228
Number of women interviewed	6287	5941	6647	6653
Number of women refusals (%)	446 (6.6%)	336 (5.4%)	498 (7.0%)	670 (10%)
Number of women not interviewed*	198	255	494	526
Number of nets (household report)	5220	6939	8253	7717
Number of current pregnancies	779	584	707	733
Mean gestation (weeks)	20.3	21.0	20.7	21.0
Number of live births in previous 12 mo	1870	1332	1285	1245
Household head respondents**:				
Men		2377	2053	2257
Women		3726	4010	4508
Of whom: currently pregnant		296	397	435

* Women were not interviewed if they had travelled away from the household on the day of the interview and would not return while the survey team were in the vicinity; or if they were ill.
**The number of men and women household head respondents does not add up to the total number of respondents because of missing information on sex in a number of cases.

The denominators - household

Table 4 shows the denominators used to calculate the coverage indicators presented in this report. *Hati Punguzo* pregnancy voucher coverage amongst currently pregnant women is restricted to women who have already attended RCH services during pregnancy.

Hati Punguzo infant voucher coverage uses infants who received a measles vaccine and who were at least nine months of age and living in a launched district as a denominator.

All coverage indicators are population based and derived from the household survey unless otherwise specified.

Table 4. Denominators for pregnancy coverage indicators, Household surveys 2005-2008

	2005		2006		2007		2008	
	Household survey		Household survey		Household survey		Household survey	
	Current pg	Pregnancy in 2004/5	Current pg	Pregnancy 2005/6	Current pg	Pregnancy in 2006/7	Current pg	Pregnancy in 2007/8
Total pregnancies	779	1870	584	1332	707	1296	733	1246
Pregnancies in launched districts	420 (53.9%)	164 (8.8%)	584 (100%)	977 (73.3%)	707 (100%)	1296 (100%)	733 (100%)	1245 (100%)
Attended RCH – overall (%)	377 (48.4%)	1825 (97.6%)	331 (56.7%)	1264 (94.9%)	362 (51.2%)	1265 (97.6%)	358 (52.0%)	1203 (97.5%)
Attended RCH – launched (%)	214 (51.0%)	163 (99.4%)	331 (56.7%)	922 (97.7%)	362 (51.2%)	1265 (97.6%)	358 (52.0%)	1203 (97.5%)

The characteristics of the facility survey sample for the period 2005-2008 are shown in Table 5. Denominators for records reviewed and RCH pregnant users interviewed are shown in Table 6.

Table 5 Summary of facility sample 2005, 2006 and 2007 surveys

	2005	2006	2007	2008
All facilities	N=190	N=188	N=192	N=200
Facility types				
Dispensary %	78	72	75	77
Health Centre %	11	16	15	15
Hospital %	10	11	10	8
Facility ownership				
Mission %	10	10	10	12
NGO %	1	1	1	2
Government %	89	89	89	86
Facility *Hati Punguzo* Status – Pregnant				
Not started %	45	0	0	2
Trained %	14	0	0	0
Started %	41	100	100	98
Facility *Hati Punguzo* Status – Infant [2007=130/140*] [2008=189/200]				
Not started %	-	-	6	3
Trained %	-	-	1	3
Started %	-	-	93	94

*numerator is the number of facilities actively launched, denominator is number of facilities surveyed within the sample of clusters in launched districts (N=140 for infant 2007, N=200 for infant 2008)

Table 6 Denominators for coverage indicators, Facility surveys 2005-2007

		PV launched districts	IV launched districts
2005	Pregnant women interview	488	-

	Antenatal records	17351	-
	Infant measles records	-	-
2006	Pregnant women interview	862	-
	Antenatal records	35239	-
	Infant measles records	-	-
2007	Pregnant women interview	914	-
	Antenatal records	34524	-
	Infant measles records	-	16463
2008	Pregnant women interview	858	-
	Antenatal records	50528	-
	Infant measles records	-	26352

The pregnant women populations

The data presented in this report represent 4 different populations of pregnant women: (1) currently pregnant women from the household survey, (2) women who had a pregnancy ending in a live birth in the 24 months prior to the household survey, (3) women who were interviewed while attending a sampled RCH facility, (4) pregnant women represented by data extracted from routine RCH ledger books. Each population represents a slightly different group of women, and each is associated with different bias. Taken together the estimates offer a rich picture of pregnancy indices.

The currently pregnant household survey population is internationally recognised as the appropriate group over which to estimate net coverage and net outcomes are restricted to that group in this report.

PART 2 NET and INSECTICIDE INDICATORS

3.1 Household ownership of nets

There was a smaller increase in household ownership of nets between 2007 and 2008 compared to previous years, with only ITN ownership demonstrating a sstatistically significant increase. 70% of households surveyed reported owning at least one net, and 46% reported at least one ITN (table 7).

Table 7 Summary statistics for household ownership of at least one net, Household surveys 2005-08

	Household survey years				
	2005 (N=6115)	2006 (N=6260)	2007 (N=6198)	2008 (N= 6922)	P*
Any net	43.9 (40.1 – 47.8)	56.9 (53.3 – 60.5)	64.6 (61.0-68.1)	69.8 (63.8-75.2)	0.3
Never treated	25.4 (23.1-27.9)	27.7 (25.4-30.1)	30.6 (28.3-33.0)	31.6 (27.9 – 39.8)	0.9
Ever treated	23.7 (21.1-26.4)	37.5 (34.7-40.4)	44.4 (41.3-47.6)	46.6 (41.1-52.3)	0.1
ITN	17.9 (15.7 – 20.2)	28.9 (26.6 – 31.3)	36.0 (33.1-38.9)	45.7 (40.1-51.5)	0.02

*P is for difference between 2007 and 2008

The number of nets per household also increased in 2008 to a mean of 1.5 nets across all households and also 1.5 nets in households in which a pregnant woman was resident (table 8).

Table 8. Mean number of nets per household in Tanzania: all households and households with resident pregnant woman, Household survey 2005-08

	Mean number of nets	P
All households 2005 (N=6113) 2006 (N=6260) 2007 (N=6198) 2008 (N=6922)	0.8 (0.7-0.9) 1.1 (1.0-1.2) 1.3 (1.2-1.4) 1.5 (1.3-1.7)	0.1
Households with resident pregnant woman* 2005 (N=1886) 2006 (N=1826) 2007 (N=1902) 2008 (N=	0.9 (0.8-1.0) 1.2 (1.0-1.3) 1.4 (1.3-1.5) 1.5 (1.1-1.8)	0.08

*Combines data on current and past pregnancies

The 2008 survey asked about the number of sleeping places in each household (table 9). 95% of all households had 5 or fewer sleeping places, 20% of households had only one. We observe that while there is little difference in mean number of sleeping places by the socio-economic status of the household, there is considerable difference in the mean number of nets.

Table 9. Mean number of sleeping places and mean number of nets, disaggregated by socio-economic status of households: Household survey 2008

	Q1 Mean (95% CI)	Q2 Mean (95% CI)	Q3 Mean (95% CI)	Q4 Mean (95% CI)	Q5 Mean (95% CI)
Mean number of	2.4 (2.2-2.5)	2.5 (2.4-2.7)	2.8 (2.4-2.9)	2.9 (2.8-3.0)	2.7 (2.5-3.0)

sleeping places				
Mean number of nets	0.7 (0.6-0.8)	0.8 (0.7-0.9)	1.0 (0.8-1.2)	1.1 (0.9-1.3)	2.1 (1.8-2.4)

The breakdown of household ownership of nets and ITNs by SES and residence is shown in Table 10. Households in urban areas, and the least poor households, have twice the coverage of at least one ITN than observed in rural and poorest households.

Table 10. Bivariate analysis of determinants of household ownership of any net, and ITNs, Household survey 2008

		Any net 2008 N=6922		ITN 2008 N=6922	
	N	% (95%CI)	P	% (95% CI)	P
All	6922	69.8 (63.8-75.2)		45.7 (40.1-51.5)	
SES					
Q1	1381	42.2 (36.5-48.0)	<0.001	24.0 (19.7-28.9)	<0.001
Q2	1393	48.0 (43.1-53.0)		28.2 (24.1-32.6)	
Q3	1380	58.3 (48.5-67.5)		36.9 (28.9-45.6)	
Q4	1363	58.7 (52.0-65.1)		38.8 (31.6-46.6)	
Q5	1379	85.8 (80.5-89.9)		57.9 (50.7-64.7)	
Residence					
Rural	4419	48.6 (44.3-52.9)	<0.001	28.3 (25.0-31.8)	<0.001
Semi-urban	1855	71.8 (57.9-82.5)		49.8 (37.8-61.9)	
Urban	648	88.9 (82.4-93.1)		60.0 (50.9-68.5)	

Totals do not always add up due to missing values

The disaggregation of household ownership of any net and ITNs by socio-economic status for each survey year are shown in figures 2 and 3 below. The socio-economic inequity observed in previous years continues to be apparent but the gap in net ownership between the poorest and least poor households narrowed and the Q1:Q5 equity ratio saw some improvement in 2008 compared to other years.
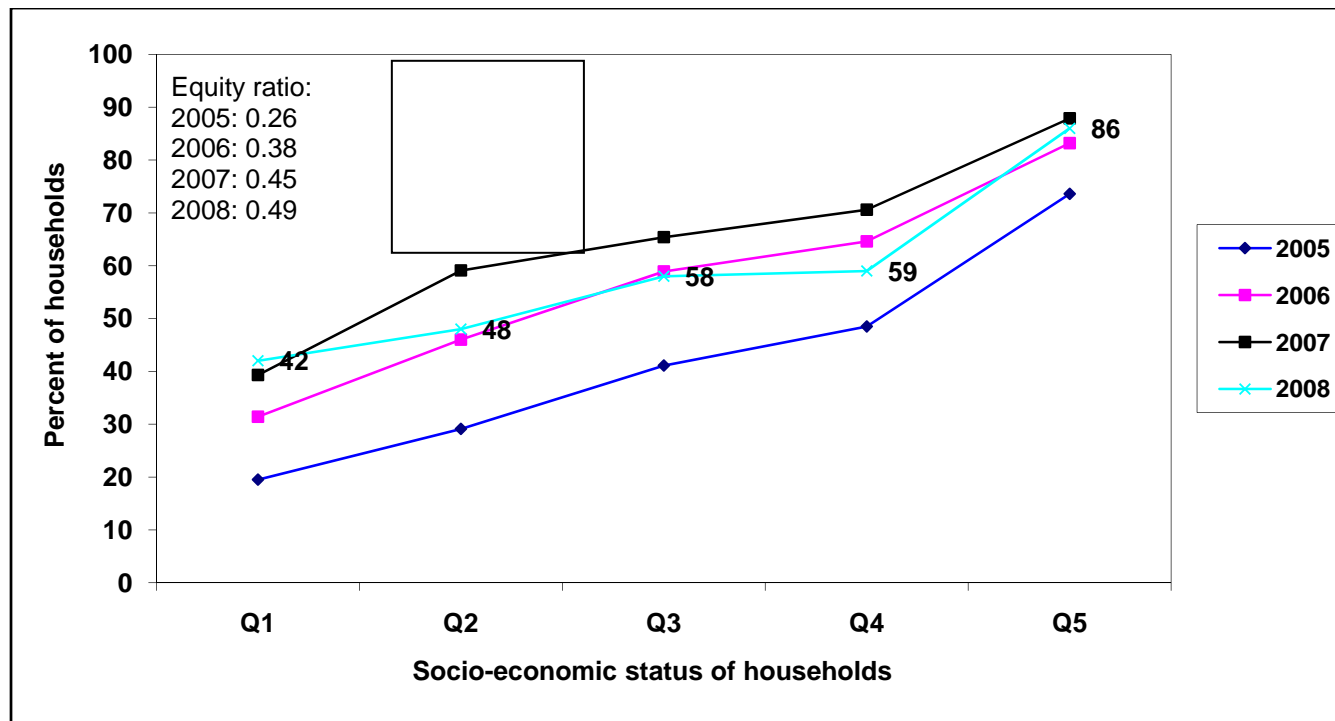
Figure 2. Distribution of households owning at least one net by socio-economic status, household survey 2005-08
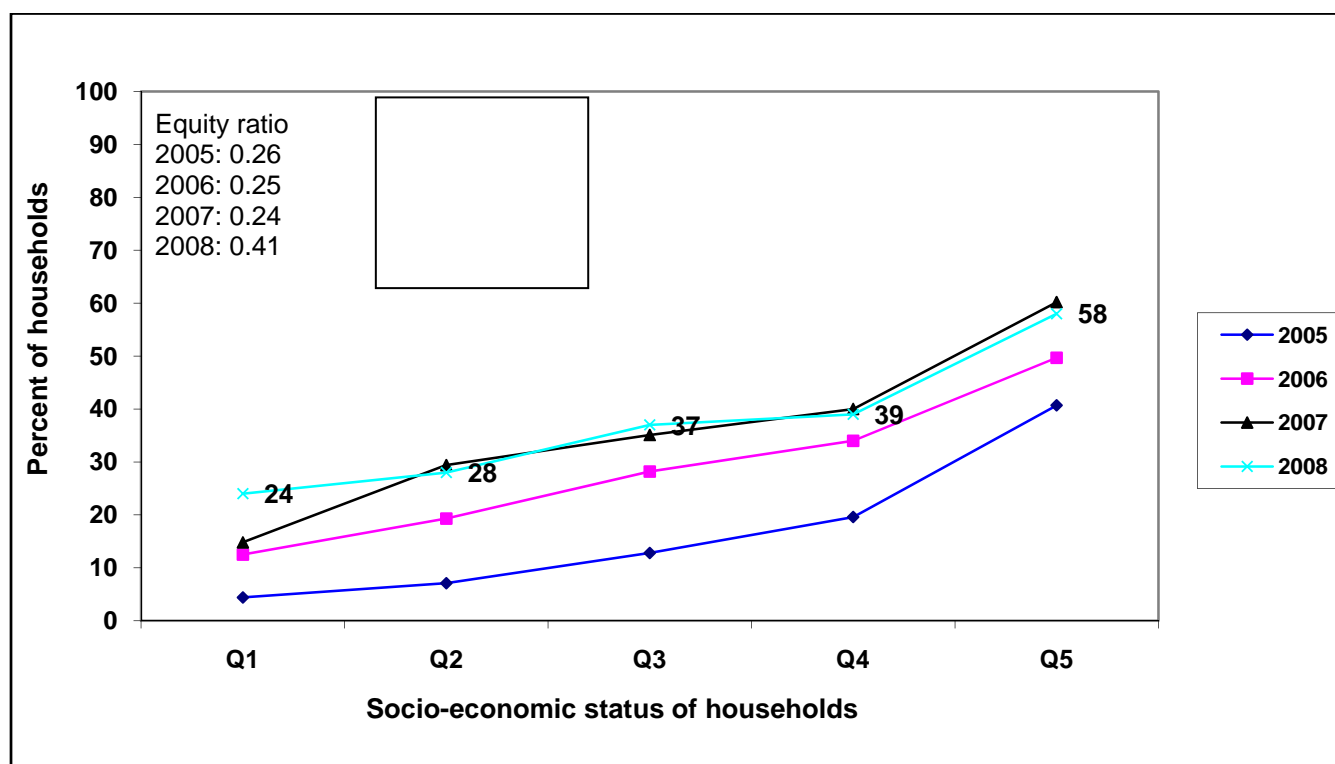
Figure 3. Distribution of households owning at least one ITN by socio-economic status, household survey 2005-08

Looking at the distribution of households by number of nets owned (figure 4) we see a continuation of the trend for net owning households to increase the number of nets they own: 62% of net owning households had at least two nets in 2008 compared to 58% in 2007, 54% in 2006 and 51% in 2005.
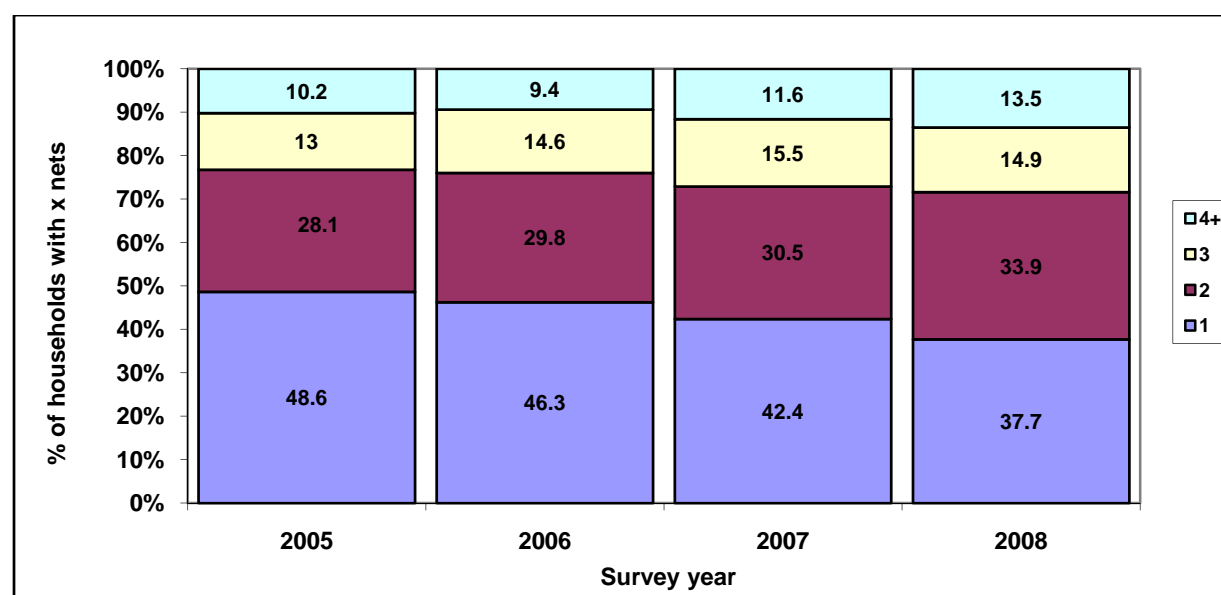
Figure 4. Breakdown of ownership of nets by number of nets in household (Household survey 2005-2008)

Information about net use is presented for currently pregnant women, children under 5 years, children under 1 year and all household members from the household survey. For all groups, and for each individual separately, the lead question asked was "Did person XX, (or did you), sleep under a mosquito net last night". Estimates reported here represent responses asked of individual pregnant women for currently pregnant, household heads for all household members, and of the mother/carer for children under five years.

3.2 Coverage of nets: currently pregnant women
Information about the coverage of nets in currently pregnant women between 2005 and 2008 is summarised in Table 11. Coverage of any net in 2008 remained close to 2007 levels at 38.6% for any net and 18.8% for an ITN.

Table 11. Summary statistics for net use last night by currently pregnant women, Household survey 2005-2008

| | Household currently pregnant | | | | |
	2005 (N=779)	2006 (N=584)	2007 (N=707)	2008 (N= 731)	P*
Any net	25.2 (21.3-29.5)	33.9 (29.0 – 39.2)	38.9 (34.1-43.9)	38.6 (30.8-47.0)	0.9
Ever treated	13.4 (10.7-16.5)	22.7 (19.0-27.3)	24.6 (20.8-28.9)	23.2 (17.3-30.5)	0.6
Never treated	11.8 (9.4-14.7)	11.1 (8.4-15.0)	14.3 (11.6-17.4)	15.3 (10.7-21.5)	0.6
ITN	10.7 (8.5-13.4)	17.6 (14.2 – 21.7)	23.2 (19.5-27.4)	18.8 (12.9-26.5)	0.3

*Difference 2007/08

Table 12 shows the bivariate analysis of determinants of use of any net or an ITN last night from the household survey, currently pregnant women. In contrast to previous years, an association was observed in 2008 between use of an ITN and gravidity with multigravidae six times more likely to be ITN users than primigravidae. The proportion of urban women who reported using either any net or a ITN last night was at least double that of women in rural areas as in previous years but this did not reach statistical

20

significance for use of ITNs. Inequity of net use continued to be in evidence and is looked at in more depth in Figures 5 and 6 below.

Table 12. Bivariate analysis of determinants of use of any net, or an ITN, last night for currently pregnant women, Household survey 2008

		Any net 2008			ITN 2008		
	N	% (95%CI)	p	N	% (95%CI)	p
All	730	38.6 (30.8-47.0)			18.8 (12.9-26.5)	
Age						
<20 years	98	34.6 (18.5-55.2)	0.5	92	17.6 (4.7-47.7)	0.5
20-29 years	377	42.6 (32.2-53.7)		368	19.4 (11.9-29.9)	
30-39 years	220	32.4 (22.6-44.0)		210	14.7 (6.8-29.1)	
40+ years	35	44.9 (14.7-79.5)		33	41.2 (10.8-80.2)	
Gravidity						
Primigravidae	114	26.3 (12.2-47.8)	0.1	110	3.7 (1.5-8.8)	0.001
Multigravidae	617	42.2 (33.1-51.7)		594	23.3 (15.3-33.8)	
Trimester						
First	204	38.0 (25.0-53.0)	0.5	198	25.5 (13.7-42.6)	0.07
Second	281	34.7 (25.6-45.0)		270	9.9 (5.1-18.2)	
Third	246	42.6 (31.1-55.1)		236	21.2 (13.2-32.4)	
Residence						
Rural	498	30.7 (24.2-38.0)	0.04	479	12.6 (8.2-18.9)	0.1
Semi-urban	184	36.2 (22.7-52.5)		178	22.6 (8.5-47.9)	
Urban	49	61.6 (33.5-83.7)		47	30.6 (16.3-49.8)	
SES						
Q1	137	36.1 (25.6-48.1)	0.004	135	15.9 (8.7-27.5)	0.01
Q2	174	25.3 (17.3-35.4)		165	9.0 (4.4-17.7)	
Q3	167	25.0 (18.1-33.4)		161	11.0 (6.3-18.3)	
Q4	142	39.3 (26.0-54.3)		137	23.0 (9.6-45.6)	
Q5	110	59.8 (37.8-78.5)		105	30.7 (17.6-47.9)	

Looking at net use by socio-economic status, we observe a gain in use of any net and use of ITNs by women living in the most poor households in 2008 (with the point estimate for 2008 greater than the 95% confidence limits for 2007 most poor women). Net and ITN use among women living in the least poor households remained at 2007 levels. The effect of this on the equity ratio was to indicate a reduction in inequity (0.60 for any nets and 0.51 for ITNs in 2008). However, it must be noted that coverage in the intermediate socio-economic groups actually fell back to 2006 levels (figures 5 and 6). The socio-economic breakdown of point estimates with 95% confidence intervals for each survey year is included in appendix 4 for reference.
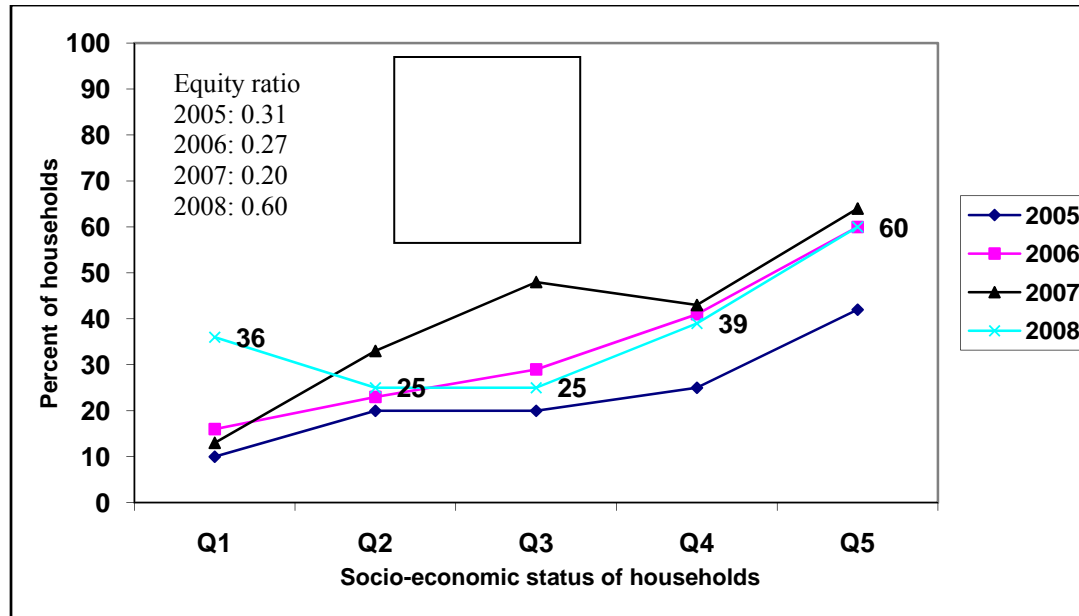
Figure 5. Distribution of currently pregnant women who used any net last night by socio-economic status, Household survey 2005-08
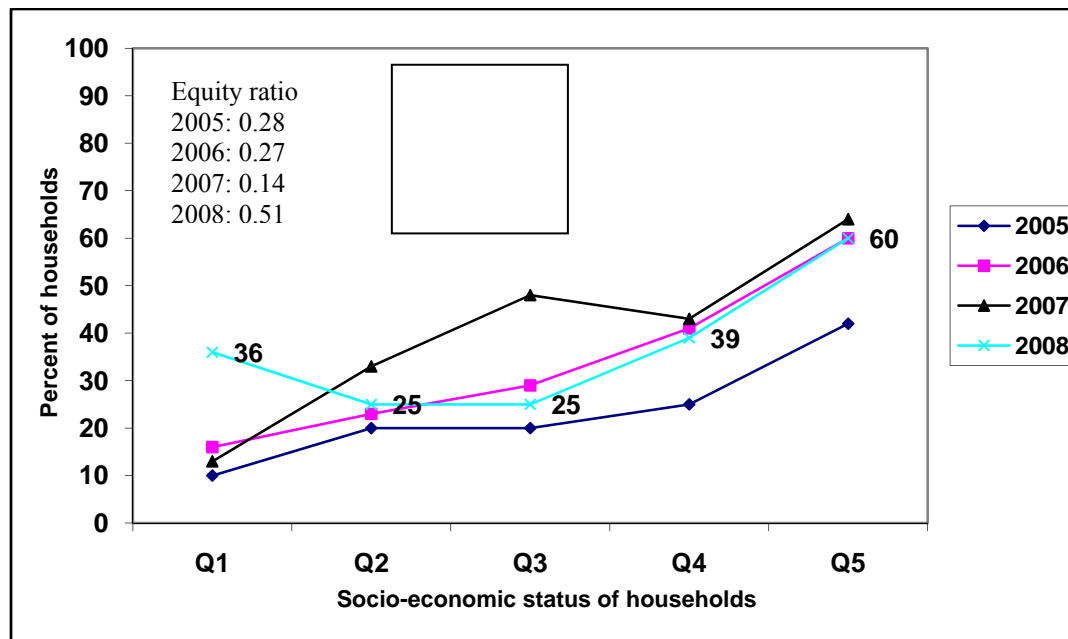
Figure 6. Distribution of currently pregnant women using an ITN last night by socio-economic status, Household survey 2005-08

3.3 Coverage of nets: children under 5

Information about net coverage among children under 5 is presented in table 13. As for current pregnancy, this question relates to use of a net the night prior to the survey, and is reported by the mother or guardian of the child.

Similar to currently pregnant women, the 2008 estimates show no change from 2007 with almost half of all children under five sleeping under a net, but only 29% sleeping under an ITN (table 10).

Table 13. Summary statistics for net use by children under 5 , night preceding survey, Household survey 2005-2008

	All children under 5				
	2005 (N=5567)	2006 (N=5815)	2007 (N=6123)	2008 (N=5701)	p*
Any net	27.5 (24.1,31.3)	40.9 (37.0,44.8)	47.0 (43.0,51.1)	48.3 (40.8-55.8)	0.7
Ever treated	15.3 (13.0,17.9)	28.4 (25.4,31.6)	32.4 (29.3,35.7)	33.8 (27.6-40.7)	0.7
Never treated	12.2 (10.6,14.1)	12.5 (10.8,14.4)	14.6 (12.9,16.5)	14.4 (11.0-18.7)	0.9
ITN	12.2 (10.2,14.4)	21.1 (18.8,23.7)	26.2 (23.5,29.0)	28.8 (22.3-36.3)	0.5

*Difference 2007/08

The bivariate analysis of the determinants of use of any net, and of ITNs, by children under 5 is shown in Table 14. Urban residence and socio-economic status continue to be significant predictors of net use. Differences by socio-economic status across survey years are shown in more detail in figures 7 and 8 below.

