

# THE LANCET

## Global Health

### Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

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# Supplementary appendix

The effect of report cards on the coverage of maternal and neonatal health care: a factorial, cluster-randomised controlled trial in Uttar Pradesh, India

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1. Social accountability in the National Health Mission .....	2
2. Description of intervention.....	4
3. Additional tables .....	8
4. Additional figures.....	18

## 1. Social accountability in the National Health Mission

### Community Action for Health programme

The Community Action for Health is a key strategy of the National Health Mission (NHM); it is envisaged as an important pillar of NHM's Accountability Framework in order to ensure that the services reach those for whom they are intended. The accountability framework proposed in the NRHM is a three-pronged process that includes internal monitoring, periodic surveys and studies and community-based monitoring.

The process involves the following steps:

- (a) strengthening of Village Health, Sanitation and Nutrition Committees (VHSNCs), Rogi Kalyan Samities (RKS) and Planning and Monitoring Committees (PMC) at the PHC, block, district and state levels;
- (b) creating community awareness on NHM entitlements, roles and responsibilities of the service providers;
- (c) training of VHSNC, RKS and PMC members;
- (d) undertaking community level enquiry to assess availability, range and quality of health services;
- (e) developing village and facility level reports to reflect the status of health services;
- (f) organising Jan Samwad (public dialogue) for advocacy with health providers and managers to highlight gaps and find solutions, and
- (g) corrective action and planning to address the emerging issues and gaps.

The Ministry of Health and Family Welfare (MoHFW) constituted the Advisory Group on Community Action (AGCA) in 2005 to provide guidance on community action initiatives under the National Rural Health Mission (NRHM) at the national level.

The AGCA with support from the Ministry of Health and Family Welfare (MoHFW) guided the implementation of a pilot on Community Action for Health in 1,620 villages across 36 districts in nine states (Assam, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Tamil Nadu) between 2007 and 2009.

In the Financial Year 2016-17, the AGCA provided technical support to 25 states/union territories to plan and roll out the CAH process. These territories include: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Delhi, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Telangana, Tripura, Uttar Pradesh, Uttarakhand and West Bengal.

### Comparison of study intervention and government approach

Most of essential components of the Community Action for Health process are similar to our intervention design.

- The CAH aims to strengthen VHSNCs which are made up of Gram Panchayat members from the village, ASHA, Anganwadi Worker, ANM, Self Help Group Leader, Parent Teacher Association/Mother Teacher Association Secretary, village representative of a community-based organisation working in the village, user0-group representative. Our community arm convened meetings among the same types of community members, as explained in Panel X, our village meetings were attended by Gram Panchayat members, ASHAs and AWWs,

teachers, and other community members who could be described as users of health services.

- The CAH aims at increasing community awareness on roles and responsibilities of service providers. Our intervention was similarly targeted at providing community members with information of what their entitlements were from a health service provision perspective.
- The CAH includes the development of village and facility level reports to reflect the status of health services. Our report cards had exactly the same role in providing information on the status of health services at village level.
- The CAH revolves around organising policy dialogue with health providers. Our intervention created opportunities for policy dialogue at the community level by fostering discussion among meeting participants on the gaps observed in local health care provision (and evidenced by the report cards)
- The CAH included corrective action and planning to address gaps and issues. Our intervention used participatory methods to bring community members together and stimulated discussion of possible strategies to be implemented at village level to improve health service provision and overcome identified gaps.

The CAH also includes a process to conduct community and facility level enquiry through 2 tools used for data collection purposes – a Community tool and a Health Facility tool. The community tool includes individual interviews and focus groups with mothers and community health workers. The facility tool includes interviews and direct observations of providers. The information is collected on a bi-annual basis and compiled into village and facility report cards. Village report cards contain a number of indicators – among these there are 6 maternal health indicators (Antenatal care, Delivery, Post-natal care, Family planning, Janani Suraksha Yojna (JSY) entitlement, Janani Shishu Suraksha Karyakram (JSSK)) scored on a 1-3 scale. Again, this process is very similar to the intervention we implemented.

After the report cards are prepared, the CAH process envisages the organisation of community meetings at which the card is presented, the indicators are shared and discussed. The discussion focuses on the identification of gaps and of corrective actions and strategies. The meetings include all village residents, members of community-based organisations and Self Help Groups, ASHAs, ANMs and AWWs. Our intervention almost identically replicated this process. Our intervention similarly asked communities to write down lists of strategies and corrective actions, similarly to what is done in CAH where community members compile a planning sheet reflecting on reasons for gaps, possible solutions. As already discussed in the manuscript the only difference, and probably critical point in our intervention, was that we did not ask community members to define a specific timeline and allocate responsibility to specific individuals; which instead was done in the planning sheet of the CAH programme.

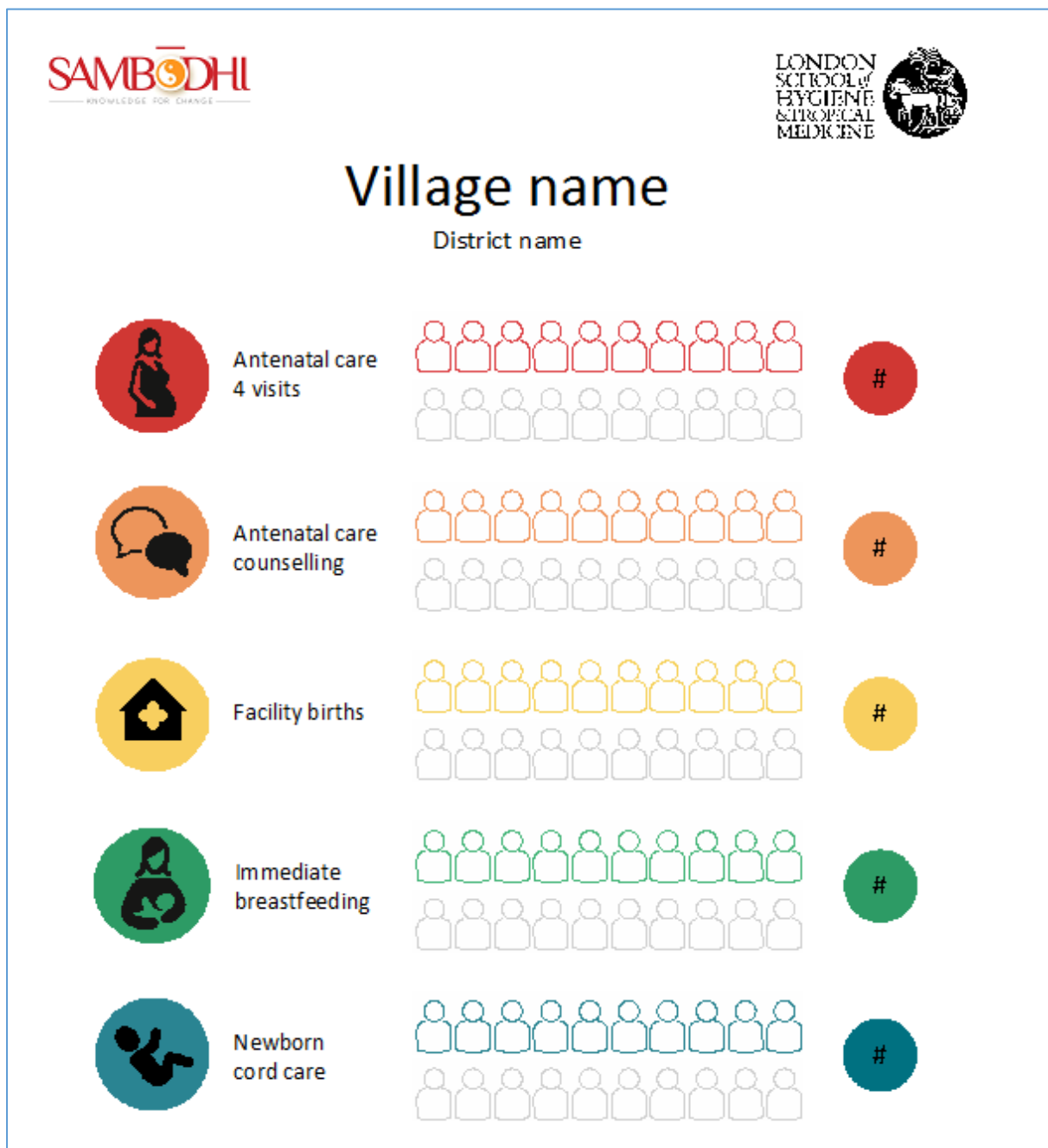
The one major difference between our intervention and the Community for Action programme is the lack of capacity building at state and district level targeted to village meeting members.

## 2. Description of intervention

### Maternal health report card

Using data collected in the first and second round of the household survey, a report card was designed to incorporate indicators of service coverage measured at the cluster level. The purpose of the report cards was to communicate information on the situation of villages in terms of maternal and newborn health indicators in a way that was simple to comprehend for those with low levels of literacy. The report card covered five indicators: ANC four visits, ANC counselling, facility births, immediate breastfeeding, and newborn cord care. Indicators were colour coded and were assigned an icon representing the specific health service that each of them measured. The coverage of each indicator was communicated using a scale from 0 to 10 (0% to 100% coverage).