Table 14. Bivariate analysis of determinants of use of any net, and use of ITNs, last night for children under 5, Household survey 2008

		Any net 2008		ITN 2008	
	N	% (95%CI)	P	% (95%CI)	P
All	5701	48.3 (40.8-55.8)		28.8 (22.3 – 36.3)	
Residence					
Rural	3759	30.7 (25.3-36.6)	<0.001	14.8 (11.7-18.6)	<0.001
Semi-urban	1534	42.5 (27.8-58.7)		25.6 (13.3-43.7)	
Urban	408	87.9 (81.0-92.6)		59.9 (46.1-72.4)	
SES					
Q1	1145	30.5 (22.9-39.2)	<0.001	13.1 (8.1-20.6)	<0.001
Q2	1216	26.3 (21.2-32.3)		12.9 (9.4-17.5)	
Q3	1291	31.2 (25.0-38.1)		18.1 (12.7-25.1)	
Q4	1127	36.5 (29.1-44.5)		16.9 (11.9-23.4)	
Q5	906	80.2 (73.4-85.5)		54.1 (42.8-65.1)	

*Totals do not always add up due to missing values

The coverage estimates for under fives disaggregated by survey year and by socio-economic status show very small improvements in 2008 for both the most and the least poor children – and therefore a stable equity ratio – although the 2008 point estimate for the least poor is greater than the 95% confidence limit for the least poor in 2007. Coverage estimates for the intermediate socio-economic groups in 2008 fell to 2006 levels, and were lower than the 95% confidence limits in 2007 (figures 7 and 8, appendix 4).
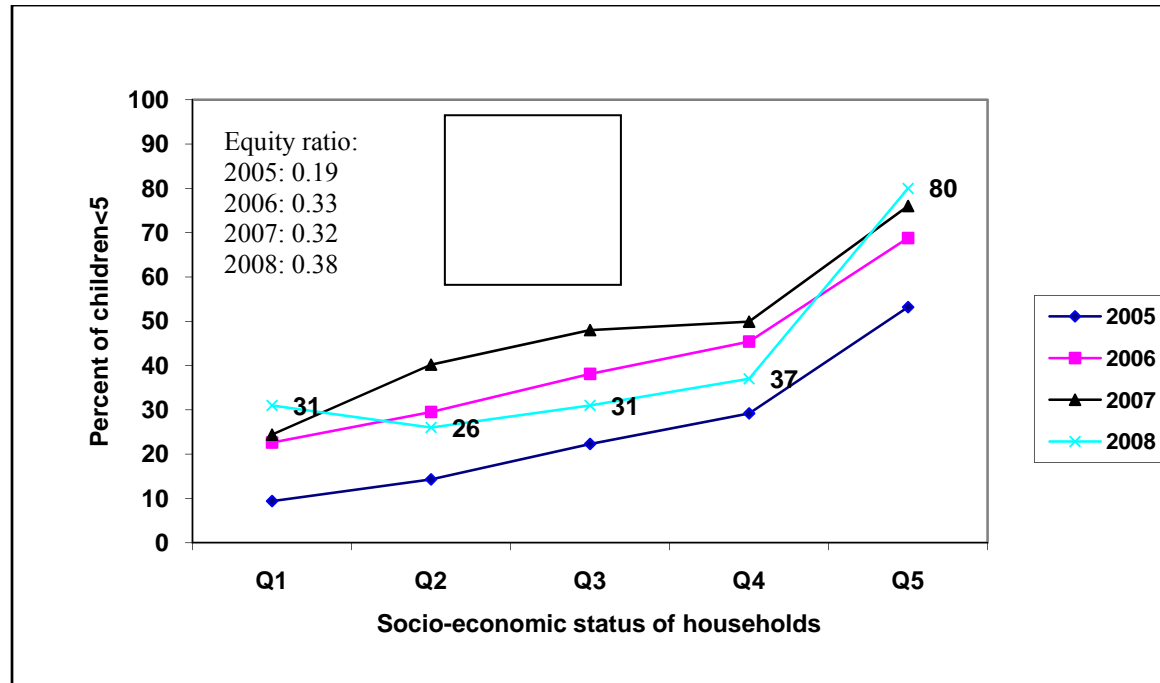
Figure 7. Distribution of children under 5 years using any net last night by socio-economic status, Household survey 2005-08
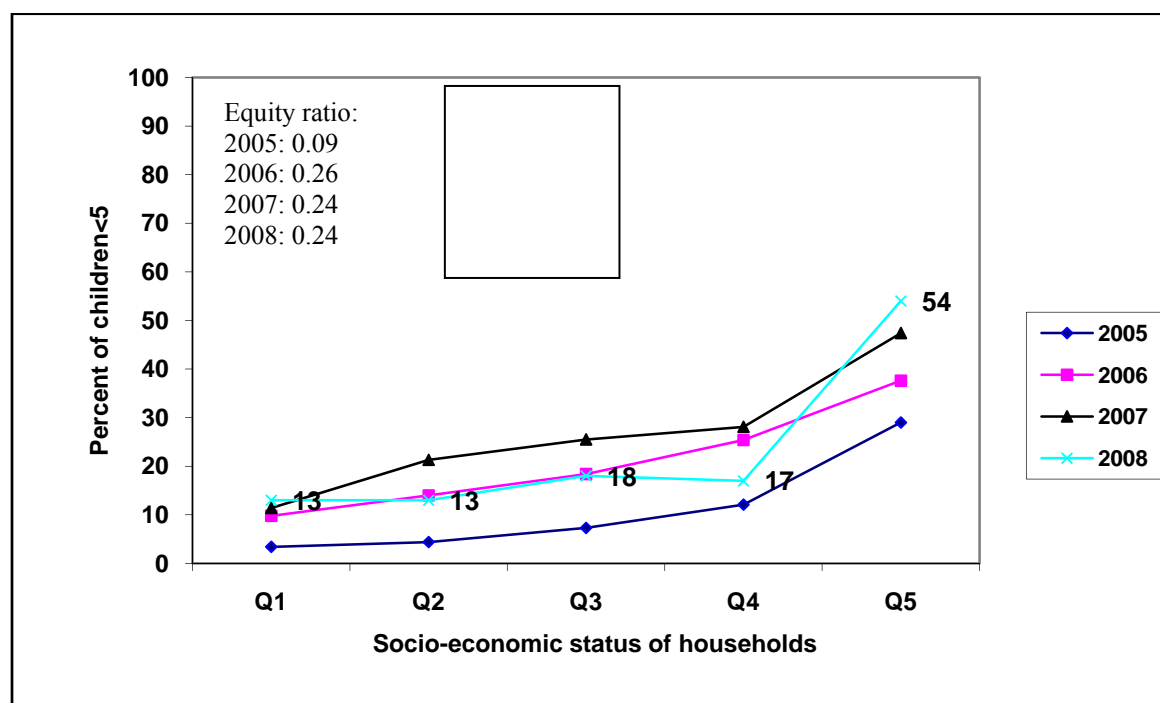
Figure 8. Distribution of children under 5 years using an ITN last night by socio-economic status, Household survey 2005-08

3.4 Coverage of nets: children under 1

Overall no change was observed in use of nets by children under 1 between 2007 and 2008, although the point estimate in 2008 was slightly lower than for 2007 with 47.2% of children under 1 sleeping under any net (with weak statistical evidence that the level of coverage has fallen) and 31.2% under an ITN (table 15).

Table 15. Summary statistics for net use last night by children under 1, Household survey 2005-2008

	All children under 1				
	2005 (N=1180)	2006 (N= 1265)	2007 (N= 1272)	2008 (N= 1228)	p-value*
Any net	32.9 (28.3,37.8)	47.8 (43.4,52.3)	55.6 (50.6,60.5)	47.2 (39.4-55.1)	0.06
Ever treated	19.1 (15.8,22.8)	36.1 (32.2,40.2)	38.8 (34.6,43.2)	34.6 (26.9-43.2)	0.3
Never treated	13.8 (11.4,16.6)	11.7 (9.7,14.1)	16.7 (14.2,19.6)	12.6 (9.7-16.3)	0.06
ITN	15.9 (13.2,19.2)	27.7 (24.4,31.2)	34.3 (30.5,38.3)	31.2 (23.1-40.8)	0.4

*Difference 2007/08

As for other target groups, the bivariate analysis indicates significantly higher coverage levels in urban compared with rural areas, and considerable socio-economic inequity (table 16). Differences by socio-economic status by survey years are shown in more detail in figures 9 and 10.

Table 16. Use of any net, and effectively treated net, by children under 1, bivariate analysis, household survey 2008

		Any net, children < 1		Use of an ITN, children < 1	
	N	% (95%CI)	P	% (95%CI)	P
All	1226	47.2 (39.4-55.1)		31.2 (23.1-40.8)	
Residence					
Rural	305	36.1 (29.6-43.2)	<0.001	18.3 (13.7-24.0)	<0.001
Semi-urban	138	34.1 (23.4-46.7)		26.5 (12.3-48.1)	
Urban	65	88.4 (68.3-96.4)		70.0 (44.1-87.4)	
SES					
Q1	259	36.0 (25.9-47.6)	<0.001	17.8 (9.8-30.2)	<0.001
Q2	265	30.1 (22.2-39.5)		15.1 (9.7-22.6)	
Q3	303	36.2 (27.2-46.3)		22.5 (14.7-32.8)	
Q4	230	38.7 (28.8-49.6)		21.8 (13.1-34.0)	
Q5	169	76.4 (60.0-87.6)		61.5 (40.7-78.7)	

Totals do not always add up due to missing values

In Figure 9 we again observe small gains for the under 1 most poor anynet coverage resulting in an improvement to the equity ratio, but no change for under 1 ITN coverage by socio-economic status (figure 10). Again there was a decrease in coverage for the middle socio-economic groups, consistent with other population sub-groups.
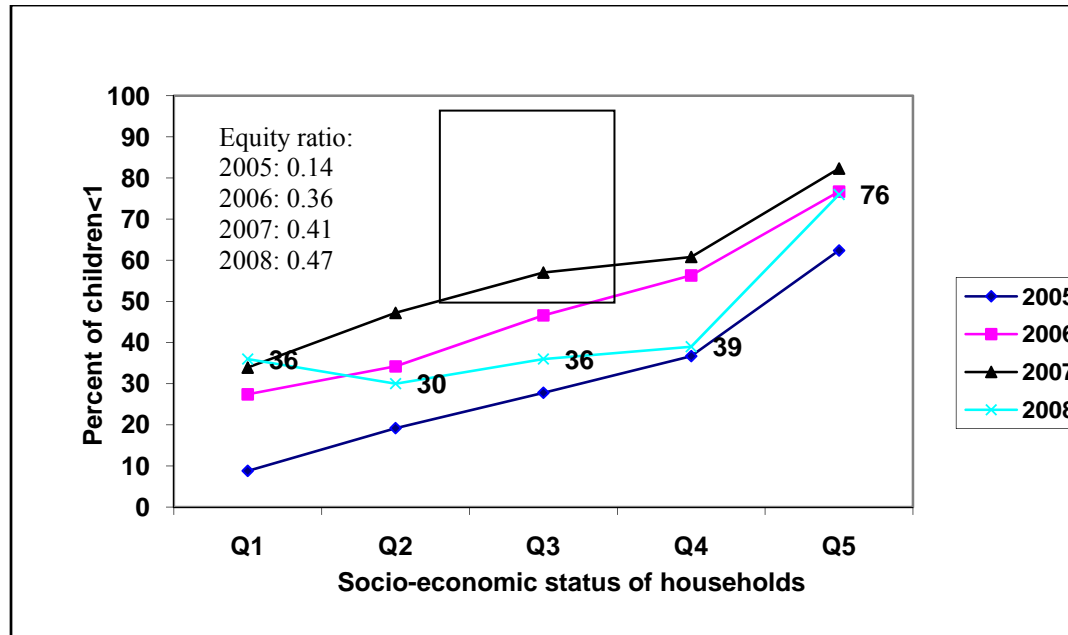
Figure 9. Distribution of children under 1 year using any net last night by socio-economic status, Household survey 2005-08
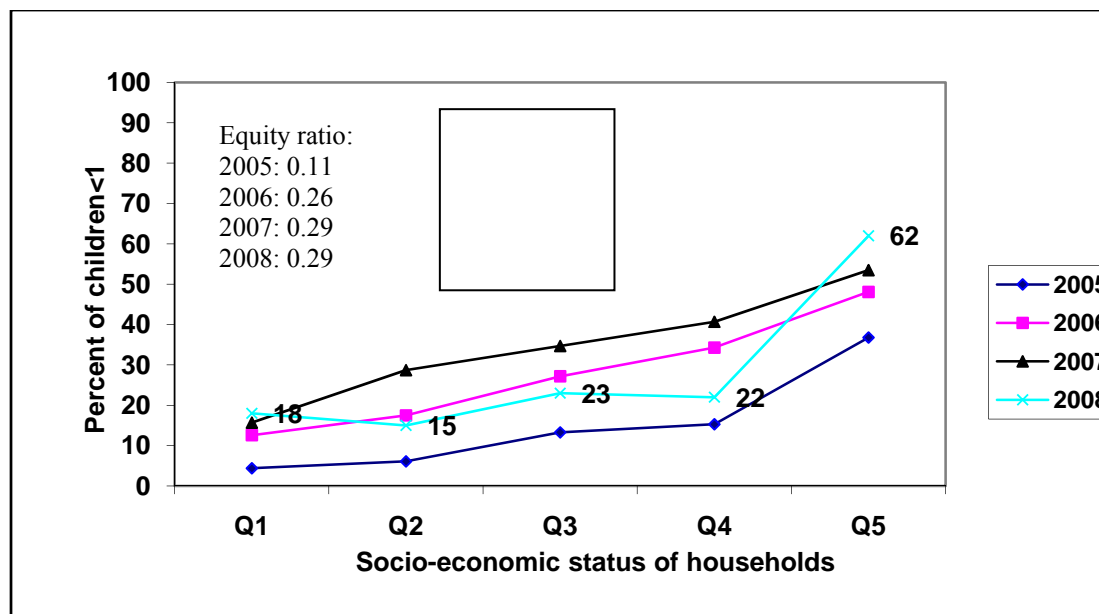
Figure 10. Distribution of children under 1 year using an ITN last night by socio-economic status, Household survey 2005-08

Figures 11 and 12 below show the breakdown of net coverage into discrete year groups of age under 5. The 2008 data shows no statistically significant relationship between year of age of children under five and use of nets, although there is a small peak for children older than 1 year but younger than two years.
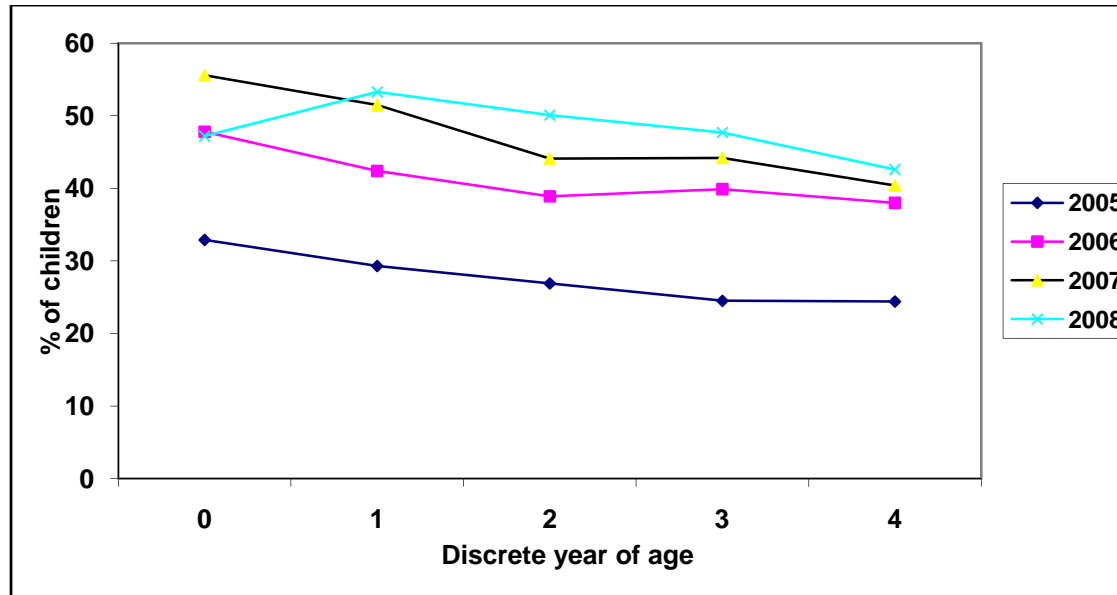
Figure 11. Coverage of any net on night before survey for children under 5 by year of age. Household survey 2005-08
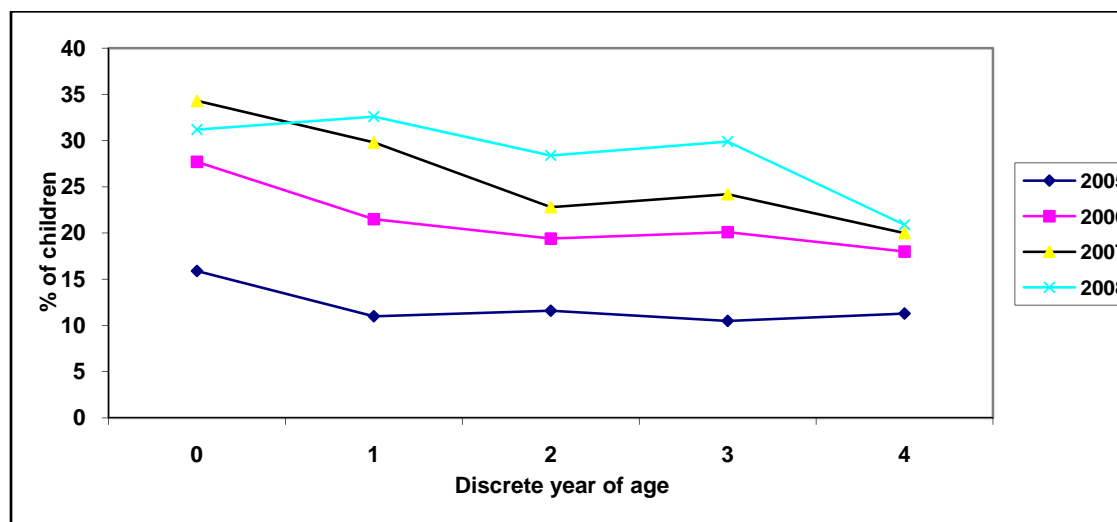
Figure 12. Coverage of effectively treated net on night before survey for children under 5 by year of age. Household survey 2005-08.

3.5 Coverage of nets: all household members
Household heads were asked to indicate which household members had slept under each net in their household the previous night, giving an indication of net coverage among the general population. A summary of these results is shown in Table 17, and the determinants of household member net use in Table 18. The results follow the same pattern as for other sub-groups, with significant associations between the use of nets, location and socioeconomic status.

Table 17. Summary statistics for net use last night by all household members, Household survey 2005-2008

	All household members				
	2005 (N=31164)	2006 (N=30273)	2007 (N=31381)	2008 (N=32246)	p-value*
Any net	23.4 (20.5,26.5)	31.8 (28.8,35.1)	38.4 (35.0,41.9)	40.8 (33.7-48.4)	0.4
Ever treated	12.8 (10.9,14.9)	20.5 (18.4,22.7)	24.9 (22.5,27.6)	26.1 (21.3-31.5)	0.6
Never treated	10.3 (9.0,11.7)	10.8 (9.5,12.3)	12.8 (11.4,14.4)	13.9 (10.4-18.3)	0.5
ITN	9.8 (8.3,11.7)	15.4 (13.7,17.2)	20.5 (18.3,22.8)	25.8 (21.0-31.3)	0.06

*Difference 2007/08

Table 18. Use of any net, and effectively treated net, by all household members, bivariate analysis, household survey 2008

	N	Any net All household members 2008 N=		ITN All household members 2008 N=	
	N	% (95%CI)	P	% (95%CI)	P
All	32246	40.8 (33.7-48.4)		25.8 (21.0-31.3)	
Residence					
Rural	20432	19.9 (16.4-23.8)	<0.001	11.7 (9.7-14.0)	<0.001
Semi-urban	8909	41.3 (24.3-60.7)		27.2 (16.5-41.4)	
Urban	2905	71.0 (62.8-78.0)		45.9 (37.4-54.7)	
SES					
Q1	6159	17.7 (14.5-21.4)	<0.001	9.4 (7.3-12.0)	<0.001
Q2	6237	17.9 (14.4-21.9)		11.0 (8.6-14.1)	
Q3	6915	22.5 (17.3-28.8)		14.4 (10.5-19.5)	
Q4	6655	26.9 (21.5-33.1)		18.5 (13.1-25.5)	
Q5	6201	67.1 (59.3-74.1)		42.8 (36.1-49.8)	

Totals do not always add up due to missing values

Finally, within socio-economic status quintiles and across years figures 13 and 14 present a similar pattern to that observed for pregnant women and children, most strikingly that there remain stark socio-economic differences in coverage for all household members.
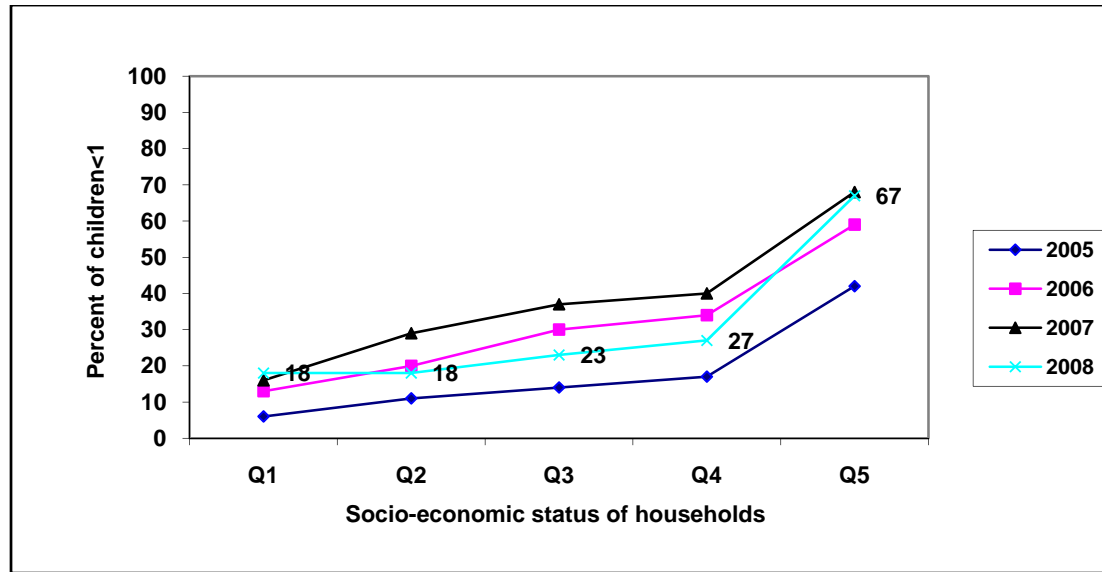
Figure 13. Distribution of all households members using any net last night by socio-economic status, Household survey 2005-08
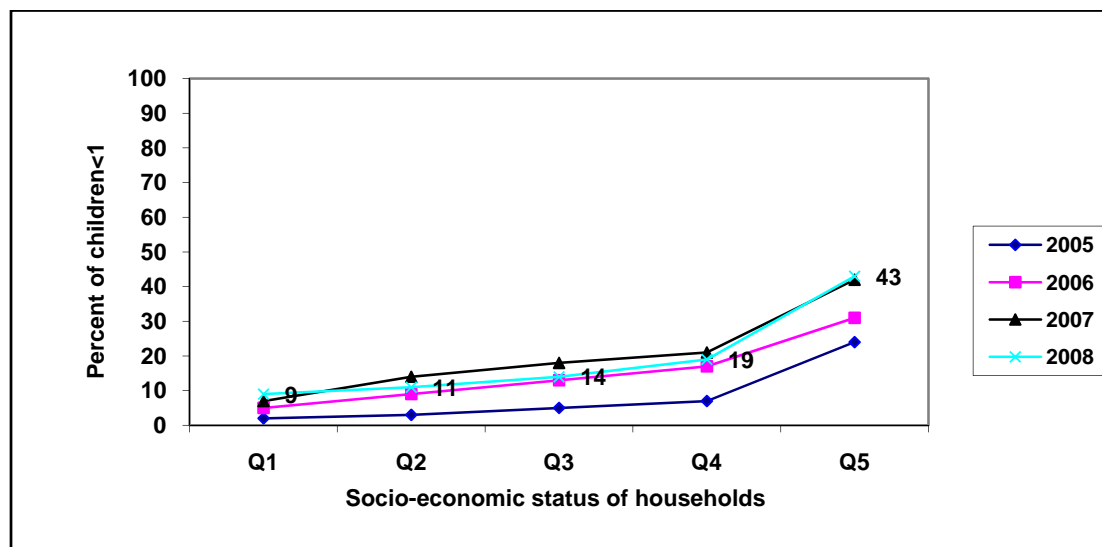
Figure 14. Distribution of all household members using an ITN last night by socio-economic status, Household survey 2005-08

3.6 District level coverage data

District-level estimates of net coverage for children under 5 and all household members in 2008 are explored in Tables 19 and 20. The last column indicates whether the district is classified by the Ministry of Health as epidemic prone. Five districts achieve 60% or higher coverage of any net for children under five (Kigoma Urban, Kinondoni, Kisarawe, Mtwara Urban, Muheza) but only Kinondoni approaches 60% for under 5 coverage of ITNs.

Table 19 – By district: net coverage among under 5s, Household survey 2008

Region 2008	District 2008	Any net 08 % (95% CI)	ITN 2008 % (95% CI)	Epidemic prone
Arusha	Arusha rural	29 (15-48)	13 (4-14)	Yes
Dodoma	Bahi	13 (7-22)	7 (3-14)	
Shinyanga	Bariadi	16 (9-28)	9 (4-17)	
	Shinyanga Urban	49 (33-66)	27 (17-36	
Kagera	Karagwe	24 (16-34)	12 (6-21)	Yes
	Chato	46 (36-57)	12 (8-18)	
Iringa	Iringa Rural	33 (19-50)	22 (11-39)	Yes
	Makete	4 (3-7)	1 (0-4)	Yes
Kigoma	Kigoma Urban	60 (50-70)	32 (24-41)	
Dar es Salaam	Kinondoni	86 (77-91)	59 (29-53)	
Coast	Kisarawe	60 (46-72)	32 (52-80)	
	Rufiji	59 (46-71)	30 (17-46)	
Mbeya	Mbeya Urban	39 (24-57)	23 (11-42)	
Kilimanjaro	Moshi Rural	29 (13-53)	12 (5-25)	
	Rombo	21 (15-28)	10 (6-16)	
Mtwara	Mtwara Urban	79 (65-88)	47 (46-60)	
Tanga	Muheza	70 (61-77)	33 (58-76)	
Lindi	Nachingwea	27 (20-35)	14 (9-22)	
Ruvuma	Namtumbo	36 (26-47)	18 (12-26)	
Mara	Rorya	39 (33-46)	17 (13-24)	
Mwanza	Sengerema	56 (44-68)	30 (61-77)	
Manyara	Simanjiro	27 (14-46)	14 (6-30)	
Singida	Singida Rural	19 (13-27)	12 (6-20)	
Rukwa	Sumbawanga Rural	16 (12-23)	8 (4-14)	Yes

Table 20 – By district: net coverage among all household members, Household survey 2008

Region 2008	District 2008	Any net 08 %(95% CI)	ITN 2008 %(95% CI)	Epidemic prone
Arusha	Arusha Rural	29 (15-48)	11 (6-20)	Yes
Dodoma	Bahi	13 (7-22)	5 (2-9)	
Shinyanga	Bariadi	16 (9-28)	8 (5-15)	
	Shinyanga Urban	49 (33-66)	24 (14-39)	
Kagera	Chato	46 (36-57)	15 (11-19)	
	Karagwe	24 (16-34)	10 (6-16)	Yes
Iringa	Iringa Rural	33 (19-50)	15 (7-29)	Yes
	Makete	4 (3-7)	2 (0-10)	Yes
Kigoma	Kigoma Urban	60 (50-70)	28 (20-37)	
Dar es Salaam	Kinondoni	86 (77-91)	47 (40-55)	
Coast	Kisarawe	60 (46-72)	27 (19-35)	
	Rufiji	59 (46-71)	27 (20-36)	
Mbeya	Mbeya Urban	39 (24-57)	20 (12-31)	
Kilimanjaro	Moshi Rural	29 (13-53)	8 (3-18)	
	Rombo	21 (15-28)	7 (4-10)	
Mtwara	Mtwara Urban	79 (65-88)	50 (44-57)	
Tanga	Muheza	70 (61-77)	27 (18-37)	
Lindi	Nachingwea	27 (20-35)	14 (10-18)	
Ruvuma	Namtumbo	36 (26-47)	15 (11-20)	
Mara	Rorya	39 (33-46)	15 (11-21)	

Mwanza	Sengerema	56 (44-68)	22 (18-27)	
Manyara	Simanjiro	27 (14-46)	15 (7-28)	
Singida	Singida Rural	19 (13-27)	7 (4-10)	
Rukwa	Sumbawanga Rural	16 (12-23)	7 (3-13)	Yes

3.7 Summary net indicators

The 24 district sample for the TNVS household survey was drawn to represent mainland Tanzania. Figures 15 and 16 present a summary of any net coverage and ITN coverage for all population groups over four years. In summary, we observe a steady increase in any net and ITN coverage each survey year for the total population and for children under five. In 2008, children under 1, who had previously been observed to be making the largest increases in coverage, dropped to the same level as children under 5. Currently pregnant women had the lowest any net and ITN coverage of all population groups.