Figure S1. Maternal health report card (English version)



Report cards in the first wave of feedback were based on data collected in the baseline household survey and showed the coverage level of the cluster as well as the coverage of the best performing cluster in the same district. Those in the second wave of feedback were compiled using data from the first follow-up survey, so that communities and providers could be informed of changes over time that could possibly be indicative of actions they undertook in the intervening period. The report cards were in Hindi.

## **Development of the interventions**

The intervention was developed over a four-month period by a team that include researchers at the London School of Hygiene and Tropical Medicine and staff at Sambodhi Research and Communication with expertise in behaviour change communication and maternal health. The report card interventions were subjected to intense piloting in two villages in the study districts. One of the clusters was peri-urban and the other rural. Pilot testing was done with both community representatives and health providers. The objective of the pilot testing was to understand whether the report card (the indicators, the format, the language, the icons) was optimally designed to communicate the information contained within it and to explore how best to facilitate sessions to ensure maximum engagement and participation.

## **Health provider intervention arm**

### ***Selection of health providers***

Facilitators were given a list of health providers in each cluster based on a census of provider, conducted in January 2015. This was used as a starting point to identify potentially eligible providers. Once in the cluster, facilitators checked with local key informants to confirm whether the list was complete and further identify additional eligible providers in the cluster.

The following types of providers were eligible for participation in the feedback sessions: ASHAs; government health providers; private AYUSH; private MBBS; and rural health providers that had provided antenatal care in the past three months. Eligibility of the rural health providers was decided based on the screening question “Have you given tetanus toxoid injection to any pregnant women in the last three months?” A maximum of three eligible rural health providers were invited for individual feedback in each cluster.

### ***Facilitator-led feedback session***

Facilitators were carefully selected to have good knowledge of the subject area and excellent communication skills, with the ability to interact effectively with other people. They were trained for one week, using a 27 page facilitation guide and both classroom and interactive sessions.

Each feedback session with a health provider was anticipated to last for one hour. Every participant received information on the study and asked to give consent. There were three main parts to the session. First, the facilitator introduced himself and the study, highlighting the central role of the report card in the intervention. Second, the facilitator made an interactive presentation to the health worker with support of the PowerPoint slides on a laptop. This presentation explained the five key maternal healthcare practices to be discussed and reported on the information contained within the scorecard. Third, the facilitator engaged the health worker in a discussion of what explains the current situation (in terms of the report card) and what the health worker can do about it over the next 6 to 12 months. At the end of the session the facilitator made observation notes and completed a structured questionnaire.

The discussion between the facilitator and the health worker focused on two topics. First, the reasons for the present maternal health situation in their community with a particular focus on the role of health providers located in the community. In cases where the community was performing poorly or its performance had decreased, the discussion dwelled on reasons for the poor maternal health situation. In cases where the community was performing well or its performance had improved, the discussion was more focused on why maternal healthcare practices in the community are being followed. Second, possible strategies that could improve the maternal health situation in this community. These strategies focused on what the health provider can feasibly do to improve the situation within the next 6 to 12 months. The session ended with the facilitator summarizing and writing down up to five key strategies that could help improve the maternal health situation in the community.

### ***Dissemination of report card***

A report card was left in the premises of the health provider after the end of the feedback session.

## **Community intervention arm**

### ***Targeting of community member***

In this arm, report cards were shared and participatory meetings held with targeted members of the community. The reporting of performance was made public during organised participatory meetings. Community members targeted included Panchayat/ward members (local political representatives), teachers, ASHAs, Anganwadi workers (AWW), religious leaders and women beneficiaries and their husbands. Facilitators were required to conduct at least one meeting per cluster. Wherever possible another meeting in the village hamlet was also conducted to ensure that relevant community leaders were present.

### ***Facilitator-led participatory meeting***

As above, facilitators were trained for one week, using a facilitation guide and both classroom and interactive sessions. The date of meetings was organised in advance and it was the role of facilitator to mobilise participation by calling key representatives like Panchayat/ward members, ASHA, AWW and teachers in advance to encourage them to attend. Each meeting was anticipated to last one hour and a half. Informed consent was obtained from a key representative of the community. There were three main parts to the participatory meeting. First, the facilitator introduced themselves and the study, highlighting the central role of the report card in the intervention. Second, the facilitator made an interactive poster presentation that explained the five key maternal healthcare practices to be discussed and then reported the information contained within the scorecard. Third, the facilitator engaged the participants in a discussion of what explains the current situation (in terms of the report card) and what can be done about it over the next 6 to 12 months. At the end of the session the facilitator made some observation notes and completed a short structured questionnaire.

A key role of the facilitator was to facilitate a discussion amongst the participants. This discussion focused on the same two topics as mentioned in the health provider intervention arm. Facilitators were trained to give the participants enough opportunity to make their opinions heard but at the same time steer the discussion such it remains focused on the task in hand. They made particular effort to give an opportunity for everyone to speak and keep the discussion focused on problems that are not so deep rooted that they would take years to change. In other words, they tried to steer the discussion to devise strategies that could improve the situation in the near future. The session

ended with the facilitator getting consensus from the participants in order to summarise up to five key strategies that could help improve the maternal health situation in the community.

### ***Dissemination of report card***

Poster size report cards were left displayed in prominent public places and at least three report cards were given to key community members during each participatory meeting.

### **Implementation**

Were the interventions well implemented? This is a fair question because many interventions in low- and middle-income countries fail in their implementation. We collected considerable data on activities and hence have a good picture of how well the interventions were implemented. We collected the following quantitative information: GPS coordinates of meetings, start and end time of each meeting, number and type of participants in attendance, and responses of the meeting facilitators to a series of questions on participation. Consent sheets were signed by all health providers and a community representative in each village. The strategies developed by participants in every meeting were recorded, digitally entered and translated into English. And we have qualitative report from facilitators. Together these data give us confidence that the study villages received the intervention(s) as intended and that implementation fidelity was high.

### 3. Additional tables

**Table S1.** Sociodemographic characteristics of women interviewed in the second round of the household survey

	Total		Intervention groups								Pairs of intervention groups							
			Providers		Community		Providers + Community		Control		Providers (Providers + P&C)		Community (Community + P&C)		Non Providers (Community + Control)		Non Community (Providers + Control)	
Age of mother	26.03	(0.08)	26.04	(0.16)	25.80	(0.15)	26.02	(0.15)	26.25	(0.16)	26.03	(0.11)	25.91	(0.11)	26.03	(0.11)	26.14	(0.12)
Maternal education - none	857/3400	(25%)	243/857	(28%)	204/848	(24%)	185/864	(21%)	225/831	(27%)	428/1721	(25%)	389/1712	(23%)	429/1679	(26%)	468/1688	(28%)
Maternal education - primary	423/3400	(12%)	109/857	(13%)	91/848	(11%)	120/864	(14%)	103/831	(12%)	229/1721	(13%)	211/1712	(12%)	194/1679	(12%)	212/1688	(13%)
Maternal education - secondary	1305/3400	(38%)	320/857	(37%)	347/848	(41%)	347/864	(40%)	291/831	(35%)	667/1721	(39%)	694/1712	(41%)	638/1679	(38%)	611/1688	(36%)
Maternal education - higher	814/3400	(24%)	185/857	(22%)	206/848	(24%)	212/864	(25%)	211/831	(25%)	397/1721	(23%)	418/1712	(24%)	417/1679	(25%)	396/1688	(23%)
Scheduled caste	1059/3401	(31%)	278/857	(32%)	243/848	(29%)	272/865	(31%)	266/831	(32%)	550/1722	(32%)	515/1713	(30%)	509/1679	(30%)	544/1688	(32%)
Scheduled tribe	107/3401	(3%)	30/857	(4%)	16/848	(2%)	31/865	(4%)	30/831	(4%)	61/1722	(4%)	47/1713	(3%)	46/1679	(3%)	60/1688	(4%)
Other backward caste	1542/3401	(45%)	386/857	(45%)	392/848	(46%)	410/865	(47%)	354/831	(43%)	796/1722	(46%)	802/1713	(47%)	746/1679	(44%)	740/1688	(44%)
Household has BPL card	1268/3401	(37%)	315/857	(37%)	287/848	(34%)	336/865	(39%)	330/831	(40%)	651/1722	(38%)	623/1713	(36%)	617/1679	(37%)	645/1688	(38%)
Poorest quintile	534/3401	(16%)	142/857	(17%)	138/848	(16%)	131/865	(15%)	123/831	(15%)	273/1722	(16%)	269/1713	(16%)	261/1679	(16%)	265/1688	(16%)
Second quintile	596/3401	(18%)	148/857	(17%)	145/848	(17%)	152/865	(18%)	151/831	(18%)	300/1722	(17%)	297/1713	(17%)	296/1679	(18%)	299/1688	(18%)
Third quintile	688/3401	(20%)	182/857	(21%)	182/848	(21%)	165/865	(19%)	159/831	(19%)	347/1722	(20%)	347/1713	(20%)	341/1679	(20%)	341/1688	(20%)
Fourth quintile	845/3401	(25%)	204/857	(24%)	224/848	(26%)	220/865	(25%)	197/831	(24%)	424/1722	(25%)	444/1713	(26%)	421/1679	(25%)	401/1688	(24%)
Richest quintile	738/3401	(22%)	181/857	(21%)	159/848	(19%)	197/865	(23%)	201/831	(24%)	378/1722	(22%)	356/1713	(21%)	360/1679	(21%)	382/1688	(23%)
Hindu	3068/3401	(90%)	763/857	(89%)	769/848	(91%)	794/865	(92%)	742/831	(89%)	1557/1722	(90%)	1563/1713	(91%)	1511/1679	(90%)	1505/1688	(89%)
Urban	365/3401	(11%)	61/857	(7%)	78/848	(9%)	128/865	(15%)	98/831	(12%)	189/1722	(11%)	206/1713	(12%)	176/1679	(10%)	159/1688	(9%)
N	3401		857		848		865		831		1722		1713		1679		1688	