	2005	2006	2007	2008
under 1	32.9	47.8	55.6	47.2
under 5	27.5	40.9	47	48.3
currently preg	25.2	33.9	38.9	38.6
total pop	23.4	31.8	38.4	40.8
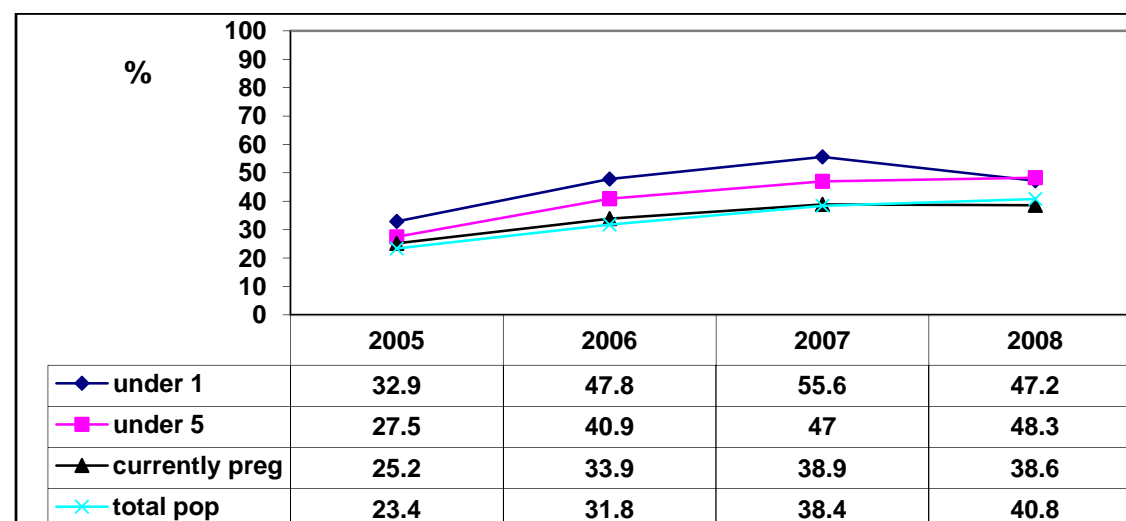
Figure 15. Summary weighted national coverage estimates for all population groups: Use of any net on night before survey, (Household 2005-08)

	2005	2006	2007	2008
under 1	15.9	27.7	34.3	31.2
under 5	12.2	21.1	26.2	28.8
currently preg	10.7	17.6	23.2	18.8
total pop	9.8	15.4	20.5	26
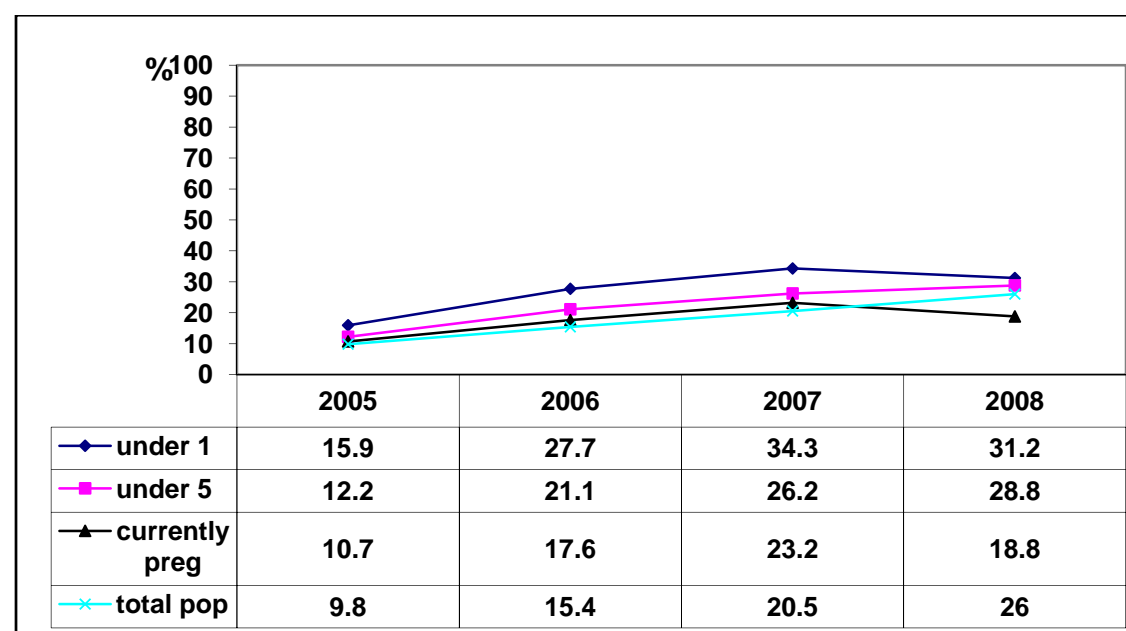
Figure 16. Summary weighted national coverage estimates for all population groups: Use of an ITN on night before survey (Household 2005-08)

3.8 Coverage estimates in net owning households

Individuals may only use a net if resident in households which own a net The final net use analysis in this report examines personal use of nets amongst individuals who live in net owning households (tables 21 and 22). These estimates cannot be reported as the universal coverage estimates since they are not representative of the population level. However they do provide interesting insight into the nature of the gap between ownership and use in Tanzania during 2008. Any net use amongst all target groups is estimated to be 15-20% higher for individuals with a net in the household than at the population level, and ITN use between 20-30% higher. In households were there was at least one net, at least half of all target group members reported sleeping under a net. In households where there was at least one ITN, over 60% of all target group members reported sleeping under an ITN. This finding underlines the importance of household ownership as a step in the causal chain leading to effective protection by an ITN. It also raises the important question of prioritisation of nets within households.

Table 21. Personal use of any net by individuals living in a net owning household, Household survey 2008

	Individuals living in net owning households, 2008			
	Currently pregnant (N=466)	Children <5 (N=3754)	Children < 1 (N=1228)	All household (N= 19613)
Any net	54.9 (45.3-64.1)	65.6 (58.7-71.9)	66.2 (57.6-73.8)	59.0 (51.7-65.9)
Ever treated	33.2 (25.5-41.9)	45.9 (39.4-52.5)	48.4 (39.4-57.5)	37.9 (32.6-43.6)
ITN	27.2 (19.4-36.5)	39.5 (32.4-47.1)	44.5 (34.5-55.2)	37.6 (32.3-43.3)

Table 22. Personal use of an ITN by individuals living in a ITN owning household, Household survey 2008

	Individuals living in ITN owning households, 2008			
	Currently pregnant (N=292)	Children <5 (N=2504)	Children < 1 (N=1173)	All household (N=12591)
Any net	62.9 (51.4-73.0)	69.7 (61.9-76.4)	71.8 (62.4-79.6)	64.6 (56.8-71.7)
Ever treated	46.7 (37.4-56.2)	61.3 (54.0-68.1)	62.7 (52.8-71.6)	56.7 (50.3-62.8)
ITN	38.6 (28.8-49.4)	54.3 (46.2-62.2)	59.7 (48.7-69.8)	56.7 (50.4-62.9)

3.9 Net stock and net retreatment indicators

The household survey asked a series of questions of household heads about the nets in their homes. These questions included the delivery system for each net (voucher, free, purchased); the type of net acquired (conventional or LLIN); whether the net had ever been treated with insecticide, the type of insecticide used and the date of last treatment. As noted in figure 1, this information is used to determine the final treatment status of all reported nets. Household heads are the standard source of this information and reporting errors cannot be ruled out given that household heads frequently do not engage in the purchase and maintenance of nets.

The disaggregation of nets by the the system through which they were acquired is shown in Figure 17. In 2008 76% of the nets owned in Tanzania were reported to have been bought without assistance and 13% with a *hati punguzo* voucher, compared to 68% and 19% respectively in 2007.   7% of all nets owned in 2008 were reported to have been free nets.
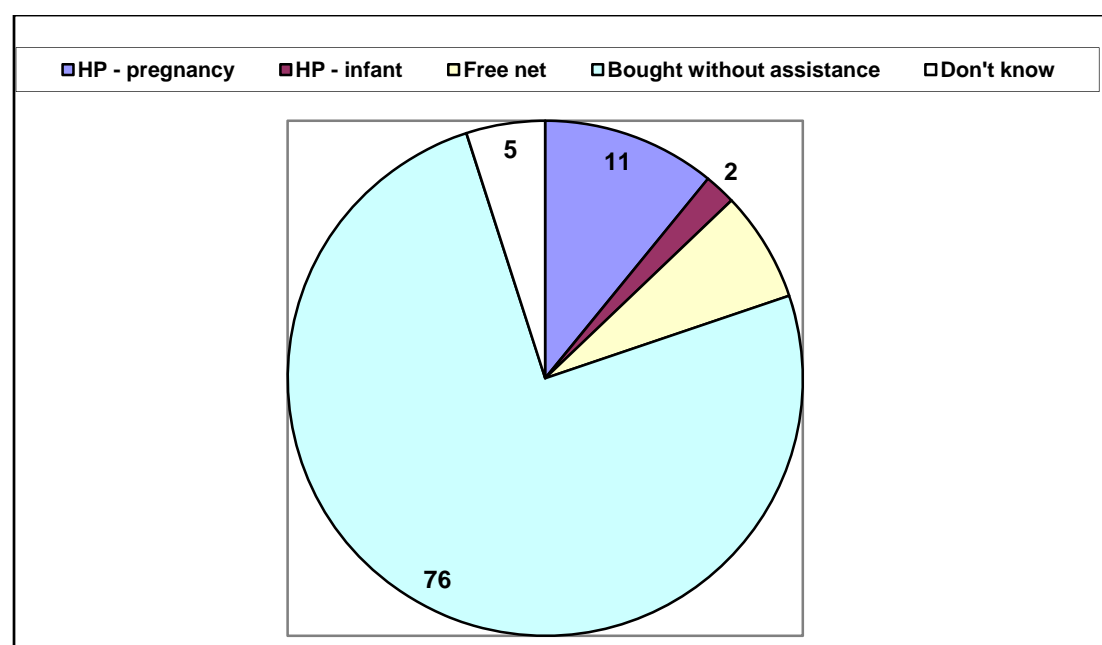
Figure 17. Delivery system for each net (voucher, free, bought), for total net stock 2008, TNVS household heads reports

The number of free net reports in each district is shown in Table 23. Ownership of free nets was reported in all districts. In 10 of the 24 districts 10% of all nets were reported to have been delivered as free nets

Table 23 Disaggregation of free nets by districts (household head reports), Household survey 2008

Region 2008	District 2008	N nets	% reported free nets
Arusha	Arusha rural 25	217	9 (4-22)
Dodoma	Bahi 26	190	18 (11-29)
Shinyanga	Bariadi 27	321	8 (6-11)
	Shinyanga Urban 43	509	1 (0-3)
Kagera	Chato 28	405	1 (0-3)
Iringa	Iringa Rural 29	230	12 (7-21)
	Makete 34	84	27 (17-41)
Kagera	Karagwe 30	204	12 (6-23)
Kigoma	Kigoma Urban 31	559	4 (2-8)
Dar es Salaam	Kinondoni 32	593	5 (4-7)
Coast	Kisarawe 33	349	18 (11-29)
	Rufiji 7	418	20 (14-28)
Mbeya	Mbeya Urban 35	393	6 (3-14)
Kilimanjaro	Moshi Rural 36	156	9 (5-16)
	Rombo 40	117	15 (10-21)
Mtwara	Mtwara Urban 37	633	17 (13-23)
Tanga	Muheza 38	333	28 (16-44)
Lindi	Nachingwea 17	319	30 (23-39)
Ruvuma	Namtumbo 39	328	4 (2-10)
Mara	Rorya 41	339	9 (4-16)
Mwanza	Sengerema 42	466	3 (1-5)
Manyara	Simanjiro 19	236	9 (5-14)
Singida	Singida Rural 44	159	8 (3-18)

Rukwa	Sumbawanga Rural 21	158	2 (0-8)
All districts		7716	7 (6-8)

In 2008 the percentage of nets to have been ever treated remained the same as 2007 but a small increase was observed in the proportion effectively treated – from 50% in 2007 to 55% in 2008 – which may reflect the increasing use of net retreatment kits with longer lasting insecticide (table 24).

Table 24. Insecticide treatment status of all nets owned by households (from nets data), Household surveys 05-08

	2005 (N=5063)	2006 (N=6729)	2007 (N=7951)	2008 (N=7605)
Never treated	51.0 (48.0,53.9)	41.8 (39.4,44.2)	39.4 (37.1,41.8)	40.9 (34.6-47.5)
Ever treated	49.0 (46.1,52.0)	58.2 (55.8,60.6)	60.6 (58.2,62.9)	59.1 (52.5-65.4)
ITN	38.9 (35.8,42.1)	44.8 (42.5,47.1)	49.7 (47.4,51.9)	54.9 (48.5-61.0)

Table 25 explores the determinants of net treatment. In previous years a difference in net treatment by socio-economic status and by residence had been observed but this was not apparent from the 2008 survey data. The only variable to continue to have statistically significant association with net treatement was use of a *Hati punguzo* voucher, with more voucher nets being treated than non-voucher nets (table 25).

Table 25. Bivariate analysis of net treatment with any type of insecticide, Household survey 2008

	Ever treated			Effectively treated (ITN)		
	N nets	% net (95% CI)	P	N nets	% ITN (95% CI)	P
By SES	7349	59.1 (52.5-65.4)		7605	54.9 (48.5-61.1)	
Q1	990	52.0 (46.4-57.5)	0.3	1010	48.0 (42.8-53.2)	0.2
Q2	1136	55.9 (51.6-60.1)		1168	52.5 (48.1-56.9)	
Q3	1303	60.0 (51.2-68.2)		1339	57.3 (47.9-66.2)	
Q4	1427	64.0 (55.5-71.7)		1465	61.6 (52.4-70.1)	
Q5	1446	59.0 (50.7-66.8)		1426	54.2 (46.7-61.5)	
By residence:						
Rural	2091	54.7 (51.5-57.8)	0.6	3852	51.2 (48.1-54.3)	0.7
Semi-urban	1347	61.1 (45.1-75.1)		2405	56.7 (39.2-72.6)	
Urban	767	60.0 (49.9-69.2)		1362	55.4 (47.0-63.5)	
By voucher status						
Used **any** voucher	1583	71.9 (66.1-77.0)	<0.001	1606	69.5 (63.6-74.9)	<0.001
Didn't use voucher	5577	57.4 (50.3-64.2)		5738	53.9 (47.1-60.6)	
By age of net:						
<6 mos	999	57.6 (47.9-66.8)	0.06	1017	55.4 (45.9-64.5)	0.1
6-12 mos	1400	66.6 (58.5-73.8)		1430	62.3 (53.6-70.3)	
13-24 mos	1598	64.0 (53.0-73.7)		1628	60.7 (49.6-70.7)	
>24 mos	2767	53.3 (45.1-61.3)		2835	51.3 (43.2-59.3)	

PART 3: RCH PROCESSES
3.10 Antenatal care coverage, timing of first use and use of IPT
Attendance to antenatal clinic at least once during pregnancy continued to be high with 98% of women with a pregnancy in the past year saying they had attended antenatal care at least once. Table 26 shows gestation at first visit to RCH for currently pregnant women from the household and facility user surveys. Again in 2008 there was no change in timing of first visit, being 20 weeks for both groups.

Table 26. Reported gestation at first RCH visit, Household and Facility surveys 2005-08

	Household (current pg)		Facility users	
	Mean wks (95%CI)	N	Mean wks (95%CI)	N
2005	20.3 (19.5-21.0)	772	20.1 (19.7-20.6)	846
2006	21.0 (20.3-21.7)	584	20.2 (19.8-20.6)	862
2007	20.7 (20.0-21.4)	707	20.1 (19.7-20.5)	914
2008	20.5 (19.3-21.7)	731	20.3 (19.2-21.3)	871

The 2008 survey explored the timing of antenatal attendance. Household heads and currently pregnant women (household survey), and antenatal clinic workers and facility users (facility survey) were asked to state the ideal gestation for a pregnant woman to first attend antenatal clinic. In addition, facility users were asked to give reasons why a woman might attend clinic earlier than the gestation they stated as ideal, and were asked to say whether they thought that they themselves had been early, on time, or late gestation at their first antenatal visit, results shown in table 27. Stated ideals may differ from recorded behaviour because the individual can report on what they would do in the absence of any limiting factors.

Results were remarkably consistent across different population groups. The mean stated ideal gestation at first visit was 13.0 weeks from household head reports, 13.7 weeks from currently pregnant women, and 12.1 weeks from reports by staff at antenatal clinic. Facility user stated reasons for a woman to attend earlier included: to check on the health of the foetus, to get all interventions available, being primigravida, being 'old', because of ill health or a previous negative pregnancy experience, or because of worry about how clinic staff might react if attending late.

When facility survey respondents were asked whether they thought their own antenatal attendance had been timely we observed that 52% of women thought that they had first attended antenatal care too late (table 27), and indeed these women had the latest gestation at first visit (median 24 weeks).

Finally, facility users were asked how the clinic staff had reacted to the timing of their first visit. 30% of women reported that clinic staff had said they had been late to attend clinic for the first time. Overall 58% of women said that the clinic staff made no comment about the timing of their first visit, and only 6% were told that they had first attended too early.

Table 27. Individual and perceived staff reaction to timing of first antenatal attendance, Facility users survey 2008

		N=878	%	Median gestation first visit (weeks)
Women's own view of timing of her first antenatal attendance:	Yes the right time	202	23	20
	No, too early	218	25	16
	No, too late	458	52	24
Perceived staff reaction to timing of first antenatal attendance:	Yes, the right time	50	6	16
	No, too early	55	6	16
	No, too late	265	30	24
	No comment made	508	58	20

Coverage of intermittent presumptive treatment (IPT) in pregnancy (with no reference to type of drug used) amongst women who had delivered in the last two years was 59.6% (55.8-63.2) for first dose and 31.0% (27.8-34.3) for second dose, showing no change from 2007. As previously observed, IPT coverage is lower when restricting analysis to women who stated the drug used to have been the recommended *sulphadoxine pyrimethamine,* being 50.2% (46.7-53.6) and 26.1% (23.3-29.0) respectively for first and second dose.

3.11 Infrastructure availability

In Table 28, key items required to deliver antenatal services in RCH clinics are listed. Stocks of sulphadoxine pyrimethamine available for IPTp had improved from 59% in 2007 to 71% of facilities having the drug available in 2008. In rural facilities the level was 76%. Stock of *hati punguzo* pregnancy vouchers had declined in 2008 from 80% to 72% of operating facilities having vouchers in stock. Stock of *hati punguzo* infant vouchers remained over 80%.

Table 28. Infrastructure availability (equipment/drugs) in RCH facilities, Facility survey 2005-08*

	2005 [N=190]	2006 [N=188]	2007 [N=192]	2008 [N=200]
	%	%	%	%
Drugs				
Sulphadoxine pyrimethamine	85	74	59	71
Vitamin A	89	95	94	85
Ferrous/ folate	77	73	65	51
Mebendezole	69	82	91	75
Vaccinations				
Measles	-	-	-	90
TT Vaccine	87	92	92	92
BCG	86	90	89	86
DPT	77	86	85	86
Functional fridge	93	96	96	96
Disposable syringes	98	98	96	98
Electricity	43	43	40	41
Hati Punguzo related				
Antenatal Cards	84	83	90	94
Child vaccination cards	85	82	82	95
Pregnancy vouchers**	69	93	80	72
Infant vouchers**	-	-	82	89
IRKits**	26	78	17	n/a
HP posters**	87	78	75	64
Ngao posters	23	24	25	12
*HP Trained personnel***				
Percent of facilities with at least one HP trained staff member**	97	91	91	87

* stock refers to items accessible to the RCH staff.

**in launched clinics

PART 4: VOUCHER PROCESSES

At the time of the 2008 survey all 24 districts had been operating the pregnancy voucher for more than 24 months, and the infant voucher for beween 2 and 20 months (see appendix 2 for more detail of launch dates).

3.12 *Hati Punguzo* voucher knowledge indicators

Knowledge of the two voucher schemes differed considerably. Eighty-one percent of household heads had heard of the pregnancy voucher but only 37% for the infant voucher. Knowledge of voucher value continued to be very low for both vouchers (table 29).

Table 29 – Voucher knowledge indicators amongst all household heads, Household survey 2008

	Knowledge of pregnancy voucher N=6922 household heads	Knowledge of infant voucher N=6922 household heads
	%	%
Heard	81	37
Eligibility	59	25
Value	2	2

Similar to other years, facility survey interviewees reported that the main source of first hearing about *Hati Punguzo* was the RCH clinic (63%), followed by announcements on the radio (19%) and conversations between neighbours and family (14%).

The 2008 facility survey asked staff who were identified to be responsible for the voucher scheme in their clinic about the value of *hati punguzo* vouchers, and the top-up required to use them. Two-thirds knew the correct voucher value, and half said that the top-up required was dependent on the size of the net (table 30).

Table 30 – Voucher value knowledge amongst clinic staff*, Facility survey 2008

	Knowledge of pregnancy voucher value, N=194 staff	Knowledge of infant voucher value, N=189 staff
	%	%
Know value	66	65
Percent of staff who stated top-up to be:		
Dependant on net size	50	49
<2000 Tsh	9	9
2000-3000 Tsh	28	26
Don't know	13	17

*identified on day of survey as responsible for the operation of voucher scheme

3.13 Coverage of pregnancy voucher

Information about pregnancy voucher coverage across four survey years is summarised in table 31. The household survey, the most representative of the general population of currently and recently pregnant women, shows 2008 voucher coverage continuing to fall for currently pregnant women, and lower than 2007 for women with a past pregnancy.   It has become apparent that not all women receive a voucher at their first or even second visit to clinic (see table 33 below) and therefore there is a difference in asking whether a woman received a voucher during pregnancy (past pregnancy), or whether she received a voucher after attending clinic at least once (currently pregnant). The facility users and the facility routine records data are less reliable when generating population coverage estimates, but these sources also indicate reduced voucher coverage for 2008 (table 31).

Table 31. Summary statistics for pregnancy voucher coverage from Household and Facility surveys, 2005-2008

	2005	2006	2007	2008
Household (current pg)*	N=194 44.3 (36.3-52.7)	N=331 70.1 (63.7-75.8)	N=362 57.2 (50.7- 63.3)	N=358 43.7 (32.7-55.4)
Household (past preg)	N=138 55.8 (46.5-64.7)	N=922 64.7 (60.6-68.6)	N=1243 72.5 (69.1-75.8)	N=1203 52.6 (46.6-58.1)
Facility users	N=488 42.0 (33.8-50.6)	N=862 75.3 (70.5-79.4)	N=914 79.1 (64.8-82.9)	N=880 70.1 (59.3-78.5)
Facility records	N=10239 46.7 (45.7-47.7)	N=25033 72.1 (71.5-72.6)	N=24336 74.2 (72.9-74.8)	N=50528 50.1 (49.3-50.7)

*N restricted to those who had already attended clinic at least once

Findings for the past pregnancy population (estimating voucher coverage by the end of pregnancy) – indicate higher coverage amongst more wealthy or urban women than non urban and poorer women in 2008 (table 32).

Table 32. Determinants of pregnancy voucer receipt, Household past pregnancies 2008

	HH Past pregnancies 2008		
	N	% (95% CI)	P
All women in launch districts	1203	52.6 (46.6-58.5)	
Location of outreach			
Facility Outreach	1171 32	52.7 (46.7-58.7) 35.8 (17.4-59.6)	0.1
Gestation			
First trimester Second Third trimester	234 814 155	60.9 (49.3-71.5) 50.6 (43.8-57.4) 49.5 (36.6-62.4)	0.2
Residence			
Rural Semi-urban Urban	788 336 79	49.1 (43.9-54.3) 44.6 (30.8-59.3) 69.4 (57.9-79.0)	0.01
Socio-economic status			
Q1 (poorest) Q2 Q3 Q4 Q5 (least poor)	242 264 301 220 174	38.7 (30.5-47.6) 39.6 (30.8-49.2) 51.9 (44.0-59.8) 65.6 (53.5-76.0) 60.4 (45.6-73.5)	0.01

Totals do not always add up due to missing values

The facility survey data from previous years had indicated that not all women received a pregnancy voucher at their first visit to antenatal clinic. Knowing that the facility users survey is susceptible to respondent bias which tends to over estimate levels, in 2008 this question was included in the household survey to estimate voucher coverage at first antenatal visit at the population level among currently pregnant women. Only 32% of currently pregnant women who had already attended antenatal clinic received a voucher at their first visit in 2008 (table 33).

Table 33. Distribution of voucher receipt by antenatal visit, Household survey 2008 and Facility survey 2005-08

	Household survey currently pregnant	Facility users survey currently pregnant			
	2008 (N=358) %	2005 (N=488) %	2006 (N=852) %	2007 (N=914) %	2008 (N=880) %
Attended but not yet received	48	58	25	21	30
Received first visit	32	31	57	64	53
Received second visit	9	8	14	11	13
Received third visit	1	3	5	4	4

3.14 Coverage of infant voucher

The percentage of infants who received a measles vaccine and also received an infant voucher remained around 60% in 2008 as in 2007, according to routine clinic records (table 34). In contrast, the household survey indicates a much lower estimate of infant voucher coverage at 26.4%. Beyond the tendency for facility records to overestimate coverage, reasons for such a large disparity in coverage are unclear (table 34). The household survey showed no evidence of a difference in infant voucher coverage by residence of socio-economic status (table 35).

Table 34. Summary statistics for infant voucher coverage from Household and Facility surveys, 2007-2008*

	2007	2008
Household survey received measles vaccination	N=131	N=1178
Received infant voucher	50.4%	26.4 % (20-2-33.7)
Facility records attendance for measles vaccination	N=16463	N=26352
Received infant voucher	65.0% (64.5-66.2)	61.1 % (59.9-61.6)

*Estimates restricted to districts which had been operating IV for at least 30 days.

Table 35. Determinants of receipt of an infant voucher in launched districts, Household 2008

		2008 infant voucher*	
	N	% (95% ci)	P
All*	1178	26.4 % (20-2-33.7)	
Residence			
Rural	742	29.5 (24.0-35.7)	0.6
Semi-urban	343	27.0 (15.7-42.4)	
Urban	93	21.1 (8.9-42.1)	
Socio-economics			
Q1 (poorest)	211	35.0 (25.2-46.2)	0.5
Q2	229	28.5 (21.1-37.3)	
Q3	274	28.1 (20.0-37.8)	

Q4	251	26.5 (18.2-37.0)	
Q5 (least poor)	212	22.8 (12.4-38.3)	

*All recipients of the measles vaccine in launched districts

3.15 Voucher redemption – pregnancy and infant voucher

Summary statistics for voucher redemption are shown in table 36 for household survey women with a past pregnancy (pregnancy voucher) and household survey infant voucher recipients.   Pregnancy voucher redemption declined again in 2008 to 64% of recipients.   In the 2008 around half of the infant vouchers reported had been redeemed at the time of survey.

Table 36 – Summary on *Hati Punguzo* voucher redemption, Household survey 2005-08

	Household Past pregnancies		Infant voucher	
	Used voucher to buy a net		Used voucher to buy a net	
	N	%	N	%
2005	108	79.6 (68.9-87.4)		n/a
2006	633	82.8 (77.9-86.8)		n/a
2007	901	72.6 (68.5,76.3)	131	37.9 (23.4.56.7)
2008	622	66.4 (59.1-72.9)	413	49.4 (40.2-58.6)

Disaggregation of voucher redemption by socio-economic status and residence is shown for pregnancy and infant vouchers in Table 37. Socioeconomic and geographic inequity in redemption of both vouchers was observed in 2008, reaching statistical significance for the pregnancy voucher but not for the infant voucher.

Table 37. Bivariate analysis of determinants of Hati Punguzo voucher redemption Household survey 2008

	Household past pregnancies 2008			Infant voucher 2008		
	N	% (95% CI)	P	N	% (95% CI)	P
Used voucher to buy a net	348	64.3 (55.3-72.4)		433	49.4 (40.2-58.6)	
Socio-economics						
Q1 (poorest)	59	48.2 (29.6-67.4)	0.009	88	46.0 (32.3-60.4)	0.1
Q2	61	36.4 (20.9-55.3)		84	34.9 (25.3-45.9)	
Q3	82	63.7 (48.5-76.6)		101	42.9 (29.7-57.1)	
Q4	86	64.6 (48.9-77.7)		87	48.5 (35.7-61.6)	
Q5 (least poor)	60	75.7 (60.8-86.2)		73	61.4 (40.3-79.0)	
Residence						
Rural	407	60.3 (52.5-67.7)	0.02	257	45.9 (37.2-55.0)	0.6
Semi-urban	168	57.2 (37.6-74.8)		127	44.9 (28.8-62.2)	
Urban	47	82.6 (67.0-91.8)		31	57.5 (29.7-81.3)	

Totals do not always add up due to missing values

 Table 38 shows the reasons for non-redemption of a vouchers at the time of survey for past pregnancy respondents (pregnancy voucher) and carers of infants (infant voucher). Not having sufficient funds to top-up continues to be the primary reason for non-use of both vouchers.

Table 38. Use and non-use of pregnancy and infant vouchers, Household survey 2008

	2008	2008
Overall N who received the voucher	Pregnancy voucher* (N= 348)	Infant voucher (N=433)
Used the voucher to buy a net	64%	49%
Already had a net/don't need a net	1%	3%
No money for the top-up	20%	31%
Lost the voucher	5%	4%
No nets in shop	1%	2%
Other	9%	10%
All voucher outcomes	100%	100%

*taken from past pregnancy reports

3.16 The cost of using Hati Punguzo vouchers

Top-up costs, travel time and cash travel costs when using vouchers are presented in tables 39-41.

In 2008 the mean top-up paid when using the voucher increased again to around Tsh2300/- for nets purchased using either voucher (table 39).

Table 39. Mean top-up paid by size of net bought with Hati Punguzo vouchers, household surveys 2005-2008

	Infant voucher				Pregnancy voucher (current + prev pregnancies]							
	2007		2008		2005		2006		2007		2008	
	n	Mean	n	Mean	n	Mean	N	Mean	n	Mean	N	Mean
All voucher nets	24	1481	209	2240	138	968	643	1149	727	1601	390	2319
3.5x6	3	1150	30	1717	20	660	120	1000	72	1392	46	2181
4x6	13	1387	99	2273	53	820	286	1098	331	1514	180	2229
6x6	5	1790	51	2267	52	1238	173	1336	251	1758	127	2407
Other size	9	1625	23	2559	13	962	64	1148	73	1655	37	2360

Mean top-ups for pregnancy voucher nets (all sizes) are calculated and presented at the district level in table 40. We observe a considerable range of mean top-up values, from Tsh 1506/- in Rombi district to Tsh 2754/- in Bariadi district.

Table 40. District breakdown of mean top-up to pregnancy voucher

Region 2008	District 2008	Mean top-up Tsh (95%CI)
Arusha	Arusha Rural	1738 (1491-2242)
Dodoma	Bahi	1926 (1580-2274)
Shinyanga	Bariadi	2754 (2529-2981)
	Shinyanga Urban	2210 (1985-2434)
Kagera	Chato	2096 (1809-2384)

Iringa	Iringa Rural	2306 (1735-2877)
	Makete	2292 (1904-2678)
Kagera	Karagwe	2025 (1826-2223)
Kigoma	Kigoma Urban	1708 (1557-1858)
Dar es Salaam	Kinondoni	2421 (2119-2722)
Coast	Kisarawe	1750 (1350-2148)
	Rufiji	2509 (2186-2831)
Mbeya	Mbeya Urban	1634 (1325-2148)
Kilimanjaro	Moshi Rural	2217 (2119-2313)
	Rombo	1506 (1354-1656)
Mtwara	Mtwara Urban	1745 (1215-2274)
Tanga	Muheza	2233 (1776-2689)
Lindi	Nachingwea	1965 (1830-2100)
Ruvuma	Namtumbo	2008 (1735-2280)
Mara	Rorya	1905 (1575-2235)
Mwanza	Sengerema	2579 (2383-2774)
Manyara	Simanjiro	2500 (2075-2924)
Singida	Singida Rural	1963 (1662-2266)
Rukwa	Sumbawanga Rural	1833 (1424-2242)

*Note: Calculated over current and previous pregnancies, for 2008 survey data only.

Travel time and travel cost for both vouchers was similar to that recorded in previous years except for the infant voucher travel cost which indicated a large increase in the estimated cost of travel between home and voucher retail outlet from Tsh109/- in 2007 to Tsh317/- in 2008 (table 41).

Table 41. Indirect cost of using Hati Punguzo vouchers, Household survey 2005-2008

	Pregnancy voucher*				Infant voucher	
	2005	2006	2007	2008	2007	2008
Travel time	40 (n=124)	43 (n=598)	66 (n=696)	60 (n=662)	65 (n=35)	56 (n=199)
Travel cost (TSh)	136 (n=136)	109 (643)	78 (n=731)	106 (n=683)	109 (n=35)	317 (n=211)

*combined household past and current pregnancy respondents

PART 5: MALARIA AND ANAEMIA PREVALENCE

3.17 Malaria prevalence in children under five and currently pregnant women

The 2008 household survey measured malaria prevalence in children under five and currently pregnant women using the "Parahit" rapid diagnostic test (RDT) in the field. Use of RDT test kits during survey allows immediate feedback to study participants of health outcomes. In addition, slides (thick blood films) were prepared in the field and returned to the Ifakara Health Institute laboratories for microscopy. Analysis of slide reading data is reported on separately.

Prevalence of malaria amongst children under 5 was estimated using RDTs to be 10.5%. In this binary analysis, there were clear residence and socio-economic differences with poorer, more rural children having considerably higher prevalence of malaria (table 41). There was statistically significant evidence of lower prevalence of malaria amongst children under 5 who had slept under a net on the night before survey compared with those who who did not sleep under a net. This result must be interpreted with

considerable caution because (a) a cross sectional study cannot establish a causal relationship and (b) it is likely that there is some confounding between socio-economic characteristics, residence, use of bednets and prevalence of malaria.

Table 42. Prevalence of malaria (RDT positive) amongst children under 5, Household survey 2008

	Children under 5		
	N	% (95% CI)	p-value
All	5433	10.5 (8.1-13.5)	
Residence			
Rural	3622	15.5 (11.9-19.9)	
Semi-urban	1456	7.2 (4.4-11.5)	
Urban	355	1.3 (0.3-5.3)	<0.001
SES			
Q1	1120	25.3 (18.9-33.1)	
Q2	1214	14.7 (11.3-19.0)	
Q3	1245	12.1 (8.8-16.5)	
Q4	1058	8.5 (6.1-11.7)	
Q5	782	1.3 (0.5-3.7)	<0.001
Use Of an ITN			
Yes	1214	7.2 (4.4-11,4)	
No	4185	12.0 (9.4-15.1)	<0.01
Use of a voucher net			
Yes	722	9.2 (5.9-14.1)	
No	4688	10.8 (8.4-13.8)	0.3

Amongst currently pregnant women the prevalence of malaria was estimated to be 5.7% using RDTs. Disaggregation by residence and socio-economic status results in wide confidence intervals, due in part to the lower number of malaria positives together with the smaller overall number of currently pregnant women tested. In addition it is possible that malaria infection is very clustered in the sample which could further inflate confidence intervals. Note the very wide confidence intervals around the Q4 estimate. The observed association between use of an ITN and reduced prevalence of malaria amongst pregnant women does not reach statistical significance.

Table 43. Prevalence of malaria (RDT positive) amongst currently pregnant women, Household survey 2008

		Currently pregnant women	
	N	% (95% CI)	p-value
All	618	5.8 (3.3-9.9)	
Residence			
Rural	414	6.2 (4.0-9.4)	
Semi-urban	163	8.4 (2.7-22.7)	
Urban	41	0.3 (0.06-1.2)	0.1
SES			
Q1	119	6.1 (2.4-15.1)	
Q2	140	8.0 (4.2-14.8)	
Q3	143	5.0 (2.3-11.0)	
Q4	119	15.1 (3.4-43.6)	
Q5	97	0.1 (0.01-0.6)	0.03
Use Of an ITN			
Yes	122	4.4 (2.8-7.0)	
No	491	10.8 (3.0-32.3)	0.1
Use of a voucher net			

| Yes | 53 | 4.9 (1.0-21.7) | |
| No | 558 | 5.9 (3.2-10.4) | 0.8 |

The degree of precision for reporting malaria prevalence is affected by the underlying malaria burden. The lower the burden of malaria the fewer positive persons are detected and the less precision is available from the fixed sample size in this survey. Therefore district level prevalence estimates - which reflect different levels of endemicity - must be interpreted with caution. Table 44 shows the breakdown by district of malaria prevalence in children under five from the RDTs.

Estimates from this survey conducted July-September showed 6 districts to have a malaria prevalence of less than 1% using RDTs, and there is considerable range across districts in estimated malaria prevalence amongst children under five. (between 0% and 53%) (table 43).

Table 44 District level breakdown of malaria slide positive readings for children under 5, Household survey 2008

Region 2008	District 2008	N <5	% RDT positive (95% CI)
Arusha	Arusha Rural	197	0.0
Dodoma	Bahi	247	6.5 (3.5-11.7)
Shinyanga	Bariadi	376	10.6 (5.3-20.1)
	Shinyanga U	209	7.7 (4.0-14.3)
Kagera	Chato	437	39.4 (27.1-53.1)
Iringa	Iringa Rural	179	2.2 (0.6-8.1)
	Makete	160	0.6 (0.1-3.9)
Kagera	Karagwe	288	5.2 (2.5-10.6)
Kigoma	Kigoma Urban	253	19.8 (10.2-34.8)
Dar es Salaam	Kinondoni	139	1.4 (0.4-4.6)
Coast	Kisarawe	149	53.0 (31.0-73.9)
	Rufiji	208	20.7 (11.7-33.3)
Mbeya	Mbeya Urban	129	0.8 (0.1-4.9)
Kilimanjaro	Moshi Rural	143	0.0
	Rombo	164	0.0
Mtwara	Mtwara Urban	137	2.9 (0.8-10.4)
Tanga	Muheza	143	23.9 (28.2-52.7)
Lindi	Nachingwea	162	28.8 (18.1-42.4)
Ruvuma	Namtumbo	231	39.8 (28.2-52.7)
Mara	Rorya	280	44.3 (32.3-57.0)
Mwanza	Sengerema	363	34.2 (23.9-46.1)
Manyara	Simanjiro	272	2.6 (1.5-4.4)
Singida	Singida Rural	235	0.9 (0.3-2.8)
Rukwa	Sumbawanga R	335	3.0 (1.5-5.7)

3.18 Anaemia prevalence in children under five and currently pregnant women

The survey also measured haemoglobin of children under five and pregnant women, using a Hemocue®. This machine is compatible with rapid diagnostic tests for malaria in a survey environment, each requiring only one drop of blood from a finger prick and 15-20 minutes to complete the test and feedback to the study participant.

Haemoglobin results are presented in two formats: (1) the mean haemoglobin of children under five and currently pregnant women, and (2) the prevalence of anaemia using a cut-off of 8g/dL.

The mean haemoglobin of children under five was 11.2g/dl and of currently pregnant women 11.2g/gl (table 45)

Table 45 Mean haemoglobin levels amongst children under 5 and currently pregnant women, Household survey 2008

	Children under 5 N=			Currently pregnant women N=		
	N	Mean	p	N	Mean	P
All	5475	11.2		621	11.2	
Residence						
Rural	3625	11.3 (11.1-11.4)		413	11.6 (11.2-11.9)	
Semi-urban	1495	11.1 (10.9-11.3)		167	11.4 (10.9-11.8)	
Urban	355	10.9 (10.5-11.3)	<0.001	41	9.9 (8.0-11.9)	<0.001
SES						
Q1	1128	11.0 (10.8-11.2)		120	11.8 (10.5-13.0)	
Q2	1214	11.3 (11.1-11.5)		142	11.4 (11.0-11.8)	
Q3	1262	11.2 (11.1-11.4)		144	11.5 (11.2-11.8)	
Q4	1071	11.4 (11.2-11.6)		119	11.5 (11.1-11.8)	
Q5	786	10.9 (10.7-11.2)	<0.001	96	10.6 (9.2-11.9)	<0.001
Use of ITN						
Yes	1232	10.9 (10.7-11.1)		122	11.4 (10.8-11.9)	
No	4207	11.3 (11.1-11.4)	<0.001	495	11.2 (10.6-11.7)	<0.001
Use of a voucher net						
Yes	737	11.0 (10.8-11.2)		53	11.7 (11.2-12.2)	
No	4715	11.2 (11.0-11.3)		562	11.1 (10.7-11.6)	

The prevalence of anaemia (Hb<8g/dL) was estimated to be 3.4% amongst children under 5 and 7.4% amongst currently pregnant women. Disaggregation by residence, SES, and use of ITNs is shown; there is no evidence of any statistically significant difference in prevalence of anaemia at this cut-off for children under five (table 46). The currently pregnant women estimates are shown and again have very wide confidence intervals.

Table 46. Prevalence of anaemia (Hb<8g/dL) amongst children under 5 and currently pregnant women, Household survey 2008

	Children under 5			Currently pregnant women		
	N	% (95% CI)	P	N	% (95% CI)	p
All <8g/dL	5475	3.4 (2.7-4.2)		621	7.4 (2.8-18.0)	
Residence						
Rural	3625	3.5 (2.8-4.5)		413	3.2 (1.7-6.1)	
Semi-urban	1495	4.4 (3.3-5.7)		167	7.3 (2.0-23.6)	
Urban	355	2.0 (0.7-5.9)	0.2	41	19.5 (2.8-66.8)	0.1
SES						
Q1	1128	4.6 (3.2-6.5)		120	2.8 (0.7-10.6)	
Q2	1214	4.2 (3.1-5.7)		142	5.1 (1.9-13.2)	
Q3	1262	2.6 (1.7-4.0)		144	1.6 (0.4-5.7)	
Q4	1071	3.4 (2.1-5.5)		119	3.2 (0.7-12.8)	
Q5	786	3.0 (1.5-5.9)	0.4	96	17.3 (4.8-46.0)	0.006
Use of ITN						

Yes	1232	3.4 (2.1-5.4)			3.4 (1.4-8.1)	
No	4207	3.4 (2.7-4.4)	0.9		8.5 (2.9-22.2)	0.1
Use of a voucher net						
Yes	737	3.0 (1.8-5.1)			4.3 (1.3-13.1)	
No	4715	3.5 (2.7-4.5)	0.6		7.7 (2.9-19.4)	0.4

46

4. Discussion and conclusions

This report presents analysis of the 2008 household and facility survey data, drawing on previous years where appropriate for comparison. The data describe a situation in which overall net ownership and use indicators appear to have stagnated. Support for this observation is provided by data on intermediate process indicators, which suggest a decline in *Hati Punguzo* coverage, an increase in the cost of using *Hati Punguzo* vouchers, and a decline in voucher redemption.

Study strengths and limitations

Strengths.

The data presented here were generated by the fourth annual national household and linked RCH facility survey conducted over consecutive years. The two-stage cluster sample survey design is such that each year represents a picture of the NATNETS activities, processes and outcomes, at national scale for mainland Tanzania, and also gives a window into the operational unit of activity, the district. As such the data represent an exceptionally rich resource to examine key outcomes and to monitor trends over time. Managers are able to evaluate closely the impacts resulting from this very dynamic programme.

The 2008 survey was conducted in 24 newly sampled districts and thus required a newly planned route and timetable for completion. Further, for the first time the surveys included blood letting to estimate malaria and anaemia prevalence with implications for team formation. Maintaining essential elements of design were a priority in order to contribute to the overall validity and comparability of these data with previous years' surveys. The 2008 survey was again implemented in the dry season, beginning in the first half of July and ending early September. Data collection (using PDAs) and quality control measures were modified to include blood letting activities but essentially remained the same. All survey tools were pretested, the field team comprehensively trained, and the survey mechanism piloted to ensure smooth operation of the survey protocol. All activities were implemented in Kiswahili. Finally, as has been highly beneficial over previous years, the overall approach allows for triangulation across multiple data sources.

Limitations
A number of limitations must be considered when interpreting these results.

Most importantly, the surveys were cross sectional and as such only measure indicators such as ITN coverage at a point in time: seasonal changes in ITN use cannot be accounted for. Because there were other ITN interventions going on at the same time as *Hati Punguzo* (such as, for example, activities by the SMARTNET project, free net distributions in some districts, etc), it is not possible to attribute all of the changes in aggregate coverage to *Hati Punguzo*.

The 2008 survey planning process experienced some difficulty arising from uncertainty around funding and extent of the survey activities. All efforts were made to minimise the impact of this on the exercise, although it should be noted that the survey start date was delayed by two weeks compared to previous years.

In summary, there was no increase in household ownership of any type of bednet in 2008 (70% of households owned at least one net), although there was evidence to suggest that households owned more ITNs than ever before (46% owned at least one ITN), and net-owning households owned more nets on average than they had a year earlier. Inequities in ownership of at least one net by household continue to be evident, however, with poorer and more rural households having the lowest coverage.

47

Personal use of nets remained largely unchanged between 2007 and 2008. Socio-economic inequities were observed to persist, and there were indications that the intermediate socio-economic groups may be falling behind. In 2008 the highest net use was observed for children under five (48% any net and 29% ITN), and lowest net use observed for currently pregnant women (39% any net and 23% ITN) – lower even than the point estimates of use by all household members.

A positive finding was the coverage amongst all individuals living in net owning households. At least 60% of all target groups living in households owning at least one ITN reported sleeping under a net on the night before survey: this finding underlines the importance of increasing household ownership of nets.

No change was observed in the timing of first attendance to RCH clinic. Furthermore, it was estimated that only 32% of pregnant women who attended clinic received a voucher at their first visit. Clearly the timing of providing access to ITNs for currently pregnant women still needs to be addressed. Stock of pregnancy vouchers had declined in 2008 (to 71% of facilities), but remained high for infant vouchers (89% of facilities).

Pregnancy voucher coverage measured using all data sources declined to around 50% of women in 2008. Infant voucher coverage estimated at the population level was very low (26%) and inconsistent with data extracted from routine clinic records which suggested that around 60% of measles vaccination recipients were given a voucher. Reasons for this disprepancy are not clear. Certainly there were large differences in knowledge of the two vouchers at the community level with 81% of household heads reporting that they had heard about the pregnancy voucher but only 37% with knowledge of the infant voucher. Knowledge of the value of both vouchers continued to be very poor (2% of household heads could correctly state the value).

Redemption of vouchers declined in 2008, and there was evidence that poorer, rural households were less likely to redeem than richer, urban households. For both vouchers a lack of money was stated as the main reason for non-use of vouchers. The cost of using vouchers increased markedly in 2008 to around Tsh 2300/- for either voucher, with considerable variation across districts.

Finally, the 2008 survey estimated malaria and anaemia prevalence amongst children under five and pregnant women. Using a Hemocue machine in the field, the prevalence of anaemia (defined at Hb<8g/dL) was estimated to be 3% amongst children under five and 7% amongst currently pregnant women. Malaria prevalence using RDTs estimated 11% of children under five and 6% currently pregnant women to be positive. There was evidence to suggest an association between reduced malaria prevalence and higher socio-economic status, living in urban areas, and using an ITN in bivariate analysis but further, multivariate analysis is required to adjust for potential confounding of these effects.

Overall the results continue to be consistent with previous years although there were some inconsistencies, e.g. the infant voucher coverage estimate, that could not easily be explained. Neverthelesss, these coverage estimates for mainland Tanzania show overall trends that are representative of the mainland over the period of *Hati Punguzo* implementation. Importantly, when we are able to disaggregate data to the district level – the level at which programme managers operate – there are clearly striking differences between districts and considerable variation experienced in the challenges faced to reach targets.

Appendices

Appendix 1: Procedures for selecting M&E districts and sampling households and facilities

<u>Stage 1</u>
At the first stage a random sample of 24 districts was drawn, stratified by Zone, from the complete list of districts for mainland Tanzania available from the President's office (PORELG) in 2008 (133 Mainland districts across 7 Zones). The rational for stratification was:
(1)to ensure a wide distribution of all geographical areas of the country included in the survey
(2)to assist in comparability of reporting with other data collection activities.
NATNETS/TNVS will now be able to report on indicators at both the district and the Zonal level.

The approach to drawing the 24 district sample for 2008 was as follows:
1. District were grouped by zone (listed alphabetically), giving 7 strata of unequal size.
2. The sampling fraction (24/133=0.180) was applied to each of the strata to calculate how many districts should be sampled from each zone.
3. A random number was assigned to each district (for each zone separately)
4. Districts within each stratum were ordered by this random number
5. The first 'n' districts were chosen from each stratum, where 'n' was found from step 2 above
6. This resulted in a sample of 24 districts in all (table 1 main report).

At the next stage, ten clusters (Wards) each of 30 households were chosen from each district with probability proportional to size of Ward.

<u>Stage 2</u>
At the second stage of sampling, ten clusters of 30 households (300 households in total) were selected in each of the 24 districts. Sampling was undertaken so that all households within the district had an equal chance of being included in the sample.

Clusters (wards) were selected with probability proportionate to size of the ward as follows:

1. Using 2002 census data, wards were listed by District, Division and Ward (alphabetically within each group), with cumulative population for Wards calculated

2. The sampling interval was calculated as Total Population / 10 (=number of clusters)

3. A random starting number (between 1 and sampling interval) was generated using =randbetween in Excel.

4. Sampling interval was applied to cumulative Ward populations within each district to select 10 Wards with probability proportionate to size (PPS).

Within each chosen ward (each cluster), one sub-village (kitongoji in rural, mtaa in urban areas) was pre-selected using simple random sampling.

Because of the distances teams travelled away from Dar, the following procedure was carried out twice so that for each cluster there was a substitute pre-selected kitongoji for teams to survey in the case that the original kitongoji could not be entered (e.g. its was a refugee camp/prison etc).

From Presidents Office (PORELG, 2008) we had received a list of all the vitongoji in each district. The steps followed were:

1. List all the vitongoji in each selected ward

2. Generate a list of random numbers using =rand() (1 random number for each kitongoji in the ward) and copy the list of random number values to a new column to fix the value.

3. Sort the list of vitongoji within each ward by random number

4. Select the first kitongoji in the sorted list (the one with the smallest random number).

Finally, within each selected kitongoji, 30 households were chosen using a modified EPI-type sampling procedure. This level of sampling was done in the field. Instructions given to supervisors were as follows:

"Try to visit each village one day before the survey will take place. You will need to select 30 households, whether or not they have women aged 15-49 or children under two years resident. You should try to leave the invitation letter (mwaliko) in each of these households, so that the household know that the team will be visiting the next day. Village and kitongoji leaders should be briefed about the project and the help we need. This will help ensure work can start soon after arrival in the kitongoji.
When you get to the kitongoji

1. Introduce yourself to the kitongoji leader and explain the purpose of the study.

2. Ask to be taken to (the physical) centre of the kitongoji

3. Throw the pen/bottle so that it indicates the direction you should walk in

4. Walk in this direction until you reach the edge of the kitongoji. As you walk draw a rough map of all the households you pass and give each a number (here a household means a group of people who cook and eat their meals together).

5. Using a random number table select one of the houses from this list. This is your starting point for sampling.

6. Return to the starting point house. This is household number 1. Write down the name of the household head on your form and leave a letter of introduction.

7. Throw the pen/bottle again and walk in the direction it indicates.

8. Each household you pass in that direction is sampled – write down names of household heads and try to draw a map. Each time you come to a road (dirt or otherwise) throw the pen again and change direction if indicated.

9. Continue until you have 30 households from that kitongoji. Each of those 30 households must be surveyed the following day whether there are any eligible respondents resident there or not.

10. If no-one is home continue with another household and return again later. In the case of refusals no substitute is made but supervisors must make a home visit.

RCH Facility survey sampling:
A total of 240 facilities are surveyed – in line with the number of clusters in the household survey. The District Medical Officer was asked to report which facility had been designated to provide RCH services to the sampled kitongoji in the household survey. The facility module was administered to the health facility serving the selected cluster, giving a total of 10 RCH facilities per district.

RCH Facility users sample
At each facility the facility users' interview was administered to the first 7 women to leave the facility on the day of survey. After obtaining facility-level permission, the interviewer(s) wait by the exit of the facility and introduced him/her self to each exiting antenatal care user, asking for (approx) 20 minutes of her time and informed consent to proceed with the questionnaire.
This sample size is based on a convenience sample following experience from other surveys. A broad range of facility levels are represented across the household sample and many see only a few women each day. In practice the average number of women interviewed in 2005-07 surveys was 5 per facility, 45 per district, and 950 across the whole sample. As such the facility user survey sample size is sufficient to measure indicators with high levels of precision at national level but insufficient precision at district level.

Appendix 2: Launch dates (exposure definitions) for pregnancy and infant vouchers in the 2008 24 district sample

"Exposure"	Pregnancy voucher	Total 2008 : 24 N (time before 2008 survey)	Infant voucher	Total 2008: 24 N (time before 2008 survey)
"Early"	(before 1/6/05)	10 (>36 months) Kinondoni (18/10/2004) Bahi (25/10/2004) Muheza (18/12/2004) Kisarawe (1/02/2005) Moshi Urban (8/02/2005) Rufiji (25/02/2005) Rombo (1/04/2005) Arusha Rural (6/04/2005) Singida Rural (19/05/2005) Nachingwea (20/05/2005)	(01/10/06 – 31/12/06)	12 (18-20 months) Mtwara Urban (01/10/2006) Kisarawe (01/10/2006) Mbeya Urban (13/10/2006) Rorya (14/10/2006) Kigoma Urban (16/10/2006) Shinyanga Urban (17/10/2006) Bariadi (13/11/2006) Karagwe (24/11/2006) Sengerema (24/11/2006) Muheza (30/11/2006) Makete (7/12/2006) Nachingwea (8/12/2006)
"Middle"	(1/6/05 – 30/11/05)	7 (30-36 months) Mtwara Urban (10/06/2005) Shinyanga Urban (26/08/2005) Kigoma Urban (24/10/2005) Karagwe (20/10/2005) Sengerema (7/11/2005) Chato (18/11/2005) Rorya (21/11/2005)	(1/1/07 – 30/6/07 (actually 28/2)	6 (16-18 months) Chato (24/01/2007) Namtumbo (30/01/2007) Rufiji (31/01/2007) Iringa Rural (01/02/2007) Sumbawanga R (26/02/2007) Bahi (28/02/2007)
"Late"	(1/12/05 – 30/5/06)	7 (24-30 months) Simanjiro (19/12/2005) Bariadi (05/01/2006) Iringa Rural (03/02/2006) Namtumbo (13/02/2006) Mbeya Urban (08/02/2006) Makete (29/03/2006) Sumbawanga Rural (30/05/2006)	1/7/07-30/4/08	6 (2-4 months) Simanjiro (18/03/2008) Moshi Rural (11/04/2008) Rombo (11/04/2008) Kinondoni (15/04/2008) Arusha Rural (30/04/2008) Singida Rural (30/04/2008)

("launched" means the official launch date plus 30 days for bedding down).

Appendix 3: Results of socioeconomic status index analysis
Socioeconomic status was measured as an index made up of a combination of education (household head in household survey), housing conditions, asset ownership of household and whether the house was rented or not. Weights for the variables were derived using principal components analysis, and the index was generated from the first principal component, which summarises the largest amount of information common to the variables (in this sample 20.4%).

For the household survey, the housing conditions included were toilet facility, roof and floor material, cooking fuel and connectivity to electricity; the assets were radio, bicycle, mobile phone, owning ducks or chickens and goats, sheep or cattle; and education of household head was classified as a binary variable none/1-6 years (incomplete primary), or 7+ years (complete primary +). Table A.1 shows the characteristics of all sampled households and the principal components weight.

Principal components analysis generates a continuous variable. Household are then divided into 5 equal sized groups (quintiles) according to the value of their score, ranging from the poorest (quintile 1) to the least poor (quintile 5). Table A.2 shows the socioeconomic characteristics of the households in each of the quintile.