Notes: Data are n / N (%) or mean (SD)

**Table S2.** Sociodemographic characteristics of women interviewed in the third round of the household survey

	Total		Intervention groups								Pairs of intervention groups							
			Providers		Community		Providers + Community		Control		Providers (Providers + P&C)		Community (Community + P&C)		Non Providers (Community + Control)		Non Community (Providers + Control)	
Age of mother	25.81	(0.09)	26.05	(0.17)	25.91	(0.18)	25.76	(0.16)	25.51	(0.17)	25.90	(0.12)	25.83	(0.12)	25.71	(0.12)	25.78	(0.12)
Maternal education - none	636/2494	(26%)	188/633	(30%)	148/612	(24%)	164/650	(25%)	136/599	(23%)	352/1283	(27%)	312/1262	(25%)	284/1211	(23%)	324/1232	(26%)
Maternal education - primary	317/2494	(13%)	91/633	(14%)	81/612	(13%)	72/650	(11%)	73/599	(12%)	163/1283	(13%)	153/1262	(12%)	154/1211	(13%)	164/1232	(13%)
Maternal education - secondary	961/2494	(39%)	238/633	(38%)	241/612	(39%)	245/650	(38%)	237/599	(40%)	483/1283	(38%)	486/1262	(39%)	478/1211	(39%)	475/1232	(39%)
Maternal education - higher	580/2494	(23%)	116/633	(18%)	142/612	(23%)	169/650	(26%)	153/599	(26%)	285/1283	(22%)	311/1262	(25%)	295/1211	(24%)	269/1232	(22%)
Scheduled caste	887/2498	(36%)	239/636	(38%)	204/612	(33%)	233/650	(36%)	211/600	(35%)	472/1286	(37%)	437/1262	(35%)	415/1212	(34%)	450/1236	(36%)
Scheduled tribe	50/2498	(2%)	15/636	(2%)	11/612	(2%)	11/650	(2%)	13/600	(2%)	26/1286	(2%)	22/1262	(2%)	24/1212	(2%)	28/1236	(2%)
Other backward caste	1034/2498	(41%)	259/636	(41%)	249/612	(41%)	273/650	(42%)	253/600	(42%)	532/1286	(41%)	522/1262	(41%)	502/1212	(41%)	512/1236	(41%)
Household has BPL card	836/2498	(33%)	205/636	(32%)	205/612	(33%)	235/650	(36%)	191/600	(32%)	440/1286	(34%)	440/1262	(35%)	396/1212	(33%)	396/1236	(32%)
Poorest quintile	348/2498	(14%)	93/636	(15%)	81/612	(13%)	93/650	(14%)	81/600	(14%)	186/1286	(14%)	174/1262	(14%)	162/1212	(13%)	174/1236	(14%)
Second quintile	486/2498	(19%)	138/636	(22%)	129/612	(21%)	110/650	(17%)	109/600	(18%)	248/1286	(19%)	239/1262	(19%)	238/1212	(20%)	247/1236	(20%)
Third quintile	541/2498	(22%)	142/636	(22%)	142/612	(23%)	131/650	(20%)	126/600	(21%)	273/1286	(21%)	273/1262	(22%)	268/1212	(22%)	268/1236	(22%)
Fourth quintile	490/2498	(20%)	135/636	(21%)	109/612	(18%)	137/650	(21%)	109/600	(18%)	272/1286	(21%)	246/1262	(19%)	218/1212	(18%)	244/1236	(20%)
Richest quintile	633/2498	(25%)	128/636	(20%)	151/612	(25%)	179/650	(28%)	175/600	(29%)	307/1286	(24%)	330/1262	(26%)	326/1212	(27%)	303/1236	(25%)
Hindu	2209/2498	(88%)	556/636	(87%)	541/612	(88%)	587/650	(90%)	525/600	(88%)	1143/1286	(89%)	1128/1262	(89%)	1066/1212	(88%)	1081/1236	(87%)
Urban	247/2498	(10%)	34/636	(5%)	59/612	(10%)	81/650	(12%)	73/600	(12%)	115/1286	(9%)	140/1262	(11%)	132/1212	(11%)	107/1236	(9%)
N	2498		636		612		650		600		1286		1262		1212		1236	