Table A.1. Individual household socioeconomic characteristics and principal components weights, household survey 2008

	Household survey	
	% of households with item	Principal components weight
Household head education		
None	24.1	-0.1
1-6 years	17.7	-0.05
7+ years	58.2	0.1
Water Source		
Piped water	16.1	0.2
Public tap	24.2	0.04
Well/spring	41.7	-0.1
Surface water	16.7	-0.07
Cooking fuel		
Electric/gas/kerosene	0.8	0.09
Charcoal	15.2	0.2
Firewood/dung	83.8	-0.3
Type of floor		
Natural material	83.2	-0.2
Tile ect	16.8	0.2
Type of roof**		
Thatch/grass	39.0	-0.2
Iron sheets/tile	58.0	0.2
Toilet type		
None	11.2	-0.08
Pit latrine	83.2	-0.06
Flush	5.6	0.2

Have ducks/chickens	62.4	-0.1
Have goats/sheep/cattle	39.9	-0.06
Have fridge	4.7	0.2
Have TV	8.8	0.2
Have radio	67.1	0.1
Have bicycle	45.2	-0.01
Have mobile phone	35.6	0.2
Have electricity	11.5	0.2
Rent house	9.0	0.1

Table A.2 Characteristics of households in each s-e quintile, household survey 2008

	Q1	Q2	Q3	Q4	Q5
Education of hh head:					
None	55.2	27.9	18.4	13.9	5.2
1-6	30.3	18.7	11.8	11.8	10.2
7+	14.5	53.4	74.3	74.3	84.7
Water					
Piped water	0	0	2.7	26.3	51.8
Public tap	5.7	18.5	33.2	31.6	32.2
Well/spring	71.5	58.8	41.9	25.6	10.1
Surface water	22.5	22.1	20.9	14.5	3.0
Cooking fuel					
Electric/gas/kerosene	0	0	0	0	4.0
Charcoal	0	0	1.4	7.9	66.9
Firewood/dung	100	100	98.6	91.8	28.3
Type of floor					
Natural material	100	100	99.4	78.2	38.0
Tile ect	0	0	0.6	21.7	62.0
Type of roof**					
Thatch/grass	90.5	66.2	25.4	10.3	1.7
Iron sheets/tile	0	28.8	74.0	89.3	98.3
Toilet type					
None	27.3	12.9	10.0	4.9	0.9
Pit latrine	72.7	87.0	89.6	93.9	72.6
Flush	0	0.1	0.4	1.2	26.5
Have ducks/chickens	72.3	66.5	68.9	63.8	39.9
Have goats/sheep/cattle	41.0	41.8	48.2	47.5	21.4
Fridge	0	0	0.07	0.3	23.1
TV	0	0	0	1.2	43.0
Radio	36.4	60.9	72.4	79.5	86.4
Bicycle	36.1	47.7	51.5	50.3	40.3
Mobile	2.7	12.1	27.6	54.0	82.1
Electricity	0	0	0.1	4.3	53.6
Rent house	0	0.2	3.4	9.4	32.3

Appendix 4 Socio-economic disaggregation of bednet coverage indicators for all survey years

Table A.3 Socio-economic disaggregation of bednet coverage indicators for all survey years, showing confidence intervals

Year	Currently pregnant Any	Currently pregnant ITN	Children<5 ANY	Children<5 ITN
2008	36.1 (25.6-48.1)	15.9 (8.7-27.5)	30.5 (22.9-39.2)	13.1 (8.1-20.6)
	25.3 (17.3-35.4)	9.0 (4.4-17.7)	26.3 (21.2-32.3)	12.9 (9.4-17.5)
	25.0 (18.1-33.4)	11.0 (6.3-18.3)	31.2 (25.0-38.1)	18.1 (12.7-25.1)
	39.3 (26.0-54.3)	23.0 (9.6-45.6)	36.5 (29.1-44.5)	16.9 (11.9-23.4)
	59.8 (37.8-78.5)	30.7 (17.6-47.9)	80.2 (73.4-85.5)	54.1 (42.8-65.1)
2007	13.0 (8.4,19.6)	6.9 (3.6-12.6)	24.3 (20.8-29.9)	11.4 (8.7-14.6)
	32.6 (25.1,41.0)	15.8 (11.0-22.3)	39.4 (34.6-44.5)	20.9 (17.4-24.9)
	47.6 (38.7,56.7)	29.8 (21.8-39.4)	47.4 (42.5-52.3)	24.9 (21.6-28.5)
	43.1 (33.6,53.0)	24.1 (16.4-34.0)	49.4 (44.2-54.7)	27.6 (23.7-31.9)
	63.7 (53.3,73.0)	47.9 (37.5-58.5)	75.3 (70.3-79.7)	46.5 (42.4-50.6)
2006	16.5 (9.9 – 26.1)	9.3 (5.1 – 16.4)	22.6 (18.5 – 27.3)	9.8 (7.3 – 13.2)
	22.7 (15.6-31.7)	8.4 (4.6 – 14.8)	29.2 (24.8 – 34.0)	14.0 (11.2 – 17.4)
	29.4 (21.8 – 38.3)	16.9 (11.3 – 24.6)	38.1 (33.6 – 42.9)	18.4 (15.5 – 21.9)
	41.2 (32.1 – 51.1)	19.1 (13.3 – 26.6)	45.4 (40.2 – 50.6)	25.4 (21.7 – 29.4)
	60.4 (49.3 – 70.5)	35.6 (25.6 – 47.2)	68.8 (63.8 – 73.3)	37.6 (33.3 – 42.1)
2005	12.8 (8.0 - 20.0)	6.0 (2.8 - 12.3)	9.3 (6.7 - 13.0)	3.3 (1.9 – 5.7)
	14.8 (9.5 - 22.5)	5.5 (2.6 - 11.2)	14.3 (11.1- 18.1)	4.4 (3.0 - 6.5)
	22.5 (16.3 - 30.3)	6.5 (3.8 - 11.0)	22.3 (18.3 - 26.8)	7.3 (5.5 -9.7)
	28.7 (21.5 -37.1)	11.7 (7.5 - 17.8)	29.2 (24.9 - 33.8)	12.1 (9.7 - 14.9)
	40.7 (33.3 - 48.6)	21.5 (16.0 - 28.2)	53.1 (47.3 - 58.9)	28.9 (24.7 - 33.6)

Appendix 5 Survey instruments

Savei ya kaya kwa chandarua na HATI PUNGUZO 2008

Module 1. Household questionnaire

H1	Wilaya *District: (drop down)*	|__| district
H3	Kata *Ward (drop down)*	_|__|__|__|__|__|__|__| ward
H5	Kitongoji *Sub village (drop down)*	_|__|__|__|__|__|__|__| kitongoji
H6	Namba ya Cluster *Cluster no*	|__|__| cluster
H7	Namba ya Kaya *Household no*	|__|__| hhno
H8	Mhojaji *Interviewer initials*	|__|__| int
H9	Tarehe ya leo (tarehe/mwezi/mwaka) *Date (dd/mm/yyyy)*	|__|__|/|__|__|/|__|__| date
H10	Jina la mkuu wa kaya *Name of household head*	|__|__|__|__|__|__|__|__| hhname

H11	**Umemsomea mwaliko wa ushiriki** 1= ndiyo 2= hapana ***Have you read him/her the consent form?*** 1= yes 2=no	|__| readconsent
H12	Je, mhojiwa amekubali? 1= ndiyo 2= hapana **KAMA HAPANA UHOJAJI UISHIE HAPA** *Does the respondent agree?* 1=Yes 2=No **IF NO END INTERVIEW HERE**	|__| respagree
H13	Mhojiwa ni nani? 1=Mkuu wa kaya 2= Mwakilishi wa mkuu wa kaya *Who is the respondent?* 1=Household head 2=Representative	|__| whoresp

H14. Tafadhali naomba kuuliza majina ya watu wote wanaokaa kwenye kaya yako? **Anza na mkuu wa kaya na watu wazima.**
Please can I ask the names of all the people in your household? **Start with the head of household and older people**

Namba ya mtu	Jina la mtu	Jinsia 1=M 2=K	Tarehe ya kuzaliwa tarehe/mwezi/mwaka	Mwanamke kati ya miaka 15 na 49? 1= ndiyo 2= hapana (aliyezaliwa kati ya 1959 na 1993)	(KAMA 15-49) Umewahi kuolewa? 1=ndiyo, kwa sasa nimeolewa 2=ndiyo, lakini sio kwa sasa 3=naishi na mtu lakini hatujaonana 4=sijawahi	(KAMA 15-49) Je, ni mama mjamzito kwa sasa? 1=ndiyo 2=hapana	Chini ya miaka 5? 1= Ndiyo 2=hapana (Alizaliwa kati ya 2003 mpaka sasa)	Chini ya miaka 2? 1= ndiyo 2= hapana (Alizaliwa kati ya 2006 na 2008)	Jina la mama/mlezi (kwa watoto chini ya miaka mitano tu)	Je ni nani anamlea huyu mtoto? 1=Mama 2=Mwangalizi a	Anajishughulisha na nini? (Angalia namba chini) (Jibu kama ana umri zaidi ya miaka 14 i.e kama alizaliwa mwaka 1993 au kabla)Hoji kama anashughuli nyingine	Jaza Jumla ya miaka aliyosoma	Je mtu huyu alilala hapa ndani ya nyumba hii usiku wa kuamkia leo? 1=Ndiyo 2=Hapana	Je mtu huyu ndiye anayehojiwa maswali kuhusu kaya? 1=ndiyo 2=hapana	Je kuna mtu mwingine kwenye kaya?
Number of the person	*Name of the person*	*Sex 1=M 2=F*	*Date of birth (dd/mm/yyyy)*	*Woman between 15 and 49 years? 1 = Yes 2 = No (born between 1959 and 1993)*	*(IF 15-49) What is your marital status? 1=married now 2=was married but not anymore 3=living with someone 4=never*	*(If 15-49) Is this person pregnant now?*	*Child under 5 years? 1 = Yes 2 = No (Born 2003 to present)*	*Child under 2 years? 1=Yes 2=No (Born 2006 or 2008)*	*Name of the mother/guardian (under five years only)*	*Who cares for this child? 1=Mother 2=Guardian*	*What does he/she do? (see codes below) (Answer if aged over 14 years i.e. born in 1993 or earlier) Probe for any second occupation*	*Completed years of education*	*Did the person sleep in the household last night? 1 = Yes 2 = No*	*Is this the person who is being interviewed for the household questionnaire 1=yes*	*Is there anybody else in the household*
a	**b**	**c**	**d**	**e**	**umewahi**	**?**	**f**	**g**	**h**	**i (id) ia (sex) j (mum)**	**k: work l (other) m: work**	**n**	**o**	**?**	**q**

Occupation codes:
1=Kilimo, misitu, uvuvi; 2=Madini; 3=Kazi ya kutwa isiyo shamba; 4=Mtaalamu/karani; 5=Huduma (ufundi, ususi, ushonaji);
6=Muuzaji (mboga, bidhaa); 7=Biashara; 8=Mfanyakazi wa ndani; 9=Mwanafunzi; 10=Sijaajiriwa

1=Farming, fishing, forestry; 2=Mining; 3=Non-agricultural day-labour; 4=Professional/clerical; 5=Service (e.g. repair, hairdressing, tailoring);
6=Selling (e.g. vegetables, products); 7=Business; 8=Domestic worker; 9=Student; 10=Not employed

Taarifa kuhusu kaya

H15	Je, nyumba hii mmepanga? 1= ndiyo 2= hapana 3=Ingine *Do you rent this house?* *1 = yes 2=no 3=Other*	|__| rent otrent
H16	Kaya hii ina choo cha aina gani? 1 = Choo cha maji 2 = Choo cha shimo 3 = Hakuna choo/kichakani/shambani *What kind of toilet facilities does your household have?* *1 = Flush toilet* *2 = Pit toilet/latrine* *3 = No facility/bush/field*	|__| toilet ottoilet
H16a	Kaya yako inatumia chanzo gani kikuu kupata maji ya kunywa? 1=Bomba la maji la mtu binfsi ndani ya nyumba 2= Bomba la maji la mtu binafsi lililoko kwenye eneo/kiwanja chake 3=Bomba la maji ya kuchuruzika 4=Dimbwi 5=Kisima cha kuchimbwa 6=Maji ya chemchem 7=Maji yanayoletwa na gari 8=Maji ya ardhini (mto/bwawa/ziwa etc) 9=Maji ya chupa 10=Nyingine *What is the main source of drinking water for members of your household?* *1=Piped water into dwelling* *2=Piped water into compound* *3=Public tap* *4=Borehole* *5=Dug well* *6=Water from spring* *7=Tanker truck* *8=Surface water (river/dam/lake ect)* *9=Bottled water* *10=other*	
H16b	Je, ni nini chanzo kikuu cha nishati itumiwayo na kaya yako kwa kupika *(Chagua jibu moja tu)* 1 = Umeme 2 = Gesi 3 = Mafuta ya taa 4 = Mkaa 5= Kuni 6 =Kinyesi cha mifugo 7= Nyingine *What type of fuel does your household mainly use for cooking* *(select only one)* *1=Electricity* *2=Gas* *3=Kerosene* *4=Charcoal* *5=Firewood/straw*	

	6=Dung *7=Other*	
H16c	Nyumba imesakafiwa na nini? 1= Sakafu ya kawaida (udongo/mchanga/kinyesi cha mifugo) 2= Mbao zilizopigwa polish 3= Sakafu laini (mbao za kurandwa, vinyl/asphalt, marumaru,simenti,zuria) *What is the main floor material?* *1=Natural floor (earth/sand/dung)* *2=Rudimentary floor (wood/palm/bamboo)* *3=Finished floor (Polished wood, vinyl, tiles, cement, carpet)*	
H16d	How many sleeping places are there in this house? **(Sleeping place is an area of the house where one or more people sleep together on the same bed or mat that could be covered by a single bednet)** *Write number*	
	Je katika kaya hii, kuna mtu yeyote anamiliki: *In this household is there anyone who owns*	
H17a	Jokofu 1=ndiyo 2=hapana *Fridge* *1=yes 2=no*	
H17b	Luninga 1=ndiyo 2=hapana TV 1=yes 2=hapana	
H17c	Redio 1 = ndiyo 2 = hapana *Radio* *1= yes 2= no*	|__| radio
H18	Baisikeli 1 = ndiyo 2 = hapana *Bicycle* *1= yes 2= no*	|__| bike
H19	Simu ya mkononi 1 = ndiyo 2 = hapana *Mobile phone* *1=yes 2=no*	|__|

H20	Je, katika kaya hii mnao kuku na bata wangapi? (Jaza 999 kama hajui) *In this house are there ducks or chickens? How many? (write the number; 999 if respondent does not know)*	|__|__|__|
H21	Je, katika kaya hii mnao wanyama kama kondoo, mbuzi au ng'ombe wangapi? (Jaza 999 kama hajui) *Do you have animals in this household like goat, sheep or cattle-how many? (write the number; 999= she / he do not know.*	|__|__|__|
H22	Je nyumba hii imeunganishwa kwenye umeme? 1 = ndiyo 2 = hapana *Is the house connected to electricity* *1= yes 2= no*	|__| electric
H23	Je paa la nyumba ni la: 1 = Bati/Vigae 2 = Nyasi/Makuti	|__| roof otroof

	3 = Nyingine, eleza *What is the main material of the roof:* *1= Iron sheets or tiles* *2= Thatch/grass or leaves* *3= Other (explain)*	
	Taarifa za mkuu wa kaya juu ya ufahamu wa Hati Punguzo ***Household Head knowledge of Hati Punguzo***	
H25a	Je umewahi kusikia juu ya mpango wa hati punguzo ya wajawazito ya kununulia chandarua kwa bei nafuu? 1 = Ndiyo 2 = Hapana **(NENDA H26a)** *Have you heard of Hati Punguzo for pregnant women, the discount voucher programme to buy a mosquito net at a cheaper price?* *1=Yes* **2=No *(SKIP TO H26a)***	|__| heardvouch
H25b	Ulisikia wapi kuhusu hiyo hati punguzo ya wajawazito kwa mara ya kwanza? (chagua moja) 1 = RCH na kituo cha tiba 2 = Dukani 3 = Mwanafamilia 4 = Jirani 5 = Redio 6 = Kupitia kampeni ya utangazaji/uhamasishaji 7 = Nyingine 8 = Serikali ya kijiji 8a =Magazeti 9 = Sijui *If yes, where did you first hear about the discount voucher?* *1 = RCH or health facility; 2 = Shop; 3 = Family member; 4 = Neighbour;* *5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others;* *8 = Village government; 8a = Newpaper; 9= I don't know*	|__| heardwhere otheardwhere
H25c	Wapi kwingine uliposikia kuhusu Hati Punguzo ya wajawazito (onyesha yote aliosema) *1 = RCH au kliniki* *2 = Dukani* *3 = Mwanafamilia* *4 = Jirani* *5 = Redio* *6= Kupitia kampeni ya utangaza/uhamasishaji* *7 = Nyingine* *8 = Serikali ya kijiji* *8a = Magazeti* *9= Sijui* *Where else have you heard? (show all)* *1 = RCH or health facility; 2 = Shop; 3 = Family member; 4 = Neighbour;* *5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others;* *8 = Village government; 8a = Newpaper; 9= I don't know*	
H25d	Ni nani mlengwa kupewa hati punguzo ya wajawazito? (chagua moja) 1 = Mwanamke mja mzito 2 = mtoto chini ya umri wa mwaka mmoja 3 = Mwanamke mjamzito au mtoto mdogo 4 = Maskini 5 = ingine (eleza) 9 = Sijui	|__| eligible oteligible _____

	Who is eligible to receive a voucher? (select one) *1= Pregnant women* *2= Child < 1* *3= Pregnant woman and child* *4=the poor* *5=Other (specify)* *9=Don't know*	
H25e	Unaweza kuniambia thamani ya Hati Punguzo ya wajawazito? (Andika kiasi cha namba au 99 kama hajui) *Can you tell me the value of HP? (write the amount or write 99 if dk)*	⌐_⌐_⌐_⌐_⌐
H26a	Je umewahi kusikia juu ya mpango wa hati punguzo ya watoto ya kununulia chandarua kwa bei nafuu? 1 = Ndiyo 2 = Hapana **(NENDA H27)** *Have you heard of Hati Punguzo for infants, the discount voucher programme to buy a mosquito net at a cheaper price?* *1=Yes* *2=No (SKIP TO H27)*	
H26b	Ulisikia wapi kuhusu hiyo hati punguzo ya watoto kwa mara ya kwanza? 1 = RCH na kitua cha afya; 2 = Dukani; 3 = Mwanafamilia; 4 = Jirani; 5 = Redio; 6 = Kupitia kampeni ya utangazaji/uhamasishaji; 7 = Nyingine; 8 = Serikali ya kijiji; 8a =Magazeti; 9 = Sijui *If yes, where did you first hear about the discount voucher for infants?* *1 = RCH or health facility; 2 = Shop; 3 = Family member ; 4 = Neighbour;* *5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others;* *8 = Village government; 8a = Newpaper; 9= I don't know*	
H26c	Wapi kwingine uliposikia kuhusu Hati Punguzo ya watoto (onyesha yote aliosema) *1 = RCH au kliniki; 2 = Dukani;3 = Mwanafamilia; 4 = Jirani; 5 = Redio;* *6= Kupitia kampeni ya utangaza/uhamasishaji; 7 = Nyingine;* *8 = Serikali ya kijiji; 8a = Magazeti; 9= Sijui* Where else have you heard about the discount voucher for infants? (select all) *1 = RCH or health facility; 2 = Shop; 3 = Family member ; 4 = Neighbour;* *5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others;* *8 = Village government; 8a = Newpaper; 9= I don't know*	
H26d	Ni nani mlengwa kupewa hati punguzo ya watoto? (chagua moja) 1 = Mwanamke mja mzito 2 = mtoto chini ya umri wa mwaka mmoja 3 = Mwanamke mjamzito au mtoto mdogo 4 = Maskini 5 = ingine (eleza) 9=Sijui *Who is eligible to receive a voucher? (select one)* *1= Pregnant women* *2= Child < 1* *3= Pregnant woman and child* *4=the poor* *5=Other (specify)* *9=Don't know*	
H26e	Unaweza kuniambia thamani ya Hati Punguzo ya watoto? (Andika kiasi cha namba au 99 kama hajui) *Can you tell me the value of HP for infants? (write the amount or 0 if dk)*	
H27	Je, mwanamke anatakiwa kuhudhuria kiliniki anapokuwa mjamzito?	⌐__⌐

	1=Ndiyo 2=Hapana *Should a woman attend antenatal (RCH) care when she is pregnant?* *1 = yes* *2 = no*	
H27a	Ujauzito unatakiwa uwe na umri gani (katika wiki) anapohudhuria kwa mara ya kwanza? *(Jaza idadi ya wiki. Jaza 99 kama hajui)* *How old should the pregnancy be (in weeks) when she goes for the first time? (enter n. wks,enter 99 if don't know)*	|__|__|

H28	Je, katika kaya hii, mnavyo vyandarua vingapi? **KAMA "0" NENDA M1** *How many mosquito nets does your household have?* *If "0" SKIP TO M1*	|__|__| numnets

Taarifa kuhusu vyandarua
Bednets module

	Omba kuona chandarua	Chandarua # 1	Chandarua # 2	Chandarua # 3
H29	**Je, chandarua hiki kilikaguliwa?** 1 = Ndiyo 2 = Hapana ***Is the net observed?*** *1 =Yes* *2 = No*	|__| seennet1	|__| seennet2	|__| seennet3
H29a	Chandarua hiki ni cha aina gani? 1=Cha kawaida 2=Olyset net 3=Permanet 9=Sijui What kind of net is it? 1=Ordinary net 2=Olyset net 3=Permanet 9=Don't know			
H30	Kaya yako ilipata chandarua hiki miezi mingapi iliyopita? **Kama ni zaidi ya miezi 36 andika 96, kama haijulikani andika 99** *How long ago did your household obtain the mosquito net? (Months ago)* ***If more than 3 years, indicate 96*** ***Don't know write 99***	|__|__| whenbought1	|__|__| whenbought2	|__|__| whenbought3
H31	Chandarua kilinunuliwa kwa kutumia nini: **Chagua moja** 1. hati punguzo ya mjamzito **(H34b)** 2. hati punguzo ya mtoto **(H34b)** 3. hati punguzo maalum **(H34b)** 4. Alipata bure **(H32)** 5. Nilinunua **(H34a)** 6. Sijui **(H32)** *Was the net purchased using: (select one)*	|__| usedvouch1	|__| usedvouch2	|__| usedvouch3

	1. *hp pregnant* 2. *hp infant* 3. *hp equity* 4. *free net* 5. *bought the net* 6. *don't know*			
H34a	*If the net was not a HP net:* Chandarua hiki kilinunuliwa shilingi ngapi? (kama alinunua) **(''0'' kama zawadi, "9999" kama hajui)** *What price was paid for this net?* *(write "0" if gift)* *(write "9999" if don't know)*	TSh. _____ Paidnet1	TSh. _____ Paidnet2	TSh. _____ Paidnet3
H34b	If was a HP net: Uliongeza shilingi ngapi kununua chandarua (kama ametumia HP; 999 kama hajui, 0 kama HPMaalum) How much money did you add to the voucher to buy the net? (999 if doesn't know, 0 if HP equity also)			
H32	Ulinunua/pata wapi chandarua hiki? 1 = Dukani 2 = Machinga 3 = Kituo cha afya 4 = Mradi wa serikali/NGO 5 = Ingine 6 = Sokoni (gulioni) 7 = Zawadi 9 = Haijulikani *From what kind of source did your household obtain the mosquito net?* *1=Shop* *2= Hawker (mobile)* *3= Health facility* *4= Government or NGO project* *5= Other* *6= Shifting market (gulio)* *7= Gift* *9= Don't know*	|__| wherebought1 otwherebought1	|__| wherebought2 otwherebought2	|__| wherebought3 otwherebought3
H33	Chandarua hiki kina kubwa gani? 1=3.5X6 2=4X6 3=6X6 4=Ingine *What size is the net?* *1=3.5X6* *2=4X6* *3=6X6* *4=Other*	|__| size1 otsize1	|__| size2 otsize2	|__| size3 otsize3
H37a	Je chandarua hiki kilishawahi kuchovywa kwenye dawa ya chandarua (check for pre-treated nets)? 1 = Ndiyo 2 = Hapana **(NENDA H39)** 3 = Hakuna uhakika **(NENDA H39)**	|__| evertreat1	|__| evertreat2	|__| evertreat3

	Has this net ever been treated with an insecticide (check for pre-treated nets? *1=Yes* *2=No (SKIP TO H39)*			
H37b	Ni aina gani ya dawa ya chandarua ilitumika 1=Ngao 2=Ngao ya Muda Mrefu 3=kilichovywa kiwandani 4=Ngao Iliyoberoshwa 9=Sijui *What type of insecticide was used?* *1=Ngao* *2=Ngao ya Muda Mrefu* *3=Pre-treated from factory* *4=Better Ngao (new brand name for (2)* *9=Don't know*			
H37c	Ulilipa kiasi gani kwa dawa ya chandarua (andika 0 kama hakulipa, andika 999 kama hajui) *How much did you pay for the insecticide? (Write 0 if it came bundled with the net. Don't know write 999)*			
H38	Je kwa mara ya mwisho chandarua hiki kilichovywa lini kwenye dawa ya chandarua? (mwezi/mwaka) **(Kama hujui, andika 1 July 2099)** *When was the last time the net was treated? (month/year)* **(If don't know, write 1 July 2099)**	☐☐ |__|__|__|__| lasttreat1	☐☐ |__|__|__|__| lasttreat2	|__|__| |__|__|__|__| lasttreat3
H38a	Chandarua hiki kufuliwa lini kwa mara ya mwisho?(jaza idadi ya wiki zilizopita) **(Kama hujui, andika 1 July 2099)** *When was the last time this net was washed? (enter x weeks ago?)*			
H39	Je kuna mtu yeyote alilala kwenye chandarua hiki usiku uliopita? 1 = Ndiyo 2 = Hapana **(NENDA H41)** 3 = Hakuna uhakika **(NENDA H41)** *Did anyone sleep under the mosquito net last night?* *1 = Yes* *2 = No (SKIP TO H41)* *3 = Not sure (SKIP TO H41)*	|__| sleeplstnt1	|__| sleeplstnt2	|__| sleeplstnt3
H40	Ni nani alilala chini ya chandarua hiki usiku uliopita **(andika namba ya mtu huyo kutoka kwenye orodha ya mwanakaya H14)** *Who slept under this mosquito net last night* **(record the line number of the individual(s) from the household roster H14)**	Jina_____ Jina _____ Jina _____	Jina _____ Name_____ Name _____	Jina _____ Name _____ Name _____

H41	Katika kijiji hiki, kwa kawaida ni miezi gani mnayolala ndani ya chandarua? *(Onyesha yote-hata kama mhojiwa hakuwa na chandarua kwa mwaka mzima, muulize kama angekuwa nacho angefanyaje?)* In this village which months do you usually put up your bednets? **(indicate yes or no or don't know for each month for one complete year)**	1=ndiyo/yes 2=hapana/no 3=hajui/don't know	
	January		
	February		
	March		
	April		
	May		
	June		
	July		
	August		
	September		
	October		
	November		
	December		

Module 2: Wanawake wenye umri kati ya miaka 15 – 49
Module 2: Women aged 15-49 years

M1	Jina la mama *Name of the mother*	Mothername
M2	ID ya mama (Wilaya/cluster/kaya/mtu) *ID of the mother (District/cluster/household/person)*	|__|/|__|__|/|__|__|/|__|__| motherid
M3	Je inawezekana kumhoji mwanamke? 1=Ndiyo **(NENDA M5)** 2=Hapana *Is it possible to interview the woman?* *1 = yes (SKIP TO M5)* *2 = No*	|__| intwom1
M4	Kwanini haiwezekani kumhoji mwanamke? 1=Amesafini mbali 2=Mgonjwa 3=Nyingine *Why is it not possible to interview?* *1=Travelled away* *2 = Sick* *3 = Other* *Currently not present*	|__| whynot1 otwhynot1
M5	Umemsomea mwaliko wa ushiriki 1 = ndiyo 2 = hapana *Have you read her the consent form?* *1= yes* *2=no*	|__| readconsent
M6	Je, huyu mama amekubali? 1 = ndiyo 2 = hapana **KAMA HAPANA, UHOJAJI UISHIE HAPA** *Does the woman agree?* *1=yes 2=no IF NO, END INTERVIEW HERE*	|__| motheragree

Mhojaji: Kama mwanamke mwenye sifa za kuhojiwa amejibu Module 1, nenda M10
Interviewer: If the eligible woman was the respondent to Module 1, skip to M10

M7a	Je umewahi kusikia juu ya mpango wa hati punguzo ya wajawazito ya kununulia chandarua kwa bei nafuu? 1 = ndiyo 2 = hapana **(NENDA M8a)** *Have you heard about the discount voucher for pregnant women programme for buying a net at a cheaper price?* *1=Yes* *2=No (SKIP TO M8a)*	|__| heardhp_preg
M7b	Kwa mara ya kwanza, ulisikia wapi kuhusu hiyo hati punguzo ya wajawazito? 1 = RCH au kituo cha afya; 2=Dukani; 3 =Mwanafamilia; 4 = Jirani; 5 = Redio; 6 = Kupitia kampeni ya utangazaji/uhamasishaji; 7 = Nyigine; 8 = Serikali ya kijiji; 8a = Magazeti 9 = Sijui *If yes, where did you first hear about the discount voucher for pregnant women?* *1 = RCH or health facility; 2 = Shop; 3 = Family member; 4 = Neighbour; 5 = Radio;* *6= Performance by theatre group or roadshow;* *7 = Others; 8 = Village government; 8a = Newspaper* *9= I don't know*	|__| whereheard_preg

M7c	Wapi kwingine uliposikia kuhusu Hati Punguzu kwa wajawazito? (taja yote) *1 = RCH au kliniki; 2 = Dukani; 3 = Mwanafamilia;* *4 = Jirani; 5 = Redio; 6= Kupitia kampeni ya utangaza/uhamasishaji; 7* *=Nyingine; 8 =Serekali ya kijiji; 8a = Magazeti; 9= Sijui* Where else have you heard about the discount voucher for pregnant women ? (tick all that apply) *1 = RCH or health facility; 2 = Shop; 3 = Family member; 4 = Neighbour; 5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others; 8 = Village government; 8a = Newpaper; 9=Dknow*	|__| elseheard_hp
M7d	Ni nani mlengwa kupewa hati punguzo ya wajawazito? 1 = Mwanamke mja mzito 2 = Mtoto chini ya umri wa mwaka mmoja 3 = Mwanamke mjamzito na mtoto mdogo 4 = Ingine (eleza) 9 = Sijui *Who is eligible to receive a voucher for pregnant women?* *1=Pregnant women* *2= Child < 1* *3=Pregnant woman and child* *4=Other (specify)* *9=Don't know*	|__| eligible_preg
M7e	Unaweza kuniambia thamani ya Hati Punguzo ya wajawazito? (Andika kiasi cha namba au 99 kama hajui) *Can you tell me the value of HP for pregnant women? (write the amount or write 99 if doesn't know)*	Value_preg
M8a	Je umewahi kusikia juu ya mpango wa hati punguzo ya watoto ya kununulia chandarua kwa bei nafuu? 1 = Ndiyo 2 = Hapana **(NENDA M10)** *Have you heard of Hati Punguzo for infants, the discount voucher programme to buy a mosquito net at a cheaper price?* *1=Yes* *2=No **(SKIP TO M10)***	|__| heardhp_inf
M8b	Ulisikia wapi kuhusu hiyo hati punguzo ya watoto kwa mara ya kwanza? 1 = RCH na kitua cha afya; 2 = Dukani; 3 = Mwanafamilia; 4 = Jirani; 5 = Redio; 6 = Kupitia kampeni ya utangazaji/uhamasishaji; 7 = Nyingine; 8 = Serikali ya kijiji; 8a =Magazeti; 9 = Sijui *If yes, where did you first hear about the discount voucher for infants?* *1 = RCH or health facility; 2 = Shop; 3 = Family member ; 4 = Neighbour;* *5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others;* *8 = Village government; 8a = Newpaper; 9= I don't know*	|__| whereheard_inf
M8c	Wapi kwingine uliposikia kuhusu Hati Punguzo ya watoto (onyesha yote aliosema) *1 = RCH au kliniki; 2 = Dukani;3 = Mwanafamilia; 4 = Jirani; 5 = Redio;* *6= Kupitia kampeni ya utangaza/uhamasishaji; 7 = Nyingine;* *8 = Serikali ya kijiji; 8a = Magazeti; 9= Sijui* Where else have you heard about the discount voucher for infants? *1 = RCH or health facility; 2 = Shop; 3 = Family member ; 4 = Neighbour;* *5 = Radio; 6= Performance by theatre group or roadshow; 7 = Others;* *8 = Village government; 8a = Newpaper; 9= I don't know*	Elseheard_inf
M8d	Ni nani mlengwa kupewa hati punguzo ya watoto? 1 = Mwanamke mja mzito	Eligible_inf

	2 = mtoto chini ya umri wa mwaka mmoja 3 = Mwanamke mjamzito au mtoto mdogo 4 = Maskini 5 = ingine (eleza) 9 = Sijui *Who is eligible to receive a voucher?* *1= Pregnant women* *2= Child < 1* *3= Pregnant woman and child* *4=the poor* *5=Other (specify)* *9=Don't know*	
M8e	Unaweza kuniambia thamani ya Hati Punguzo ya watoto? (Andika kiasi cha namba au 99 kama hajui) *Can you tell me the value of HP for infants? (write the amount or 99 if dk)*	Value_inf

Sasa ningependa kukuliza maswali machache kuhusu afya yako kwa sasa.
Now I would like to ask you some questions about your health right now.

M10	Je ulishawahi kuwa mjamzito? (hata kama ujauzito huo haukupelekea mtoto kuzaliwa) 1 = ndiyo 2 = hapana *Have you ever been pregnant? (even if this did not lead to a live birth)* *1 = Yes; 2 = No*	|__| everpg
M11	Je, wewe ni mjamzito kwa sasa? 1 = ndiyo 2 = hapana **(NENDA M42)** *Are you currently pregnant?* *1=Yes* *2=No* **(SKIP TO M42)**	|__| currentpg
M11a	Hii ni mimba ya ngapi? (andika idadi) *Which number pregnancy is this?* *(write number)*	Gravid
M12	Je, ujauzito huu una umri wa wiki ngapi? **(andika idadi ya wiki)** *What gestation are you now?* *(record no. weeks)*	|__| gestation
M13	Je tayari umeshaudhuria kliniki kwa ajili ya ujauzito huu? 1 = ndiyo 2 = hapana **(NENDA M39)** *Have you already attended the RCH this pregnancy?* *1 = Yes 2 = No* **(SKIP TO M39)**	|__| attendRCH
M13a	Je, ulikwenda kliniki au walikuja kijijini? 1= klinikini 2= walijuka kijijini Did you go to a clinic building for RCH services or did you go to outreach services? 1= clinic building 2= outreach	|__| outreach
M14	Naomba kuona kadi yako ya kliniki? Ulihudhuria lini kwa mara ya kwanza? (mwezi/mwaka) *May I see your RCH card?* *When did your first visit take place? (month/year)* ***Interviewer: record from card if available***	|__|__|/|__|__|__| firstvisit
M15	1= Tarehe imeandikwa kutoka kwenye kadi 2=Mwanamke amesema tarehe	|__| visitverif

	1=Date recorded from card *2=Date reported by woman*	
M16	Ulikuwa na ujauzito wa wiki ngapi ulipohudhuria kliniki kwa mara ya kwanza? (andika idadi ya wiki) *How old was your pregnancy at the first visit? (record no.weeks)* **Interviewer: record from card if available**	|__|__| gestfirstvis
M17	1=Muda wa ujauzito umeandikwa kutoka kwenye kadi 2= Mwanamke amesema muda wa ujauzito *1=Gestation recorded from card* *2=Gestation reported by woman*	|__| gestverif
M18	Je, ulipokwenda kliniki, ulipewa dawa ya kukinga malaria? 1=Ndiyo **(NENDA M19)** 2=Hapana **(NENDA M23)** *When you went to the clinic were you given the medicine to prevent malaria?* *1= Yes **(Go to M19)*** *2= No **(Go to M23)**.*	|__| maldrug_curr
M19	Dawa gani ulipewa kukinga malaria? **(usidadisi)** 1=SP / Fansidar 2=dawa nyingine 9=hajui *Which medicine were you have given to prevent malaria? (do not prompt)* *1 = SP /fansidar* *2= Other medicine* *9= do not know*	|__| Whichdrug_curr
M19a	Ni katika hudhurio la ngapi ulipewa dawa ya kujikinga na malaria kwa mara ya kwanza? (andika lilikuwa mahudhurio la ngapi) *At which visit were you given the medicine to prevent malaria for the first time **(write number of visit)***	|__| Visitdrug_curr
	HP questions	
M23	Mfanyakazi wa kliniki alikupa hati punguzo kwa wajawazito kwa ajili ya kununulia chandarua? **(Mhojaji : onyesha Hati Punguzo)** 1 = ndiyo 2 = hapana **(NENDA M39)** *Did an RCH worker give you a pregnant woman discount voucher for buying a mosquito net?* *(Interviewer: show copy of Hati Punguzo)* *1=Yes* *2=No **(SKIP TO M39)***	|__| recdvouch
M23a	Ulipewa Hati Punguzo katika hudhurio la ngapi? *(*andika idadi ya mahudhurio*)* *At which visit was the voucher given?* *(enter the number of visit)*	|__| visithp_preg
M23b	Ulipewa Hati Punguzo mimba ikiwa na umri gani? (jaza umri kutoka kwenye kadi ya kliniki kama ipo, kama haipo muulize mimba yake ilikuwa na umri gani alipopata HP) *What gestation were you when you received Hati Punguzo?* **Interviewer:** *record gestation from the RCH card if available, if not available ask the woman her gestation at the time she received Hati Punguzo*	|__| gesthp
M24	Ulitoa fedha ili kupata hati hiyo?	|__|

	1 = ndiyo 2 = hapana **(NENDA M26)** *Did you have to pay money to somebody at the RCH clinic to get the voucher?* *1=Yes* *2=No (SKIP TO M26)*	paidvouch
M24a	Ulilipia shilingi ngapi? *How much did you have to pay? (TSh)*	|__|__|__|__| paidhowmuch
M26	Hati ilitumika kununulia chandarua? 1 = ndiyo **(NENDA M29)** 2 = hapana *Did you use a voucher to buy a net?* *1=Yes (SKIP TO M29) 2=No*	|__| usevouch
M27	Ni kwa nini chandarua hakikununuliwa kwa kutumia hati hiyo? 1 = Nilimpa mtu mwingine 2 = Tayari nina chandarua 3 = Nilikuwa sina fedha za kununulia chandarua 4 = Niliipoteza 5 = Nilinunua bidhaa nyingine 6 = Niliiuza kwa mtu mwingine 7 = Kunakouzwa vyandarua ni mbali sana 8 = Sijui ni wapi pa kununulia vyandarua 9 = Hakuna duka linalouza chandarua hapa karibú 10 = Chandarua ni aghali sana 11 = Ingine (eleza) *Why wasn't the voucher used to buy a net?* *1 = I gave the voucher to somebody else* *2 = I already had a net* *3 = I had no money to buy a net* *4 = I lost the voucher* *5 = I bought another commodity* *6 = I sold the voucher to somebody else* *7 = The place to buy a net is too far* *8 = I don't know where to buy a net* *9=No shop nearby selling nets* *10 = Nets too expensive* *11 = Other (specify).*	Whynotuse Otwhynotuse
M28	Hati punguzo bado ipo? 1 = ndiyo **(NENDA M39)** 2 = hapana **(NENDA M39)** *Do you still have the voucher?* *1=Yes (SKIP TO M39) 2=No (SKIP TO M39)*	|__| stillhave
M29	Nani alikwenda kununua chandarua? 1=Mimi 2=Mume wangu 3=Ndugu 4=Rafiki 5=Mwingine *Who went to buy the net?* *1=Self* *2=Husband* *3=Relative* *4=Friend 5=Other*	|__| whobuy
M30	Lini ulinunua chandarua ? Kama hajui, andika 1 July 2099 *When was the net bought? If not known, write 1 July 2099*	|__|__|/|__|__|/|__|__|__|__| whenbuy

M31	Chandarua hiki kilinunuliwa wapi? 1= Dukani 2=Machinga 3=Kituo cha afya 4=Mradi wa serikali/NGO 5=Sokoni (gulioni) 6=Ingine, eleza 9=Haijulikani *Where was the net bought?* *1=Shop* *2=Machinga* *3=Health facility* *4=Government or NGO project* *5=Market* *6=Other (specify)* *9=Don't know*	|__| wherebuy otwherebuy
M32	Ilichukua muda gani hadi kufika mahali kiliponunuliwa chandarua (katika dakika, 999 kama hajui) *How long did it take you (or the person who bought the net) to get to the place where you bought the net? (minutes) WRITE 999 IF DON'T KNOW*	|__|__|__| timebuy
M33	Kiasi gani cha fedha kama gharama ya usafiri kililipwa? (Tsh) **(mhojaji: kama hakulipa chochote andika 0, kama hajui andika 9999)** *How much was paid as transport costs? (TSh)* *(Intervierwer: If paid nothing write 0; write 9999 if don't know)*	|__|__|__|__| transbuy
M34	Chandarua kina ukubwa gani? 1=3.5X6 2=4X6 3=6x6 4=Ingine *What size is the net?* *1=3.5X6 2=4X6 3=6X6 4 = Other*	Sizenet Otsizenet
M35	Chandarua hiki kilinunuliwa shilingi ngapi? (baada ya kutumia hati punguzo)? *How much was paid to buy the net (after using discount voucher)?*	|__|__|__|__| costnet
M35a	Je Chandarua kilikuwa pamoja na paketi ya dawa ya chandarua 1 = ndiyo 2= hapana 9 = Sijui Did the net come packaged together with insecticide? 1=Yes 2=No 9=Don't know	|__| bundle
M36	Kulikuwa na kikwazo chochote kewnye kutumia hati punguzo kununulia chandarua? 1 = ndiyo, eleza 2 = hapana *Did you have any other difficulties in using the voucher scheme to buy a net?* *1=Yes (specify) 2=No*	|__| probbuy whatprobbuy _____
M37	Bado unacho chandarua hicho? 1 = ndiyo **(NENDA M39)** 2 = hapana *Do you still have the net that you bought with the voucher?* *1=yes (SKIP TO M39) 2=No*	|__| stillhave

M38	Kama hapana chandarua hicho kiko wapi?
	        1 = Kiliibiwa
	        2 = Kiliungua
	        3 = Nilikipoteza
	        4 = Nilikiuza
	        5 = Nilimpa mtu mwingine
	        6 = Nilimpatia aliyetoa fedha
		|__|
		wherenet
		otwherenet

	7 = Nyingine, eleza *If not, what happened to it?* *1=Stolen; 2=Burnt; 3=I lost; 4=Isold;* *5=I gave it to another person* *6=I sold it to another person* *7 = Other (explain)*	
	MASWALI KUHUSU MATUMIZI YA CHANDARUA **THE BEDNET USE QUESTION**	
M39	Je, ulilala ndani ya chandarua usiku wa kuamkia leo? 1 = ndiyo 2 = hapana **(NENDA M42)** *Did you sleep under a mosquito net last night?* *1=yes 2=No **(SKIP TO M42)***	|__| sleptlast
M39a	Chandarua hiki ni cha aina gani? 1=Cha kawaida 2=Olyset net 3=Permanet 9=Sijui *What kind of net is it?* *1=Ordinary net* *2=Olyset net* *3=Permanet* *9=Don't know*	|__| kindnet
M40	Je, chandarua hicho kimewahi kuchovywa kwenye dawa ya chandarua? 1 = ndiyo 2 = hapana **(NENDA M42)** *Have you ever treated this net with insecticide?* *1 = Yes 2 = No **(SKIP TO M42)***	|__| evertreat
M40a	Ni aina gani ya dawa ya chandarua ilitumika 1=Ngao 2=Ngao ya Muda Mrefu 3= kilichovywa kiwandani 4=Ngao Iliyoboreshwa 8 = Nyingine (eleza) 9=Sijui *What type of insecticide was used?* *1=Ngao* *2=Ngao ya Muda Mrefu* *3= Pre-treated at factory* *4=Better Ngao (new brand name for (2)* *8=Other (specify)* *9=Sijui*	|__| kinddawa
M41	Chandarua hicho kiliwekwa dawa kwa mara ya mwisho lini? (mwezi/mwaka) **(Kama hajui, andika 1 July 2099)** *When was the last time you treated the net with insecticide (month/year)?* **(If don't know write 1 July 2099)**	|__|__|/|__|__|__|__| lasttreat

Sasa ningependa kukuuliza baadhi ya maswali kuhusu ujauzito kwa kipindi cha miaka 5
iliyopita, i.e January 2003 hadi sasa hivi **(au angalia tukio muhimu lililotokea wakati huo).**

Now I would like to ask you some questions about other pregnancies during the past 5 years,
i.e. January 2003 until today **(Or check for well-known local event).**

M42	Umewahi kujifungua mtoto hai kwa kipindi cha miaka 5 iliyopita kati ya mwaka 2003, 2004, 2005, 2006, 2007, na 2008? 1 = ndiyo 2 = hapana **(NENDA C1)**	|__| livebirth

	Did you give birth to a live child in the past 5 years (in 2003, 2004, 2005, 2006, 2007 or 2008)? *1=Yes 2=No (SKIP TO C1)*	
M43	Umejifungua watoto hai wangapi ndani ya mwaka 2003, 2004, 2005, 2006, 2007, na 2008? *How many children did you give birth to in 2003, 2004, 2005, 2006, 2007 and 2008?*	|__| numbirths
M44	Ulijifungua mtoto na kwa bahati mbaya akafariki ndani ya mwaka 2003, 2004, 2005, 2006, 2007 na 2008? 1 = ndiyo 2 = hapana **NENDA M45** *Did you give birth to a child (since 2003) who cried or showed signs of life but unfortunately died later?* *1=yes* *2=no SKIP TO M45*	|__| childdied
M44a	Kama ndiyo, mtoto alifariki Ni siku ngapi mototo aliishi *If yes, a child died: How many days did the child live for?*	(number of days)
M45	Kwa hiyo kwa kipindi hicho umejifungua watoto hai? *What is the total number of live children that you gave birth to during the past year?*	|__| totlivebirth

M46 Ningependa kuandika majina ya watoto wote uliojifungua tangu 2003 mpaka sasa, hata kama alifariki/walifariki. **(Anza na mtoto aliye mdogo zaidi. Kwa mapacha, andika jina la kila mmoja kwenye mstari wake. Kama kuna mtoto ambaye hajapewa jina, andika 'not given' kama jina la huyo mtoto).**

M46 I would like to write down all the names of the children that you gave birth to in 2003, 2004, 2005, 2006 and 2007 and 2008, even if they died.
(Start with the youngest one. For twins, write every child in a separate line. If there was a child was not given a name, write "not given" in the name of the child).

Namba	Jina la mtoto (Anza na mdogo zaidi)	Amezaliwa mapacha? 1=Peke yake 2=Mapacha	Jinsia 1=M 2=K	Amezaliwa lini? (Siku/mwezi/mwaka)	Je, bado yuko hai? 1 = ndiyo 2 = hapana	Kama yuko hai, umriwake ni miezi mingapi?	Kama alifariki, ni lini alifariki?	Je, umezaa watoto wengine kati ya 2003, 2004, 2005, 2006, 2007 au 2008? 1=Ndiyo 2=Hapana
	Name of the child (start with the youngest)	*Born twins? 1 = Lone 2 = Twins*	*Sex 1=M 2=F*	*When was s/he born? (day/month/year)*	*Is s/he still alive? 1=Yes 2 = No*	*If s/he is still alive, how old is s/he in months*	*If the child died, when did s/he die??*	*Have you had any other children in 2003, 2004, 2005, 2006, 2007 and 2008? 1=Yes 2=No*
|__|num1	Name1	|__|twins1	|__|sex1	|__|__|/|__|__|/|__|__|__|__| dob1	|__| alive1	|__|__| age1	|__|__|/|__|__|/|__|__|__|__| whendied1	|__| otherchild1
|__|num2	Name2	|__| twins2	|__| sex2	|__|__|/|__|__|/|__|__|__|__| dob2	|__| alive2	|__|__| age2	|__|__|/|__|__|/|__|__|__|__| whendied2	|__| otherchild2
|__|num3	Name3	|__| twins3	|__| sex3	|__|__|/|__|__|/|__|__|__|__| dob3	|__| alive3	|__|__| age3	|__|__|/|__|__|/|__|__|__|__| whendied3	|__| otherchild3

Sasa ningependa kukuuliza maswali juu ya ujauzito wa kila mtoto aliyezaliwa mwaka 2003, 2004, 2005, 2006, 2007 na 2008

Now I would like to ask you some questions about your pregnancy with each child born in 2003, 2004, 2005, 2006, 2007 and 2008.

		Jina (1)	Jina (2)	Jina (3)
		_____ Namba ya mtoto **(kutoka M46)** *Child number (from M46)* [ ] Name1 Num1	_____ Namba ya mtoto **(kutoka M46)** *Child number (from M46)* |__| name2 num2	_____ Namba ya mtoto **(kutoka M46)** *Child number (from M46)* |__| name3 num3
M47	Ulipokuwa na ujauzito wa JINA, ulilala ndani ya chandarua? 1 = ndiyo 2 = hapana **(NENDA M49)** *While you were pregnant with NAME, did you sleep under a mosquito net?* *1=Yes* *2=No **(SKIP TO M49)***	|__| sleeppg1	|__| sleeppg2	|__| sleeppg3
M47a	Chandarua hiki ni cha aina gani? 1=Cha kawaida 2=Olyset net 3=Permanet 9=Sijui *What kind of net is it?* *1=Ordinary net* *2=Olyset net* *3=Permanet* *9=Don't know*	[ ] Kindnet_past1	[ ] Kindnet_past2	[ ] Kindnet_past3
M48	Je chandarua hicho kiliwahi kuchovyo kwenye dawa ya chandarua? 1 = ndiyo 2 = hapana ***NENDA M49*** *Had you ever treated this net with insecticide?* *1=yes* *2=no SKIP TO M49*	|__| evertreat1	|__| evertreat2	|__| evertreat3
M48a	Ni aina gani ya dawa ya chandarua ilitumika 1=Ngao 2=Ngao ya Muda Mrefu 3= kilichovywa kiwandani 4=Ngao Iliyoboreshwa 9=Sijui *What type of insecticide was used?* *1=Ngao* *2=Ngao ya Muda Mrefu* *3=Pre treated at factory* *4=Better Ngao (new name for (2)*	[ ] Kinddawa_past1	[ ] Kinddawa_past2	[ ] Kinddawa_past3

	9=Don't know			
M49	Ulipokuwa na ujauzito wa JINA, ulihudhuria kliniki? 1 = ndiyo 2 = hapana **(NENDA M75)** *While you were pregnant with NAME, did you attend an antenatal care clinic?* *1=Yes 2=No* **(SKIP TO M75)**	|__| attendRCH1	|__| attendRCH2	|__| attendRCH3
M49a	Je, ulikwenda kliniki au walikuja kijijini? 1= klinikini 2= huduma ya nje Did you go to a clinic building for RCH services or did you go to outreach services? 1= clinic building 2= outreach	|__| outreach1	|__| outreach2	|__| outreach3
M50	Ulikuwa na ujauzito wa wiki ngapi ulipohudhuria kliniki kwa mara ya kwanza? (wiki) **Andika toka kadi kama inapatikana** *How old was your pregnancy at the first visit? (weeks)* ***Interviewer: record from RCH card if available***	|__|__| gestfirstvis1	|__|__| gestfirstvis2	|__|__| gestfirstvis3
M51	1=Muda wa ujauzito umeandikwa kutoka kwenye kadi 2= Mwanamke amesema muda wa ujauziti *1=Gestation recorded from card* *2=Gestation reported by mother*	|__| gestverif1	|__| gestverif2	|__| gestverif3
MIS M52	Wakati wa ujauzito huo, ulikunywa dawa zozote za kuzuia kupata malaria? *(1=ndio)* *(2=hapana)* *During the pregnancy did you take any drugs in order to prevent you from getting malaria* *1=yes* *2=no*	|__| maldrug1	|__| maldrug2	|__| maldrug3
MIS M53	Ulikunywa vidonge gani? *(zungushia dawa zote anazotaja. Kama haitambui dawa, muonyeshe dawa halisi za malaria)* *1=SP/Fansidar* *2=Chloroquine* *3=Vingine (taja)* *4=Hajui* *Which drugs did you take to prevent malaria?* *SP/Fansidar* *Chloroquine*	☐ Whichdrug1	☐ Whichdrug2	☐ Whichdrug3

	Other (specify) *She doesn't know*			
MIS M53a	**Angalia Sw la M53: Dawa SP/Fansidar zilizotumiwa kuzuia malaria. Kamahakutumia SP/Fansidar nenda M57.** CHECK ABOVE M53 WAS SP/Fansidar If not SP/Fansidar skip to M57			
MIS M54	Ni mara ngapi ulikunywa SP wakati wa ujauzito huu? *(andika mara ngapi)* *How may times did you take SP/Fansidar during this pregnancy?*	☐ Dosesp1	☐ Dosesp2	☐ Dosesp3
MIS M54a	Ulipata SP wakati uliopohudhuria kliniki ya wajawazito wakati wa ujauzito, au ulipata wakati ulipohudhuria matibabu kwenye kituo cha tiba, au ulipata kutoka sehemu nyingine yoyote? 1=Huduma ya mama mjamzito 2=Ulipotembelea kituo kingine 3=Nyingine (eleza) *Did you get the SP/Fansidar during an antenatal visit, during another visit to a health facility, or from some other sources?* *1=Antenatal visit* *2=-Another facility visit* *3=Other (specify)*	☐ Wheresp1	☐ Wheresp2	☐ Wheresp3
	HP ya wajawazito			
M57	Je mfanyakazi wa kliniki alikupa hati kama hii ya wajawazito kwa ajili ya kununulia chandarua? **(Mhojaji : onyesha Hati Punguzo)** 1 = ndiyo 2 = hapana **(NENDA M75)** *Did an RCH worker give you a discount voucher for pregnant women for buying a mosquito net?* ***(Interviewer: show copy of Hati Punguzo)*** *1 = Yes* *2 = No **(SKIP to M75)***	|__| recdvouch1	|__| recdvouch2	|__| recdvouch3
M58	Ulitoa fedha kwa mtu yeyote kwenye kliniki ili kupata hati hiyo? 1 = ndiyo 2 = hapana **(NENDA M60)** *Did you have to pay money to somebody at the RCH clinic to get the voucher?* *1=Yes* *2=No **(SKIP TO M60)***	|__| paidvouch1	|__| paidvouch2	|__| paidvouch3
M59	Ulilipia shilingi Tshs ngapi? *How much did you have to pay?*	|__|__|__|__| paidhowmuch1	|__|__|__|__| paidhowmuch2	|__|__|__|__| paidhowmuch3

M60	Hati punguzo ilitumika kununulia chandarua? 1 = ndiyo **(NENDA M63)** 2 = hapana *Did you use a voucher to buy a net?* *1=Yes (SKIP TO M63)* *2=No*	|__| usevouch1	|__| usevouch2	|__| usevouch3
M61	Ni kwa nini chandarua hakikununuliwa kwa kutumia hati? 1 = Nilimpa mtu mwingine 2 = Tayari nina chandarua 3 = Nilikuwa sina fedha za kununulia chandarua 4 = Niliipoteza 5 = Nilinunua bidhaa nyingine 6 = Niliiuza kwa mtu mwingine 7 = Kunakouzwa vyandarua ni mbali sana 8 = Sijui ni wapi pa kununulia vyandarua 9 = Hakuna duka linalouza chandarua hapa karibu 10 = Chandarua ni aghali sana 11 = Ingine (eleza) *Why wasn't the voucher used to buy a net?* *1 = I gave the voucher to somebody* *2 =I already had a net* *3 =I had no money to buy a net* *4 = I lost the voucher* *5 =I bought another commodity* *6 =I sold the voucher to somebody* *7 = The place to buy a net is too far* *8 =I don't know where to buy a net* *9 = No shop nearby selling nets* *10 = Nets too expensive* *11 = Other (specify)*	|__| whynotuse1 otwhynot1	|__| whynotuse2 otwhynot2	|__| whynotuse3 otwhynot3
M62	Je bado hati punguzo ipo? 1 = ndiyo **(NENDA M75)** 2 = hapana **(NENDA M75)** *Do you still have the voucher?* *1=Yes (SKIP TO M75)* *2=No (SKIP TO M75)*	|__| havevouch1	|__| havevouch2	|__| havevouch3
M63	Nani aliyekwenda kununua chandarua hicho? 1=Mimi 2=Mume wangu 3=Ndugu 4=Rafiki 5=Mwingine *Who went to buy the net?* *1=Self* *2=Husband* *3=Relative* *4=Friend* *5=Other*	[ ] Whobuy1	[ ] Whobuy2	[ ] Whobuy3

M64	Chandarua kilinunuliwa ukiwa mjamzito au baada ya kujifungua? 1 = nilipokuwa mjamzito 2 = baada ya kujifungua *When in the course of your pregnancy was the voucher used to buy the net?* *1 = While pregnant* *2 = after delivery*	|__| whenbuy1	|__| whenbuy2	|__| whenbuy3
M65	Lini ulinunua chandarua? (mwezi/mwaka) **Kama hajui, andika 1 July 2099** *When was the net bought?* *(Month/Year)* ***If not known, write 1 July 2099***	|__|__|/ |__|__|__|__| datebuy1	|__|__|/ |__|__|__|__| datebuy2	|__|__|/ |__|__|__|__| datebuy3
M66	Chandarua hiki kilinunuliwa wapi? 1= Dukani 2=Machinga 3=Kituo cha afya 4=Mradi wa serikali/NGO 5=Sokoni (gulioni) 6=Ingine, eleza 9=Haijulikani *Where was the net bought?* *1=Shop* *2=Machinga* *3=Health facility* *4=Government or NGO project* *5=Market* *6=Other (specify)* *9=Don't know*	|__| wherebuy1 otwherebuy1	|__| wherebuy2 otwherebuy2	|__| wherebuy3 otwherebuy3
M67	Ilichukua muda gani hadi kufika mahali chandarua kiliponunuliwa (jaza dakika) (andika 9999 kama hujui) *How long did it take you (or the person who bought the net) to get to the place where you bought the net? (in minutes)* ***Write 9999 if don't know***	|__|__|__| timebuy1	|__|__|__| timebuy2	|__|__|__| timebuy3
M68	Kiasi cha shilingi ngapi kililipwa kama gharama ya usafiri? **(mhojaji: kama hakulipa chochote andika 0; andika 9999 kama hujui)** *How much was paid as transport costs?* ***(Interviewer: if paid nothing, write 0; Write 9999 if don't know)***	|__|__|__|__| transbuy1	|__|__|__|__| transbuy2	|__|__|__|__| transbuy3
M69	Ulinunua chandarua ukubwa gani? 1=3.5X6 2=4X6 3=6X6 4=Ingine *What size of net was bought?* *1=3.5X6* *2=4X6* *3=6X6* *4=Other*	|__| sizenet1 otsize1	|__| sizenet2 otsize2	|__| sizenet3 otsize3