Notes: Data are n / N (%) or mean (SD)

**Table S3.** Factorial analysis of primary and secondary outcomes (adjusted)

	Intervention Group	Comparison Group	Odds Ratios		Marginal Effects	
	n / N (%)		Effect, (95% CI)	p value	Effect, (95% CI)	p value
<b>Providers VS Non Providers</b>						
4 ANC visits	442/1593 (27.7%)	462/1540 (30.0%)	0.87 (0.66,1.15)	0.321	-0.027 (-0.080,0.026)	0.321
Counselling on all danger signs	265/1593 (16.6%)	231/1540 (15.0%)	1.11 (0.88,1.41)	0.383	0.014 (-0.017,0.044)	0.384
Tetanus immunisation during ANC	1335/1576 (84.7%)	1269/1528 (83.0%)	1.19 (0.90,1.56)	0.217	0.021 (-0.012,0.055)	0.217
ASHA visit during ANC	1310/1593 (82.2%)	1197/1540 (77.7%)	1.17 (0.87,1.56)	0.304	0.021 (-0.019,0.060)	0.304
Delivered in facility	1533/1936 (79.2%)	1445/1866 (77.4%)	0.97 (0.78,1.20)	0.790	-0.005 (-0.038,0.029)	0.790
Immediately breastfed	1323/1936 (68.3%)	1306/1866 (70.0%)	0.94 (0.78,1.12)	0.471	-0.014 (-0.052,0.024)	0.470
Clean cord-care	881/1936 (45.5%)	866/1866 (46.4%)	0.97 (0.82,1.14)	0.678	-0.009 (-0.050,0.032)	0.678
Received birth certificate	591/1936 (30.5%)	542/1866 (29.0%)	1.00 (0.83,1.21)	0.968	0.001 (-0.037,0.039)	0.968
<b>Community VS Non Community</b>						
4 ANC visits	432/1579 (27.4%)	472/1554 (30.4%)	0.84 (0.63,1.11)	0.212	-0.034 (-0.088,0.019)	0.212
Counselling on all danger signs	271/1579 (17.2%)	225/1554 (14.5%)	1.20 (0.95,1.53)	0.123	0.024 (-0.007,0.054)	0.124
Tetanus immunisation during ANC	1308/1561 (83.8%)	1296/1543 (84.0%)	0.96 (0.73,1.26)	0.777	-0.005 (-0.038,0.029)	0.777
ASHA visit during ANC	1297/1579 (82.1%)	1210/1554 (77.9%)	1.30 (0.97,1.74)	0.077	0.035 (0.004,0.074)	0.076
Delivered in facility	1518/1920 (79.1%)	1460/1882 (77.6%)	1.14 (0.92,1.41)	0.227	0.020 (-0.013,0.054)	0.227
Immediately breastfed	1333/1920 (69.4%)	1296/1882 (68.9%)	1.03 (0.86,1.23)	0.785	0.005 (-0.033,0.043)	0.785
Clean cord-care	877/1920 (45.7%)	870/1882 (46.2%)	0.99 (0.84,1.17)	0.927	-0.002 (-0.043,0.039)	0.927
Received birth certificate	595/1920 (31.0%)	538/1882 (28.6%)	1.04 (0.86,1.26)	0.654	0.009 (-0.029,0.047)	0.654