M70	Ililipa kiasi cha shilingi ngapi (baada ya kutumia hati punguzo) kununulia chandarua hiki? *How much did you pay to buy the net (after using the discount voucher)?*	|__|__|__|__| costnet1	|__|__|__|__| costnet2	|__|__|__|__| costnet3
M70a	Je Chandarua kilikuwa pamoja na paketi ya dawa ya chandarua 1 = ndiyo 2= hapana 9=Sijui Did the net come packaged together with insecticide? 1=Yes 2=No 9=Don't know	☐ Bundled1	☐ Bundled2	☐ Bundled3
M70b	Chandarua hiki ni cha aina gani? 1=Cha kawaida 2=Olyset net 3=Permanet 9=Sijui What kind of net is it? 1=Ordinary net 2=Olyset net 3=Permanet 9=Don't know	Kindnet1	Kindnet2	Kindnet3
M71	Je kulikuwa na kikwazo chochote wakati wa kutumia hati punguzo? 1 = ndiyo (eleza) 2 = hapana *Did you have any other difficulties using the voucher scheme to buy a net?* *1 = Yes (specify) 2 = No*	☐ ☐ Probbuy1 Whatprob1 _____	|__| probbuy2 whatprob2 _____	|__| probbuy3 whatprob3 _____
M72	Bado unacho chandarua hicho ulichonunua kwa kutumia hati punguzo? 1 = ndiyo **(NENDA M74)** 2 = hapana *Do you still have the net that you bought with the voucher?* *1=yes **(SKIP TO M74)** 2=no*	|__| havenet1	|__| havenet2	|__| havenet3
M73	Chandarua hicho kiko wapi sasa? 1 = Kiliibiwa 2 = Kiliungua 3 = Nilikipoteza 4 = Nilikiuza 5 = Nilimpa mtu mwingine 6 = Nilimpatia aliyetoa fedha 7 = Nyingine, eleza **(nenda M75)** *If not: what happened to it?* *1 =Stolen* *2 =Burnt* *3 =I lost* *4 =I sold* *5 =I have given to another person* *6=I sold it to another person*	|__| wherenet1 otwherenet1	|__| wherenet2 otwherenet2	|__| wherenet3 otwherenet3

	7 =Other (explain **(SKIP TO M75)**			
M74	Ni nani analala kwenye hicho chandarua kwa sasa? **(angalia mstari wa namba kwenye orotha ya wanakaya H14)** Ni nani analala kwenye hicho chandarua kwa sasa? **(angalia mstari wa namba kwenye orotha ya wanakaya H14)** *Who sleeps under the net now? (refer to line numbers from household roster H14)*	|__|__| |__|__| |__|__| |__|__| whosleeps11 whosleeps12 whosleeps13 whosleeps14	|__|__| |__|__| |__|__| |__|__| whosleeps21 whosleeps22 whosleeps23 whosleeps24	|__|__| |__|__| |__|__| |__|__| whosleeps31 whosleeps32 whosleeps33 whosleeps34
	Matibabu ya homa kwa watoto **TREATMENT FOR FEVER IN CHILDREN**			
MIS M75	**Sasa ningependa kukuuliza maswali machache kuhusu afya ya hawa watoto.** *Now I would like to ask you some questions about the health of these children.*			
M75	Je, [JINA] aliugua homa wakati wowote katika kipindi chochote cha wiki mbili zilizopita? 1=Ndiyo *(endelea)* 2=Hapana **(rudi Sw. M75 kama anamtoto mwingine, au nenda Module 3 kama hakuna mtoto mwingine)** *Has (NAME) been ill with a fever at any time in the last 2 weeks?* *1=yes* **(if yes continue)** *2=no* **(If no ask M75 again for next child. If no other children go to Module 3)**	☐ Fever1	☐ Fever2	☐ Fever3
M76	Homa ilianza siku ngapi zilizopita? *(andika idadi ya siku, kama ni chini ya siku 1 andika 0)* *How many days ago did the fever start? (record number of days, if less than one day record 0)*	☐ Daysago1	☐ Daysago2	☐ Daysago3
M77	Je, ulitafuta ushauri au matibabu ya ugonjwa toka sehemu yoyote? 1=ndiyo *(endelea)* 2=hapana *(nenda M81)* *Did you seek advice or treatment?* *1=Yes (continue)* *2=No (go to M81)*	☐ Advice1	☐ Advice2	☐ Advice3
M78	Je, ni wapi ulitafuta ushauri au matibabu?	☐ Alladvice1	☐ Alladvice2	☐ Alladvice3

	Mwuliza: Sehemu Nyingine? *(onyesha zote anazotaja)* **HUDUA ZA SEREKALI** 1=Hosp. ya rufaa/maalumu 2=Hosp. Ya mkoa 3=Hosp. Ya wilaya 4=Kituo cha afya/zahanati 5=Mhudumu wa afya kijijini 6=mfanyakazi wa CBD/HBC **HUDUMA ZA BINAFSI** 7=Hospitali 8=Kituo cha afya 9=Zahanati **HUDUMA NYINGINE** 10=duka la dawa 11=nyingine (eleza) *Where did you seek advice or treatment?* ***(Probe – anywhere else? Show all)*** ***GOVT SERVICES*** *1=Referal hospital* *2=Reginal hospital* *3=District hospital* *4=Health centre/dispensary* *5=Village health worker* *6=CBD/HBC provider* ***PRIVATE SERVICES*** *7=Hospital* *8=Healthcentre* *9=Dispensary* ***OTHER SERVICE*** *10=Pharmacy/drug shop* *11=other (specify)*			
M79	Je, ni wapi ulikwenda kutafuta ushauri au matibabu mara ya kwanza? ***(Chagua moja – tumia orodha sawa na ya M78)*** *Where did you go for advice/treatment the first time* *(Select one -use the same list as M78)*	☐ Firstadvice1	☐ Firstadvice2	☐ Firstadvice3
M80	Je, ni baada ya siku ngapi ulitafuta ushauri au matibabu kwa mara ya kwanza baada ya [JINA] kuanza kuugua homa? ***(kama ni siku hiyo hiyo, andika 00)*** How many days after the fever began did you first seek treatment for (NAME) **(same day ==00)**	☐ Daysadvice1	☐ Daysadvice2	☐ Daysadvice3
M81	Je, [JINA] bado anaumwa homa? 1=Ndiyo 2=Hapana Is (NAME) still sick with a fever? 1=Yes 2=No	☐ Stillfever1	☐ Stillfever2	☐ Stillfever3
M82	Je, kuna kipindi chochote wakati wa	☐	☐	☐

		Drugsfever1	Drugsfever2	Drugsfever3
	ugonjwa huu ambapo [JINA] alitumia dawa zozote? 1=Ndiyo *(endelea)* 2=Hapana *(rudi Sw. M75 kama anamtoto mwingine, au nenda Module 3 kama hajuna mtoto mwingine)* *At any time during the illness, did (NAME) take any drugs for the fever?* *1=Yes (continue)* *2=No (return to Q75 if she has another child, or go to Module 3 if she has no more children)*			
M83	Ni dawa gani [JINA] alitumia? *(zungushia dawa zote anazotaja)* **DAWA YA MALARIA** 1= SP/Fansidar 2=Klorokwini 3=Amodiaquine 4=Quinine 5=Alu, Coartem 6=Dawa Nyingine za malaria (taja) **ANTIBIOTIC DRUGS** 7=vidonge/dawa ya maji maji 8=Sindano **DAWA NYINGINE** 9=Aspirin 10=Paracetamol/panadol 11=Ibuprofen What drugs did (NAME) take? *(indicate all drugs she mentions)* **MALARIA DRUGS** 1= SP/Fansidar 2=Chloroquine 3=Amodiaquine 4=Quinine 5=Alu, Coartem 6=Other (specify) **ANTIBIOTIC DRUGS** 7=Pill/syrup 8=Injection **Other drugs** 9=Aspirin 10=Paracetamol/panadol 11=Ibuprofen	☐ Alldrugs1	☐ Alldrugs2	☐ Alldrugs3
M84 PDA check	**Angalia dawa gani zilitolewa katika M83 chaguo la 1-5. Kwa kila dawa (1-5) uliza maswali matatu yafuatayo.** **Check which antimalarial was given in M83 options 1-5. For each antimalaria (1-5) ask the following 3 questions:**			
M85	Je, ni baada ya muda gani [JINA]	☐	☐	☐

		Startdrugs1	Startdrugs2	Startdrugs3
	alitumia [DAWA] kwa mara ya kwanza baada ya kupata homa? **(andika idadi ya siku – siku hiyo hiyo andika 0)** *How long after the fever started did (NAME) first take [antimalarial]?* **(record number of days – if today write 0)**			
M86	Je, [JINA] alitumia [DAWA] kwa siku ngapi? **(kama siku 7 au zaidi andika 7)** *For how many days did (NAME) take [antimalarial]?* *(if 7 or more days write 7)*	Daysdrugs1	Daysdrugs2	Daysdrugs3
M87	Je, ulikuwa na [DAWA] nyumbani wakati mtoto alipougua au ulipata sehemu nyingini? *(na eleza – wapi)*? 1=nyumbani 2=sehemu nyingini (eleza) *Did you have the [antimalarial] at home or did you get it from somewhere else?* *1=at home* *2=somewhere else* **(specify)**	Homedrugs1	Homedrugs2	Homedrugs3
PDA CHE CK	**(rudi Sw. M75 kama anamtoto mwingine, au nenda Module 3 kama hakuna mtoto mwingine)** *(return to M75 if she has another child, or go to Module 3 if no other child)*			

85

Module 3
HATI PUNGUZO kwa watoto and INSECTICIDE RETREATMENT KIT MODULE

Sasa ningependa kukuuliza maswali kadhaa kuhusu watoto wako uliojifungua 2006, 2007 au 2008 au watoto wengine waliozaliwa 2006, 2007 au 2008 ambao unawalea.

Now I would like to ask you some questions about your chidren who were born since 2006 (for analysis - under 2) or any children under 2 for whom you are the guardian.

K1	Jina la mhojiwa *Name of respondent*	

		Jina (1) Utambulisho wa mtoto	Jina (2) Utambulisho wa mtoto
K1d	(Mtoto) Ana umri gani XX? (miezi) How old is XX?	☐ Ageinf1	☐ Ageinf2
	Mhojaji: Omba kuona kadi 1=Umri toka kadi 2=Umri toka mama Interviewer record: Age confirmed by card 1=Yes 2=No	☐ Cardage1	☐ Cardage1
K2	Je, Umeshampeleka (JINA) kliniki ya mama na mtoto kwa ajili ya chanjo? 1= Ndiyo 2= Hapana *Have you taken NAME to the RCH for vaccination?* *1=Yes* *2=No*	☐ vaccine1	☐ Vaccine2
K2a	Je NAME amepata chanjo ya surua? 1=Ndiyo 2=Hapana *Did NAME receive measles vaccination?* *1=yes* *2=No*	☐ Measles1	☐ Measles2
K2b	Tarehe gani amepata chanjo ya surua? M**hojaji andika kumbukumbu ya chanjo surua kama ilivyoandikwa katik kadi** *On what date did NAME receive their measles vaccination?* ***Write date written on card if availabile***	☐☐☐☐☐☐☐ Datemeasles1	☐☐☐☐☐☐☐ Datemeasles2
K3a	Mohaji: 1= Tarehe toka kadi; 2= Tarehe toka mama *Interviewer record:* *Measles vaccination confirmed by card 1=yes 2=no*	☐ Carddate1	☐ Carddate1
K3b	Je mfanyakazi wa kliniki alimpatia (JINA) HATI Punguzo ya watoto kwa kununua chandarua? *(mhojaji onyesha nakala ya HATI Punguzo ya watoto)* 1=Ndiyo 2=Hapana **(nenda K27)** *Did an RCH worker give NAME an infant voucher for buying a mosquito net? (Interviewer: show copy of infant voucher)* *1=yes* *2=no (skip to K27)*	☐ Infvouch1	☐ Infvouch2
K3c	Je ulilipa fedha kwa mtu yeyote pale klinik kwa kupata HATI punguzo ya mtoto? 1=Ndiyo 2=Hapana	☐ Payinfvouch1	☐ Payinfvouch2

	Did you have to pay money to somebody at the RCH clinic to get the infant voucher? *1=Yes* *2=No*		
K3d	Ulilipa shilingi ngapi kupata HP ya mtoto? *How much did you pay to get HP infant?*	☐ Howmuch1	☐ Howmuch2
K16	Je uliitumia HATI kwa kununua chandarua? 1=Ndiyo **(NENDA K20)** 2=Hapana *Did you use the voucher to buy a net?* *1=Yes* **(GO TO K20)** *2=No*	☐ Useinfvouch1	☐ Useinfvouch2
K17	Kwa nini HATI haikutumika kwa kununua chandarua? 1= HATI nimempatia mtu mwingine 2=Tayari nilishakuwa na chandarua 3=Nilikuwa sina fedha za kununulia chandarua 4=HATI nimeipoteza 5=Inimeinunilia bidhaa nyingine 6=HATI nimeiuza kwa mtu mwingine 7=Mahali pa kukununulia chandarua ni mbali 8=Inilikuwa sifahamu wapi pa kununulia chandarua 9=Hakuna duka linalouza chandarua jirani 10=Vyandarua ni ghali sana 11=Nyingine *(eleza)* *Why wasn't the voucher used to buy a net?* *1=I gave the voucher to somebody else* *2=I already had a net* *3=I had no money to buy a net* *4=I lost the voucher* *5=I bought another commodity* *6=I sold the voucher to somebody else* *7=The place to buy a net is too far* *8=I don't know where to buy a net* *9=No shop nearby selling nets* *10=Nets too expensive* *11=Other (Specify)*	☐ Useinfvouch1	☐ Useinfvouch2
K18	Je bado unayo HATI? 1=Ndiyo **(Nenda Module 4)** 2=Hapana **(NENDA Module 4)** *Do you still have the voucher?* *1=Yes GO TO Module 4* *2=No (GO TO Module 4)*	☐ Whynotinf1	☐ Whynotinf2
K20	Chandarua kilinunuliwa wapi? 1=Dukani 2=Machinga 3=Kituo cha tiba 4=Asasi isiyo ya serikali 5=Sokoni 6=Nyingine (eleza) 9=Sijui Where was the net bought? 1=Shop 2=Machinga 3=Health facility 4=Governmen/NGO 5=Market 6=Other (specify) 9=Don't know	☐ Infnetwhere1	☐ Infnetwhere2
K21	Ilichukua muda gani hadi kufika mahali kiliponunuliwa chandarua (katika dakika, 999 kama hajui)	☐ TimebuyInf1	☐ TimebuyInf2

	How long did it take you (or the person who bought the net) to get to the place where you bought the net? (minutes). Write 999 if don't know		
K22	Kiasi gani cha fedha kama gharama ya usafiri kililipwa? (Tsh) **(mhojaji: kama hakulipa chochote andika 0, 9999 kama hajui)** How much was paid as transport costs? (TSh) Interviewer: If paid nothing write 0; write 9999 if don't know	☐ TransbuyInf1	☐ TransbuyInf2
K23	Chandarua kina ukubwa gani? 1=3.5X6 2=4X6 3=6x6 4=Ingine *What size is the net?* *1=3.5X6 2=4X6 3=6X6 4 = Other*	☐ Sizeinf1	☐ Sizeinf2
K23a	Chandarua hiki ni cha aina gani? 1=Cha kawaida 2=Olyset net 3=Permanet 9=Sijui *What kind of net is it?* *1=Ordinary net* *2=Olyset net* *3=Permanet* *9=Don't know*	☐ Kindinf1	☐ Kindinf1
K24	Je Chandarua kilikuwa pamoja na paketi ya dawa ya chandarua 1 = ndiyo 2= hapana 9=sijui *Did the net come packaged together with insecticide?* *1=Yes 2=No 9=Don't know*	☐ Bundleinf1	☐ Bundleinf2
K25	Chandarua hiki kilinunuliwa shilingi ngapi? (baada ya kutumia hati punguzo)? (TSh) *How much was paid to buy the net (after using the discount voucher(s)*	☐ Costnetinf1	☐ Costnetinf2
K26	Kulikuwa na kikwazo chochote kwenye kutumia hati punguzo kununulia chandarua? 1 = ndiyo, *eleza halafu nenda Module 4* 2 = hapana *NENDA Module4* *Did you have any other difficulties in using the voucher scheme to buy a net?* *1=Yes (Specify) GO to Module4* *2=No GO to Module4*	☐ Probbuyinf1 Whatprobinf1	☐ Probbuyinf2 Whatprobinf2
K27	*Kama mlezi hakupata HP ya watoto* Kwa nini hukupata HP ya watoto 1=Sikuihitaji 2= Nilikuwa sijui kuhusu hiyo HATI 3=Nilikuwa sujui kwa nini sikupewa HATI 4=Umri bado *Why did you not receive an infant voucher?* *1=Didn't want one* *2= Didn't know about it* *3=Don't know why didn't receive* *4=Not yet old enough*	☐ Whynoinf1	☐ Whynoinf2

88

Moduli 4: Watoto wenye unri chini ya umri wa miaka 5
Module 4: Children under 5 years of age:

Mhojaji: Hakikisha kuwa mhojiwa ni mama/mlezi wa mtoto chini ya miaka 5. Kama bado hujamwomba kuhojiwa, omba ridhaa ya kumuhoji
Interviewer: Ensure that the respondent is a mother/carer of a child under 5 years. If they have not yet given consent to be interviewed, ask for their consent.

Ningependa kukuuliza baadhi ya maswali kuhusu watoto wako wenye umri chini ya miaka 5 au mtoto yeyote ambaye unamlea
I would like to ask you some questions about your children under 5 years or any children for whom you are the guardian

C1	Jina la mhojiwa *Name of respondent*				Nameresp
C3	**Umemsomea mwaliko wa ushiriki** 1= ndiyo 2= hapana *Have you read him/her the consent form?* 1= yes 2=no				|__| readconsent
C4	Je, mhojiwa amekubali? 1= ndiyo 2= hapana **KAMA HAPANA UHOJAJI UISHIE HAPA** *Does the respondent agree?* 1=Yes 2=No **IF NO END INTERVIEW HERE**				|__| respagree
C5		JINA (1) Name1	JINA (2) Name2	JINA (3) Name3	JINA (4) Name4
C7	JINA ana umri wa miaka mingapi? Kama ana umri chini ya mwaka mmoja, andika '0''. *How old is NAME? (years)* *If aged less than one year, write "0"*	|__| age1	|__| age2	|__| age3	|__| age4
C8	JINA alilala ndani ya chandarua usiku uliopita? 1 = ndiyo 2 = hapana (MWISHO) *Did NAME sleep under a mosquito net last night?* *1 = yes* *2 = no (END)*	|__| sleepnet1	|__| sleepnet2	|__| sleepnet3	|__| sleepnet4
C8a	Ni aina gani ya chandarua ? 1=Cha kawaida 2=Olyset net 3=Permanet 4=sijui *What kind of net is it?* *1=Ordinary net* *2=Olyset net* *3=Permanet* *4=sijui*	☐ Kindnet_five1	☐ Kindnet_five2	☐ Kindnet_five3	☐ Kindnet_five4
C9	Chandarua alicholala … usiku uliopita kilishawahi kuchovywa kwenye dawa? *(dodosa kama chandarua kilichovywa*	|__| evertreat1	|__| evertreat2	|__| evertreat3	|__| evertreat4

	kiwandani) 1 = ndiyo 2 = hapana **(nenda C11)** *Has the net NAME slept under ever been treated (include probes for pre-treated nets)?* *1=Yes* *2=No (go to C11)*				
C9a	Ni aina Gani ya dawa ya chandarua ilitumika? 1=Ngao 2=Ngao ya Muda Mrefu 3= kilichovywa kiwandani 4=Ngao Iliyoboreshwa 8=Nyingine 9=Sijui *What kind of insecticide was used?* *1=Ngao* *2=Ngao ya Muda Mrefu* *3=Pre-treated at factory* *4=Better Ngao (new brand name for (2)* *8=Other* *9=Don't know*	☐ Kinddawa_five1	☐ Kinddawa_five2	☐ Kinddawa_five3	☐ Kinddawa_five4
C10	Ni lini kwa mara ya mwisho chandarua alicholala ndani yake kiliwekwa dawa?(mwezi/mwaka). **(Kama hajui, andika 1 July 2099)** *When was the last time the net they slept under was treated? (Month/year)* **Kama hajui, andika 1 July 2099)**	|__|__|/ |__|__|__|__| lasttreat1	|__|__|/ |__|__|__|__| lasttreat2	|__|__|/ |__|__|__|__| lasttreat3	|__|__|/ |__|__|__|__| lasttreat4

	UWEZEKANO NA ATHARI ZA MALARIA *Inatakiwa kujibiwa mara moja tu na kila mlezi wa watoto wenye umri chini ya miaka 5* **SUSCEPTIBILITY AND SEVERITY OF MALARIA** *To be answered once by all carers of children under 5*	
	A. Kupima upatikanaji wa ujumbe kuhusu malaria *A. Measuring Exposure to Messages about Malaria*	
C11	Katika mwaka uliopita umeshaona au kusikia ujumbe wowote kuhusu kinga au tiba ya malaria? 1= Ndiyo 2= Hapana *(nenda swali namba C14)* 3= Sijui *(nenda swali namba C14)* *In the past year, have you heard or seen any messages about malaria prevention or treatment?* *1= yes* *2=no (go to question C14)* *3=don't know (go to question C14)*	
C12	Ujumbe huo ulikuwa unahusu nini? *DADISI MARA MOJA: Kitu kingine? RUHUSU JIBU ZAIDI YA MOJA* 1=VYANDARUA VYENYE DAWA 2=KUWEKA DAWA KWENYE CHANDARUA /NGAO 3=DAWA MSETO 4=MATIBABU KWA WANAWAKE WAJAWAZITO 5=ATHARI YA MALARIA 6=HATARI ZA MALARIA 7=NYINGINEZO 8=SIJUI *What were these messages about?* *PROBE ONCE: Anything else? ALLOW MULTIPLE RESPONSES* *1=ITNS/BEDNETS* *2=RETREATMENT/NGAO* *3=ACT/DAWA MSETO* *4=TREATMENT FOR PREGNANT WOMEN* *5=SEVERITY OF MALARIA* *6=RISK OF MALARIA* *7=OTHER* *8=DON'T KNOW*	
C13	Wapi umesikia au kuona ujumbe kuhusu kinga na tiba ya malaria? *RUHUSU MAJIBU MENGI* 1=REDIO 2=RUNINGA/TV 3=TUKIO LA KIJAMII 4=MHUDUMU WA AFYA	

	5=RAFIKI/JIRANI/MWANAFAMILIA 6=NYINGINEZO *Where did you hear or see these messages about malaria prevention or treatment?* *ALLOW MULTIPLE RESPONSES* *1=RADIO* *2=TELEVISION* *3=COMMUNITY EVENT* *4=HEALTH CARE WORKER* *5=FRIEND/NEIGHBOR/FAMILY MEMBER* *6=OTHER*	
C14	Umeshawahi kusikia msemo kwamba "Malaria Haikubaliki" 1 – Ndiyo 2 = Hapana *(nenda C16)* 3 = Sijui *(nenda C16)* *Have you ever heard the phrase "Malaria Haikubaliki"* *1 – yes* *2 = no (go to C16)* *3 = don't know (go to C16)*	
C15	Wapi umesikia au kuona msemo huu? *RUHUSU JIBU ZAIDI YA MOJA* 1=REDIO 2=RUNINGA/TV 3=TUKIO LA KIJAMII 4=MHUDUMU WA AFYA 5=RAFIKI/JIRANI/MWANAFAMILIA 6=NYINGINEZO *Where did you hear or see this phrase?* *ALLOW MULTIPLE RESPONSES* *1=RADIO* *2=TELEVISION* *3=COMMUNITY EVENT* *4=HEALTH CARE WORKER* *5=FRIEND/NEIGHBOR/FAMILY MEMBER* *6=OTHER*	
	Kupima viashiria vya kisaikolojia na kijamii vinavyohusiana na kinga na tiba ya malaria. **Measuring psychosocial factors related to malaria prevention and treatment:** **SELF-EFFICACY**	

NO.	Swali/Question	Jibu/Response	Ruka/Skip

		UTAWEZA KABISA *DEFINITELY COULD*	LABDA UTAWEZA *PROBABLY COULD*	LABDA HAUTOWEZA *PROBABLY COULD NOT*	HAUTOWEZA KABISA *DEFINITELY COULD NOT*	
	Sasa nitakuuliza kuhusu mfululizo wa mambo utayoyafanya na ningependa uniambie ni kwa jinsi gani unajiamini kufanya jambo hilo kwa ukamilifu. Kwa kila jambo utalolifanya, tafadhali niambie kama unafikiri utaweza kabisa, labda utaweza, labda hautoweza au hautoweza kabisa kufanya kila jambo kwa ukamilifu. (*Chagua jibu moja tu*) *I am going to ask you about a series of actions you could take and I would like you to tell me how confident you are that you could actually do that action successfully. For each action, please tell me if you think you definitely could, probably could, probably could not or definitely could not do each action successfully.* (*Select one response*)					
C16	Kupata vyandarua vya kutosha kwa watoto wako wote *Obtain enough bed nets for all your children.*	1	2	3	4	
C17	Kufunga chandarua juu ya sehemu wanayolala watoto wako. *Hang a bed net above your children's sleeping spaces.*	1	2	3	4	
C18	Kujikinga wewe na watoto wako ili msipate malaria. *Protect yourself and your children from getting malaria.*	1	2	3	4	
C19	Kuweka pesa za kutosha ili kupata vyandarua kwa watoto wako wote. *Save enough money to obtain bed nets for all your children.*	1	2	3	4	
C20	Kulala kwenye chandarua chenye dawa kila siku kwa mwaka mzima. *Sleep under a bed net every night of the year.*	1	2	3	4	
C21	Kuwawezesha watoto wako wote kulala kwenye chandarua chenye dawa kwa mwaka mzima.	1	2	3	4	

93

	Get all of your children to sleep under a bed net every night of the year.					
C22.	Kurudia kuweka dawa katika chandarua *Retreat a bed net with insecticide.*	1	2	3	4	
C23.	Kutambua homa ya mtoto siku ya kwanza inapoanza. *Notice a child's fever on the first day that it develops.*	1	2	3	4	
C24.	Kumpeleka mtoto wako kituo cha afya siku ya kwanza homa inapoanza. *Take your child to a health facility on the first day that they develop a fever.*	1	2	3	4	
C25.	Kufuata maelekezo kwa usahihi juu ya kutumia dawa mseto wakati unapokuwa na malaria? *Correctly follow the instructions for taking dawa mseto when you have malaria?*	1	2	3	4	

UWEZEKANO NA ATHARI ZA MALARIA

SUSCEPTIBILITY AND SEVERITY OF MALARIA

No.	Swali/QUESTION	Jibu/RESPONSE				SKIP
	Nitakusomea mfululizo wa maelezo na ningependa uniambie ni kwa kiasi gani unakubaliana na maelezo hayo. Kwa kila sentensi tafadhali niambie kama unakubaliana kabisa, unakubaliana kiasi, kiasi fulani hukubaliani au haukubaliani kabisa nazo. *I am going to read a series of statements to you and I would like you to tell me how much you agree with them. For each statement, please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with it.*	NAKUBALIANA KABISA *STRONGLY AGREE*	NAKUBALIANA KIASI *SOMEWHAT AGREE*	KIASI FULANI SIKUBALIANI *SOMEWHAT DISAGREE*	HUKUBALIANI KABISA *STRONGLY DISAGREE*	
C26	Malaria ni tatizo kubwa katika jamii yangu. *Malaria is the most serious health problem in my community.*	1	2	3	4	
C27	Watu katika jamii hii wanapata malaria wakati wa mvua tu. *People in this community only get malaria*	1	2	3	4	

	during the rainy season.					
C28	Kila mwaka watoto wengi katika jamii hii wanapata malaria. *Each year, many children in this community get malaria.*	1	2	3	4	
C29.	Kula mahindi mabichi kunaweza kusabisha kupata malaria. *Eating unripe maize/corn can cause malaria.*	1	2	3	4	
C30.	Malaria inakuwa hatari zaidi mwanamke anapopata ujauzito. *Malaria becomes more dangerous after a woman becomes pregnant.*	1	2	3	4	
C31	Kunyeshewa na mvua kunaweza kusababisha kupata malaria. *Exposure to the rain can cause malaria.*	1	2	3	4	
C32	Watoto dhaifu tu wanaweza kufa kwa malaria. *Only weak children can die from malaria.*	1	2	3	4	
C33	Malaria inaua watoto wengi hapa Tanzania kuliko ugonjwa mwingine wowote. *Malaria kills more children in Tanzania than any other disease.*	1	2	3	4	
C34.	Malaria inaweza ikanizuia nisifanye kazi na kupata pesa. *Malaria can prevent me from working and earning money.*	1	2	3	4	
C35	Malaria inaweza kuwazuia watoto wangu wasihudhurie shule. *Malaria can prevent my children from attending school.*	1	2	3	4	
C36	[DELETE] Kutibu malaria kunaweza kuwa ni gharama. *Treating malaria can be expensive.*	1	2	3	4	
C37	Wanawake wanapaswa kusubiri miezi kadhaa baada ya kufahamu kuwa ni wajawazito ndipo wahudhurie Kliniki. *Women should wait a couple of months after learning they are pregnant to attend antenatal care.*	1	2	3	4	
C38	Wanawake wanapaswa wahudhurie kliniki mara tu wanapojitambua kuwa ni wajawazito.	1	2	3	4	

	Women should attend antenatal care as soon as they learn they are pregnant.					
C39	Watoto inabidi wamuone mhudumu wa afya siku hiyo hiyo wanapopata homa. *Children should see a health care provider on the same day they develop a fever.*	1	2	3	4	
C40	Wakati unatumia dawa mseto ya malaria ni muhimu kumaliza vidonge vyote hata kama umepata nafuu. *When you take dawa mseto for malaria, it is important to finish all the pills even after you feel better.*	1	2	3	4	

Asante sana kwa kujibu maswali haya.
Thank you very much for answering these questions

Mhojaji: andika namba za usawa wa bahari wa kaya kwa kutumia GPS
Interviewer: Record the digital position of the household using the GPS

H24	GPS *(Kama hujui ujaza 99.9, 99.9, 9999)* (If <u>no reading available,</u> fill 99.9, 99.9, 9999)	Latitude |__|__| . |__|__|__|__|__|__| Longitude |__|__|__| . |__|__|__|__|__|__|

+++

PDA to produce a list from H14 of all pregnant women and children under 5 resident in the household to write invitations to finger pricking and to write list for blood letter.

District	Cluster n	Household n	Person n	Name	Date of birth	Pregnant woman	Child under 5

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

SECTION 1: IDENTIFIERS

	Variable		Variable Code
Date |__|__| / |__|__| / |__|__|__|	Tarehe Int_date	GPS Longitude |__|__| : |__|__|__|__|__|	
District |__|__|__|	Wilaya Distcode	GPS Latitude |__|__| : |__|__|__|__|__|	
Cluster |__|__|__|	Cluster 08	Facility Ownership |__| (1)Government (2)Mission (3)NGO	Facowner
Facility Type |__| (1)Dispensary (2)Health Centre (3)Hospital	Factype	Interviewers initials	
What is the status of the facility for the Hati Punguzo pregnant women scheme? |__| (1)Not yet started (2)Trained but not distributing yet (3)Trained and distributing			Hpstatus_preg
If not yet started, explain why not_____			
What is the status of the facility for the Hati Punguzo Infant voucher |__| (1)Not yet started (2)Trained but not distributing yet (3)Trained and distributing			HPstatus_inf
If not yet started, explain why not _____			

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

SECTION 2. EQUIPMENT, DRUGS AND VACCINES

Walk around the RCH with a member of staff and personally check the availability of the following:

Section 2.1 Equipment

Q2.1	Does the facility have the following equipment and materials on the day of survey?	(1)Yes (2)No	Variable Code
a.	Accessible and working adult scale?		Adultscales
b.	Accessible and working baby scale?		childscales
c.	Working watch or timing device?		Watch
d.	Supplies to mix ORS, cups and spoons		Orscup
e.	Source of clean running water (eg bucket+plug)		Water
f.	Child vaccination cards/growth monitoring cards		Vac_child
g.	Antenatal cards		Vac_mama
h.	Bed for examining pregnant women		Bed
i.	Fetalscope		Fetalscope
j.	Haemoglobin colour scale/Tallquist		Tallquist
k.	Clinsticks for testing sugar		Clinstiks
l.	Stethoscope		Stethoscope
m.	Blood pressure machine		Pressure
n.	Albusticks		Albustiks
o.	Single use needles and syringes for vaccinations		Disposable
p.	Functional sterilizer, cooker or stove		Sterilizer
q.	Functional fridge		Fridge
r.	Cold packs and cold boxes		Ice
r1	Sharps boxes		Sharp
r2	Soap		Soap
r3	Disposable gloves		Gloves
s.	TNVS vouchers for pregnant women *If yes skip to 2.1t3*		Vouchers_preg
t2	*If TNVS vouchers for pregnant women are not present and the facility has launched HP:* For how many days have you had no pregnancy vouchers?		Daysnohp_preg
t3	TNVS vouchers for infants *If yes skip to 2.1v*		Vouchers_inf
t5	*If TNVS vouchers for infants are not present and the facility has launched HP:* For how many days have you had no infant vouchers?		Daysnohp_inf
v.	Height stick		Stick
w.	Working electricity supply		Umeme
x.	The last time you needed emergency transport for a patient what transport did you use? (1)Ambulance (2)other official vehicle (3)Public transport (4)Patient's own (5)Bicycle (6)None available		Transport

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

Section 2.2: Current availability of drugs

Check the drug stocks. Answer the following questions based on what you see.

Q2.2	Does the facility have the following drugs available on the day of visit?	(1)Yes (2)No	Variable Code
a.	Sulphadoxine Pyrimethamine for IPT		Spstock
b.	Vitamin A		Vitamina
c.	Ferrous/Folate		Folate
d.	Paracetamol		Paracetamol
e.	Aspirin		Aspirin
f.	Mebendazol		mebendazol
f1	Co-artemether lumifantrine (for weight 5-15kgs)		Coartem
f2	Co-artemether lumifantrine (for weight 15-25kgs)		
f3	Co-artemether lumifantrine (for weight 25-35kgs)		
F4	Co-artemether lumifantrine (for weight 35-45kgs)		
F5	Anti-retroviral therapy (ART)		Artstock

Section 2.3: Current availability of vaccines

Check the vaccine stocks. Answer the following questions based on what you see.

Q2.3	Does the facility have the following vaccines in stock?	(1)Yes (2)No	Variable Code
g.	BCG vaccine		Bcg
h.	OPV vaccine		Opv
i.	DPT vaccine		Dpt
j.	Measles vaccine		Measles
k.	TT vaccine		Tetanus
l.	Were *any* (polio) vaccines indicated as unusable by the Visual Vaccine Monitor?		Vvm
m	Which staff member assisted in this section?		

Section 2.4: Current availability of diagnostics

Q2.4	Which of the following diagnostic methods are available in this clinic for malaria?		Variable Code
n	Clinical diagnosis available		Clinical_mal
o	Rapid test for malaria in stock today		Rapid_mal
p	Functioning microscopy (slides plus microscope plus slide reader)		Fmicro_mal
q	Non-functioning microscopy		Nonmicro_mal
r	No method of diagnosing malaria		Nomethod_mal
s	Does the facility offer HIV diagnostics? (1)Yes at this clinic (2)Yes at another facility/laboratory (3)No *If yes (1) go to t. If yes (2) go to W. If no (3) go to Section 3*		Diagnose_HIV
	If yes, clinic offers HIV diagnostic facility on site: Do you have the following rapid antibody tests available in clinic today?		
t	Capillis (1 yes/ 2 no)		Capillis
u	SD Bioline (1 yes/ 2 no)		SD Bioline
v	Determine (1 yes/ 2 no)		Determine
w	How many days does it take to get the results? *If results available on same day write '0'.*		HIV_days

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

SECTION 3 FACILITY SERVICES

Discuss with the head of facility to determine which services are routinely offered and the health workers who usually have responsibility for specific tasks.

Section 3.1 Services available

Q3.1			Variable Code
a.	How many days per week is the facility open?		Ser_days
	What services are routinely offered at this clinic?	(1)yes (2)no	
b.	Antenatal registration and counselling		Ser_reg
c.	Vaccination		Ser_vac
d.	VCT for pregnant women		Ser_vct
d1	PMTCT (counselling and testing, ARV prophlaxis for mother and newborn, infant feeding and family planning counselling)		Ser_pmtct
e.	Family planning		Ser_fp
f.	Child health		Ser_child
f1	Active outpatient clinic (OPD)		Ser_OPD
f2	Post-natal care		Ser_postnatal
g.	How many days per week are antenatal health services provided? (write number of days)		Ser_ancdays
h.	How many days per week are health education services provided? (write number of days)		Ser_hedays
h1	How many days per week are child health services provided? (write number of days)		Ser_infdays
	If Trained and distributing HP for pregnant women: (all)		
j.	What was the date when the first HP pregnancy voucher was issued in this clinic? (dd/mm/yy): write 99 if don't know dd	|__|__|/|__|__|/|__|__|	Faclnch_preg
	If trained and distributing HP for infants:		
j1.	What was the date when the first HP infant voucher was issued in this clinic? (dd/mm/yy): write 99 if don't know dd	|__|__|/|__|__|/|__|__|	Faclnch_inf
	OUTREACH		
k.	Does this clinic offer outreach services? (1)Yes for pregnant women only (2)Yes for children only (3)Yes, for both pregnant women and children (4)No *If no skip to S. 3.2*		Outreach
m.	During the last outreach service did you offer the following services? (1)Yes (2)No		
n.	Distribute IPT		Out_ipt
o.	Distribute Hati Punguzo for pregnant women		Out_hppreg
o1	Distribute Hati Punguzo for infants		Out_hpinf
o2			
s.	Why would you not give a pregnant woman at outreach Hati Punguzo? (1)she can't afford to use the voucher (2)she lives too far from a shop (3)she doesn't want a voucher because she has a net (4)not enough vouchers in clinic (5)no book to take on outreach (6)other (specify)_____ (7)all receive		Notgivehp_preg

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

Section 3.2 Characteristics of health workers by responsibility

Ask the in-charge to tell you the following about the staff at the RCH.

Q3.2		Prescriber	Nurse	RCH Aide	Medical Attendant	VHW	Other (sp.)	Total
a.	No. in RCH facility	S32a1	S32a2	S32a3	S32a4	S32a6	S32a7	S32a8
i.	How many are working today?							
j.	How many are away on training today?							
J1.	How many off sick today?							
J2.	How many on leave today?							
J3	How many away on official clinic work?							
J4	How many own a mobile phone?							
K	Altogether in the RCH, how many staff have attended formal training for Hati Punguzo ya wajawazito?							
L	Altogether in the RCH, how many staff have attended formal training for Hati Punguzo ya watoto?							
M	Altogether in the TCH, how many staff are trained in VCT for pregnant women?							

Section 3.3 Supervision
Ask the In-Charge about supervision visits received over the last six months, plus details about the last visit. If respondent is unsure try looking in the visitors book

Q 3.3				Variable Code
a.	Where you present at the last supervision visit? (1)Yes (2)No			Lastsup
b.	How many times during the last six months did the facility receive a supervisory visit? *(write number)*		If 0 skip to Sect 4.	Numsup
	Now please think about the last supervision visit. Which supervisors came on the last visit?		(1)Yes (2)No	
c.	DMO			Sup_dmo
d.	Other Medical doctor			Sup_dr
e.	RCH co-ordinator			Sup_rch
f.	Vaccine official			Sup_inj
g.	Mfamasia			Sup_pharm
h.	Other (specify)_____			Sup_other
	During the last supervision visit did your supervisors spend time with any service providers to discuss:		(1)Yes (2)No (3)DK	
i.	Family planning services			fp_sup
j.	Vaccinations			vac_sup
k.	Health education			he_sup
l.	Physical examination of antenatal women			mama_sup
m.	Physical examination of children			child_sup
n.	VCT			vct_sup
o.	Hati Punguzo			hp_sup
	When was the last visit made by a MEDA staff member to this clinic? (record date dd/mm/yyyy)			
p.	Staff member who assisted?			

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

SECTION 4 FACILITY RECORDS MODULE

Section 4.2 Antenatal attendees and Hati Punguzo vouchers: MTUHA (Book 6)
Ask the health worker assisting you to let you see all the MTUHA book 6 available in the clinic. In some clinics there are separate books for different villages. You first need to find out how many MTUHA book 6 there are. Do they cover the period March to June 2008? Now tell the PDA how many books there are. The PDA will then ask you the following questions FOR EACH of the books separately.

		<20 weeks	>20 weeks	Variable Code
Q4.2	**In June:**			
a.	What is the number of first visits to the facility for antenatal?	S42a1	S42a2	
b.	What is the number of revisits to the facility for antenatal?	S42b1	S42b2	
c.	How many antenatal attendees received a voucher?	S42c1	S42c2	
d.	How many antenatal attendees received IPTp1?	S42d1	S42d2	
e.	How many antenatal attendees received IPTp2?	S42e1	S42e2	
	In May:			
f.	What is the number of first visits to the facility for antenatal?			
g.	What is the number of revisits to the facility for antenatal?			
h.	How many antenatal attendees received a voucher?			
i	How many antenatal attendees received IPTp1?			
j	How many antenatal attendees received IPTp2?			
	In April:			
k.	What is the number of first visits to the facility for antenatal?			
l.	What is the number of revisits to the facility for antenatal?			
m.	How many antenatal attendees received a voucher?			
n.	How many antenatal attendees received IPTp1?			
o.	How many antenatal attendees received IPTp2?			
	In March:			
p.	What is the number of first visits to the facility for antenatal?			
q.	What is the number of revisits to the facility for antenatal?			
r.	How many antenatal attendees received a voucher?			
s.	How many antenatal attendees received IPTp1?			
t.	How many antenatal attendees received IPTp2?			
u.	Which member of staff assisted?			
	Ask the member of staff who gives out Hati Punguzo for pregnant women to answer the following questions without looking at any vouchers or training materials:			
V1	What is the value of the *Hati Punguzo* pregnancy voucher? *(enter the amount she says, or 99 if she doesn't know)*			
V2	When should a pregnant woman receive the voucher? 1. The first time she attends antenatal clinic 2. At another antenatal clinic visit (not the first) 3. Other (specify)_____			
V3	What is the top-up price? *(write the amount she says, or enter 99 if she does not know the top-up amount, or write 11 if she says the top-up price is different for different nets)*		Tsh_____	
w.	Why do you sometimes not give a pregnant woman a voucher? (1)She still can't afford to buy a net (2)She lives too far from the shops (3)She does not need it because she already has a net (4)Other (specify)_____(5)all are given			
x	*Ask the RCH worker who gives pregnant women services:* When do you think a pregnant woman should first attend antenatal clinic? *(record number of weeks)*			

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

Section 4.5 Infants attending for measles and Hati Punguzo for infants: MTUHA (Book 7 or Vaccination tally sheet (F202) or children tally sheet (F201))
Ask the health worker assisting you to let you see all the MTUHA book 7/tally sheets F202/F201 available in the clinic where measles vaccinations and Hati Punguzo for infants is recorded for the last 4 months. In some clinics there are separate books for different villages. You first need to find out how many MTUHA book 7 there are. Do they cover the period March to June 2008? Now tell the PDA how many books there are. The PDA will then ask you the following questions FOR EACH.

Q4.5	**In June:**		Variable
a.	What is the total number of infant visits to the health facility for measles vaccinations?		Infjune
b.	What is the total number of infants who received an infant voucher?		Infjune_hp
	In May:		
c.	What is the total number of infant visits to the health facility for measles vaccinations?		Infmay
d.	What is the total number of infants who received an infant voucher?		Infmay_hp
	In April:		
e.	What is the total number of infant visits to the health facility for measles vaccinations?		Infapr
f.	What is the total number of infants who received an infant voucher?		Infapr_hp
	In March:		
g.	What is the total number of infant visits to the health facility for measles vaccinations?		Infmar
h.	What is the total number of infants who received an infant voucher?		Infmar_hp
NEW	Which member of staff assisted?		
	Ask the member of staff who gives out Hati Punguzo for infants to answer the following questions without looking at any vouchers or training materials:		
i.	What is the value of the *Hati Punguzo* infant voucher? *(enter the amount she says, or 99 if she doesn't know)*		

j.	When should an infant receive the voucher?
	    1. At nine months when receiving the measles vaccine
	    2. Other_____		

k	What is the amount of money that needs to be added to the Hati Punguzo voucher to buy a bednet? (*enter amount reported, enter 99 is s/he d know*)		
l.	Why do you sometimes not give an infant a voucher? (1)The carer still can't afford to buy a net (2)The carer lives too far from the shops (3)The carer does not need it because she already has a net (4)Other (specify)_____ (5)All are given		

SECTION 5. HEALTH EDUCATION/PROMOTION
Section 5.1 Observation of health promotion materials on display

		(1)Yes (2)No	Variable Code
Q5.1	On the day of survey were these posters displayed:		
a.	Hati Punguzo		Post_hppreg
b.	Ngao		Post_ngao
c.	IPT – SP		Post_IPT
d.	STI		Post_sti
e.	Nutrition		Post_nut
f.	HIV		Post_HIV
g.	Family Planning		Post-fp
h.	Childhood illnesses (measles, polio, neonatal tetanus)		Post_child

NATNETS RCH FACILITY SURVEY, JUNE/JULY/AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

NATNETS RCH ANTENATAL USER SURVEY, HATI PUNGUZO, JUNE-AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

SECTION 1: IDENTIFIERS

	Variable Code		Variable Code
Date |__|__| / |__|__| / |__|__|__|__|	Int_date	District |__|__|__|	Wilaya Distcode
Ward/Cluster |__|__|__|	Cluster08	Kitongoji |__|__|__|	
Facility Code |__|__|__|	facilityco	Facility Type |__|	typefac
Interviewer ID |__|__|		Respondent ID |__|__|__|	
Hati Punguzo ya wajawazito?	Hati Punguzo Maalum?	Hati Punguzo ya Watoto?	

SECTION 2: SOCIO ECONOMIC BACKGROUND OF RESPONDENT
Explain to the respondent that the first questions are about her background.

Q2			Variable
a.	What is your birth date? *(dd/mm/yyyy) (if don't know 01/07/2099)* |__|__|/|__|__|/|__|__|__|__|		S2a
b.	What is your age now? (write years)		S2b Age4
c.	How many years at school have you completed? (write number of years)		Educ Educgrp Educ3
d.	Have you ever been married? (1)Yes, currently married (2)Yes but not anymore (3)Living with partner but not married (4)Never		Marstat
	How many people live in your household? *(including yourself)*		
e.	Adults > 18 years		S2e
f.	Children 5-17 years		S2f
g.	Children <5 years		S2g
h.	Which District do you live in? (1)this District (2)other District		disresid
I1	Do you rent this house? *(1) yes (2) no (3)=Other (specify)*		Renthouse
j.	Does the household you live in have a cement floor? (1)Yes (2)No		Cement
k.	Does the household you live in have a tin/tiled roof? (1)Yes (2)No		Roof
l.	Does your household have an electricity supply? (1)Yes (2)No		Umeme
m.	Is there a landline telephone in your household? (1)Yes (2)No		Phone
n.	What kind of toilet facilities does your household have? (1)Flush (2)Pit/latrine (3)No facility/bush/field (4)Other		Toilet
	Does anyone living in your household own a: (1)Yes (2)No		
o.	Radio		Radio
p.	Television		TV
q.	Bicycle		Bike

NATNETS RCH ANTENATAL USER SURVEY, HATI PUNGUZO, JUNE-AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

r.	Pikipiki		Piki
s.	Car/truck		Car
t.	Mobile phone		Mobile
t1	Wrist watch		watch
u.	Bednet	*If NO, skip to S31a*	Bednet
v.	How many bednets are there altogether? (write number)		Numnets
w.	How many of these bednets have ever been treated with insecticide? *(include all those that are pre-treated in the factory)*		Numever

SECTION 3.1: PREGNANCY HISTORY
Explain to respondent that you would now like to ask some questions about her pregnancy.

Q3.1			Variable
a.	What is your current gestation? (in weeks)		gestoday
b.	Which number pregnancy is this? (write number)		S31b
c.	In total how many live births have you had? (write number)	*If 0 skip to Sect. 3.2*	primi
d.	What was the birth date of your last born child? dd/mm/yyyy (if d know: 01/07/2099) |__|__| / |__|__| / |__|__|__|__|		

SECTION 3.2 THIS PREGNANCY
Ask to see clinic card to verify information

Q3.2			Variable
a.	How many times have you attended the RCH for antenatal services so far this pregnancy (including today)?		S32a Visit4
b.	What was your gestation at the first visit? *(write number of weeks)*		Gest1stvisit
c.	(If > 1 visit): What was your gestation at the second visit?		Gest2ndvisit
d.	(If > 2 visits): What was your gestation at the third visit?		Gest3rdvisit
e.	(If > 3 visits): What was your gestation at the fourth visit?		Gest4thvisit
f.	Have you ever been given iron prophylaxis from the RCH? (1)Yes (2)No		Getiron
f1.	At which visit were you given iron prophylaxis? (1)1st (2)2nd (3)3rd (4)4th		Ironvisit
g.	Have you ever been given IPTp1 (first dose) from the RCH? (1)Yes (2)No		Getipt1
g1.	At which visit were you given IPTp1 (first dose)? (1)1st (2)2nd (3)3rd (4)4th		Ipt1visit
h.	Have you ever been given IPTp2 (second dose) from the RCH? (1)Yes (2)No		Getipt2
h1.	At which visit were you given IPTp2 (second dose)? (1)1st (2)2nd (3)3rd (4)4th		Ipt2visit
i1	Were you asked if you wanted VCT?		AskVCT
i.	Have you ever been given ARV? (1)Yes (2)No		Getarv
j.	Have you ever been given TT vaccine from the RCH? (1)Yes (2)No		Gettt

NATNETS RCH ANTENATAL USER SURVEY, HATI PUNGUZO, JUNE-AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

k.	Have you been given a HP pregnancy voucher from the RCH during this pregnancy? (1) Yes (2)No		S32k
k1.	At which visit were you given a voucher? (1)1st (2)2nd (3)3rd (4)4th		S32k1
l.	After how many weeks should you visit the clinic again? (1)1-2 (2)3-4 (3)5-6 (4)7-8 (5)9-10 (6)10+ (7)don't know		nextvisit

SECTION 4: VOUCHER KNOWLEDGE, USE AND ITN OWNERSHIP

Remind the respondent that all the information she provides is very valuable to try to improve services and that her name or address is not written anywhere so whatever she tells us she can never be identified. Ask her to answer as honestly as she can.

Section 4.1 ITN use

Q4.1			Variable Code
aa	Before you were pregnant did you normally sleep under a bednet? (1)Yes (2)No		Beforepreg_any
a.	Have you ever slept under a bednet during this pregnancy? (1)Yes (2)No	*If no skip to g.*	Usenet
b.	Was it a treated net? *(include nets pre-treated with insecticide in the factory plus nets that have been dipped at home)* (1)Yes (2)No (3)Don't know		Useitn
c.	This pregnancy, during which week of gestation did you first sleep under a bednet? (write week 1-40, enter 1 if pre-pregnancy)		Pregest_net
d.	Did you sleep under a bednet last night? (1)Yes (2)No	*If no skip to g.*	Netlast
d1	What type of net was it? Ordinary net? Olyset net? Permanet? Don't know		Typenet
e.	Did you ever treat this net with insecticide? (1)Yes (2)No	*If no skip to g.*	ITNlast
f.	When was the last time this net was treated with insecticide? (write day/month/year)		S41f Treatlast12
f1	What was the type of insecticide put on the net? (1)Ngao (2)KO123 (LLasting) (3)Other (specify_____) (4)Don't know		Insecticide
f2	How often do you usually wash your bednet? (weeks)		
g.	Who else normally shares your bed? (1)Child<5yrs (2)Child>5yrs (3)Husband (4)No-one (5)Other		S41g1-S41g5

Section 4.2 Hati Punguzo

Q4.2			Variable Code
aa.	Have you heard of the Hati Punguzo? The discount voucher programme for pregnant women to buy a bednet at a cheaper price? (1)Yes (2)No *(skip to ba)*		Heardhp_preg
Ab	If yes, where did you first hear about HP for pregnant women? 1 = RCH or health facility, 2 = Shop 3 = Family member 4 = Neighbour, 5 = Radio, 6= Performance by theatre group or roadshow, 7 = Others, 8 = Village government, 8a = Newpaper 9= I don't know		Firstheard_preg
Ac	Where else have you heard about HP for pregnant women? (tick all that apply) *1 = RCH or health facility, 2 = Shop, 3 = Family member* *4 = Neighbour, 5 = Radio, 6= Performance by theatre group or roadshow, 7 = Others, 8 = Village government, 8a = Newpaper* *9= I don't know*		Allheard_rchpreg Allheard_shoppreg ect
Ad	Can you tell me what the value of the voucher for pregnant omen is?		

NATNETS RCH ANTENATAL USER SURVEY, HATI PUNGUZO, JUNE-AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

	(enter the amount in numbers or enter 0 is doesn't know)		
Ae	Who is eligible to receive a HP voucher for pregnant women? (1)pregnant woman (2)child under 1 year (3)Pregnant woman and child under 1 (4)other (specify)		
Ba	Have you heard of the Hati Punguzo for infants? The discount voucher programme for infants to buy a bednet at a cheaper price? (1)Yes (2)No *(skip to i)*		
Bb	If yes, where did you first hear about HP for infants? 1 = RCH or health facility, 2 = Shop 3 = Family member 4 = Neighbour, 5 = Radio, 6= Performance by theatre group or roadshow, 7 = Others, 8 = Village government, 8a = Newpaper 9= I don't know		
Bc	Where else have you heard about HP for infants? (tick all that apply) *1 = RCH or health facility, 2 = Shop, 3 = Family member 4 = Neighbour, 5 = Radio, 6= Performance by theatre group or roadshow, 7 = Others, 8 = Village government, 8a = Newpaper 9= I don't know*		
Bd	Can you tell me what the value of the voucher for infants is? (enter the amount in numbers or enter 99 is doesn't know)		
Be	Who is eligible to receive a HP voucher for infants? (1)pregnant woman (2)child under 1 year (3)Pregnant woman and child under 1 (4)other (specify)		
i.	This pregnancy have you been given Hati Punguzo for pregnant women voucher from the RCH? (show a voucher) (1)Yes *(skip to l)* (2)No		Gethp
j.	If No: Did you want to be given a pregnant women voucher? (1)Yes (2)No *(go to Sec 5)*		Wanthp
j1	If Q42j=yes: Why do you think you were not given a voucher? (select one) (1)I can't afford to pay the top-up (2) I already have a bednet (3) I didn't bring money to RCH (4) I live too far from a HP shop (5) There were no vouchers at RCH (6) Don't know (7)Other *Now skip to Sec 5*		
l.	Did you pay anyone some money to get it? (1)Yes (2)No *(skip to n)*	*If no skip to n*	Paidhp
m.	If yes: How much money did you pay for the voucher? (Tsh)		
n.	Was the Hati punguzo pregnancy voucher used yet to buy a bednet? (1)Yes (2)No *(skip to 4.2 t)*	*If no skip to t*	Usedhp
o.	What size net was bought with the voucher? (1) 3.5X6 (2) 4X6 (3) 6X6 (4)Other		Sizehpnet
p.	What was the amount of money that had to be added to the Hati Punguzo to buy the net? (write the amount in numbers)		Topup
q.	When was the net bought using the Hati Punguzo voucher? (day/mth/yr (DK: 01/07/2099)		Datehpnet
r.	Who now uses the bednet bought with the voucher? (1)Myself (2)My husband (3)My child (4)Another relative living with me (5)Adult outside my house (6)Child outside my house		Usehpnet
s.	How easy was it to use would you say: (1)Very easy (2)OK (3)Not so easy (4)Very difficult	*Now skip to Sec 5*	
	I*f not yet used:*		
t.	Do you still have the voucher? (1)Yes (skip to W) (2)No	*If yes skip to w.*	Stillhp
u.	*If no:* What happened to it? (1)Stolen (2)Burnt (3)Lost it (4)Sold it (5)Gave it away (6)Other		
v.		*Now skip to*	

NATNETS RCH ANTENATAL USER SURVEY, HATI PUNGUZO, JUNE-AUGUST 2008
Ifakara Health Institute *in collaboration with*
Ministry of Health, Tanzania and London School of Hygiene and Tropical Medicine

	If Other explain_____	*Sec 5*	
w.	*If yes, still has the voucher:* Do you plan to use the voucher to buy a net for someone? (1)Yes for myself (2)Yes for my family (3)Yes for someone else (4)No	*If Yes (1-3) skip to S.5*	Plantouse
x.	If doesn't plan to use: Why don't you plan to use the voucher? (1)Already have a net (2)Don't like bednets (3)No money (4)Other (specify)_____		

SECTION 5. RCH ATTENDANCE
Ask the respondent the following questions. Explain that we are trying to understand more about what influences a woman about when, and how many time to attend antenatal clinic.

S 5		Variable Code	
1	Have you been given health education at the RCH clinic this pregnancy either in a group for pregnant women or as part of your individual consultation?		
2	During that health education/consultation were any of the following discussed? Importance of attending RCH Individual birth plan Breastfeeding Nutrition in pregnancy and for the infant Malaria Hati Punguzo Use of bednets Treating bednets with insecticide HIV Prevention of transmission of HIV from mother to child Anaemia		
5.3	Can you tell me how many times it is recommended for all pregnant women to attend antenatal services? (*write number of times, or 99 if she doesn't know*)		
5.4	Can you tell me how many weeks old your pregnancy should be at the first visit? (*write number of weeks, or 99 if she doesn't know*)		
5.5	Can you give me one reason why a woman would attend later than this? _____		
5.6	Can you give me one reason why a woman would attend earlier than this? _____		
	I want to ask you to think about your own pregnancy now:		
5.7	Who was the first person you told about this pregnancy? (1)Husband/father of child (2)Own mother (3)Sister (own or husbands) (4)Mother of husband/father of child (5)Friend/neighbour (6)Own child (7)RCH clinic staff (8) Other specify _____		
5.8	Were you happy to find that you were pregnant at this time? (Y/N)		
5.9	Was the person you told happy to hear about your pregnancy? (Y/N)		
5.10	When you first came to RCH this pregnancy did you think you were: (1) Early (2)on time (3)late		
5.11	When you first came to RCH this pregnancy did the clinic staff tell you that you were (1) Early (2)on time (3)late (4)they didn't say anything about it		

Thank the respondent for taking the time to take part in the survey.