**Table S4.** Treatment group analysis of primary and secondary outcomes (adjusted)

	Intervention Group	Control Group	Odds Ratios		Marginal Effects	
	n / N (%)		Effect, (95% CI)	p value	Effect, (95% CI)	p value
<b>Providers only</b>						
4 ANC visits	227/795 (28.6%)	245/759 (32.3%)	0.79 (0.53,1.16)	0.223	-0.047 (-0.122,0.038)	0.222
Counselling on all danger signs	120/795 (15.1%)	105/759 (13.8%)	1.10 (0.78,1.55)	0.580	0.012 (-0.031,0.056)	0.580
Tetanus immunisation during ANC	673/790 (85.2%)	623/753 (82.7%)	1.35 (0.91,1.99)	0.136	0.036 (-0.012,0.084)	0.136
ASHA visit during ANC	638/795 (80.3%)	572/759 (75.4%)	1.08 (0.72,1.63)	0.697	0.011 (-0.044,0.066)	0.697
Delivered in facility	745/954 (78.1%)	715/928 (77.0%)	1.01 (0.75,1.36)	0.943	0.002 (-0.045,0.048)	0.943
Immediately breastfed	646/954 (67.7%)	650/928 (70.0%)	0.91 (0.70,1.17)	0.461	-0.020 (-0.074,0.034)	0.461
Clean cord-care	427/954 (44.8%)	443/928 (47.7%)	0.89 (0.70,1.13)	0.333	-0.029 (-0.087,0.029)	0.332
Received birth certificate	280/954 (29.4%)	258/928 (27.8%)	1.07 (0.82,1.40)	0.621	0.014 (-0.040,0.067)	0.621
<b>Community only</b>						
4 ANC visits	217/781 (27.8%)	245/759 (32.3%)	0.76 (0.51,1.12)	0.162	-0.054 (-0.129,0.021)	0.161
Counselling on all danger signs	126/781 (16.1%)	105/759 (13.8%)	1.19 (0.85,1.68)	0.307	0.023 (-0.021,0.066)	0.308
Tetanus immunisation during ANC	646/775 (83.4%)	623/753 (82.7%)	1.08 (0.74,1.58)	0.685	0.010 (-0.037,0.056)	0.685
ASHA visit during ANC	625/781 (80.0%)	572/759 (75.4%)	1.21 (0.80,1.82)	0.360	0.026 (-0.029,0.080)	0.359
Delivered in facility	730/938 (77.8%)	715/928 (77.0%)	1.19 (0.88,1.61)	0.260	0.027 (-0.020,0.074)	0.260
Immediately breastfed	656/938 (69.9%)	650/928 (70.0%)	0.99 (0.77,1.29)	0.969	-0.001 (-0.056,0.053)	0.969
Clean cord-care	423/938 (45.1%)	443/928 (47.7%)	0.91 (0.72,1.16)	0.460	-0.022 (-0.080,0.036)	0.459
Received birth certificate	284/938 (30.3%)	258/928 (27.8%)	1.11 (0.85,1.45)	0.434	0.021 (-0.032,0.075)	0.434
<b>Providers &amp; Community</b>						
4 ANC visits	215/798 (26.9%)	245/759 (32.3%)	0.73 (0.50,1.07)	0.109	-0.061 (-0.135,0.013)	0.108
Counselling on all danger signs	145/798 (18.2%)	105/759 (13.8%)	1.34 (0.96,1.87)	0.089	0.037 (-0.006,0.080)	0.090
Tetanus immunisation during ANC	662/786 (84.2%)	623/753 (82.7%)	1.14 (0.78,1.67)	0.496	0.016 (-0.030,0.063)	0.496
ASHA visit during ANC	672/798 (84.2%)	572/759 (75.4%)	1.52 (1.00,2.30)	0.048	0.056 (0.001,0.112)	0.048
Delivered in facility	788/982 (80.2%)	715/928 (77.0%)	1.11 (0.82,1.50)	0.512	0.016 (-0.031,0.063)	0.512
Immediately breastfed	677/982 (68.9%)	650/928 (70.0%)	0.96 (0.74,1.24)	0.745	-0.009 (-0.063,0.045)	0.745
Clean cord-care	454/982 (46.2%)	443/928 (47.7%)	0.96 (0.76,1.21)	0.708	-0.011 (-0.069,0.047)	0.708

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Received birth certificate	311/982 (31.7%)	258/928 (27.8%)	1.05 (0.80,1.37)	0.724	0.010 (-0.044,0.064)	0.724
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**Table S5.** Sensitivity analysis of ANC-related outcomes to variation in the birth date cut-off used to define the exposed sample

	Intervention group	Control group	Unadjusted (OR)			Adjusted (OR)			Unadjusted (ME)			Adjusted (ME)		
	n / N (%)		Odds ratio (95% CI)	p value	Odds ratio (95% CI)	p value	Marginal effect (95% CI)	p value	Marginal effect (95% CI)	p value				
<i>Panel A: Sample includes women who were no more than 1 month pregnant at the time the intervention was introduced (i.e. women gave birth in July 2016 onwards)</i>														
<b>Provider Report Card vs No Provider Report Card</b>														
4 ANC visits	330/1162 (28%)	348/1095 (32%)	0.790	[0.572,1.092]	0.153	0.805	[0.582,1.113]	0.189	-0.046	[-0.109,0.017]	0.152	-0.042	[-0.105,0.021]	0.188
Counselling on all danger signs	196/1162 (17%)	170/1095 (16%)	1.082	[0.818,1.431]	0.58	1.069	[0.808,1.415]	0.640	0.010	[-0.026,0.046]	0.580	0.009	[-0.027,0.045]	0.64
TT immunisation during ANC	985/1154 (85%)	917/1087 (84%)	1.090	[0.785,1.512]	0.607	1.132	[0.818,1.567]	0.454	0.010	[-0.027,0.047]	0.607	0.014	[-0.023,0.051]	0.454
ASHA visit during ANC	964/1162 (83%)	866/1095 (79%)	1.275	[0.847,1.918]	0.245	1.128	[0.806,1.580]	0.482	0.031	[-0.021,0.083]	0.247	0.016	[-0.028,0.059]	0.482
<b>Community Report Card vs No Community Report Card</b>														
4 ANC visits	322/1154 (28%)	356/1103 (32%)	0.812	[0.588,1.121]	0.205	0.793	[0.574,1.098]	0.162	-0.041	[-0.104,0.022]	0.204	-0.045	[-0.108,0.018]	0.161
Counselling on all danger signs	206/1154 (18%)	160/1103 (15%)	1.292	[0.977,1.709]	0.073	1.280	[0.967,1.694]	0.085	0.033	[-0.003,0.069]	0.074	0.032	[-0.004,0.068]	0.085
TT immunisation during ANC	969/1145 (85%)	933/1096 (85%)	0.949	[0.684,1.317]	0.753	0.910	[0.657,1.261]	0.572	-0.006	[-0.043,0.031]	0.753	-0.011	[-0.048,0.026]	0.572
ASHA visit during ANC	958/1154 (83%)	872/1103 (79%)	1.322	[0.879,1.990]	0.181	1.221	[0.873,1.708]	0.244	0.036	[-0.017,0.088]	0.183	0.026	[-0.018,0.069]	0.244
<i>Panel B: Sample includes women who were no more than 8 months pregnant at the time the intervention was introduced (i.e. women gave birth in November 2015 onwards)</i>														
<b>Provider Report Card vs No Provider Report Card</b>														
4 ANC visits	517/1936 (27%)	526/1866 (28%)	0.901	[0.709,1.145]	0.392	0.902	[0.710,1.145]	0.396	-0.020	[-0.065,0.026]	0.392	-0.017	[-0.063,0.028]	0.456
Counselling on all danger signs	327/1936 (17%)	281/1866 (15%)	1.144	[0.927,1.413]	0.211	1.184	[0.955,1.468]	0.123	0.017	[-0.010,0.045]	0.211	0.017	[-0.011,0.044]	0.234
TT immunisation during ANC	1628/1917 (85%)	1517/1847 (82%)	1.233	[0.964,1.577]	0.095	1.277	[1.001,1.630]	0.049	0.026	[-0.005,0.057]	0.096	0.029	[-0.002,0.060]	0.065
ASHA visit during ANC	1583/1936 (82%)	1437/1866 (77%)	1.310	[0.909,1.887]	0.147	1.132	[0.871,1.471]	0.355	0.037	[-0.013,0.088]	0.149	0.019	[-0.019,0.058]	0.325
<b>Community Report Card vs No Community Report Card</b>														
4 ANC visits	504/1920 (26%)	539/1882 (29%)	0.880	[0.692,1.118]	0.296	0.852	[0.670,1.083]	0.191	-0.024	[-0.070,0.021]	0.295	-0.028	[-0.073,0.018]	0.234
Counselling on all danger signs	327/1920 (17%)	281/1882 (15%)	1.165	[0.943,1.437]	0.156	1.107	[0.894,1.371]	0.352	0.020	[-0.008,0.047]	0.157	0.019	[-0.008,0.047]	0.168
TT immunisation during ANC	1589/1894 (84%)	1556/1870 (83%)	1.063	[0.831,1.360]	0.624	1.041	[0.815,1.328]	0.750	0.008	[-0.023,0.039]	0.624	0.005	[-0.026,0.036]	0.749
ASHA visit during ANC	1550/1920 (81%)	1470/1882 (78%)	1.229	[0.853,1.771]	0.269	1.214	[0.934,1.578]	0.147	0.029	[-0.022,0.079]	0.270	0.018	[-0.020,0.057]	0.348

**Table S6.** Factorial analysis of primary and secondary outcomes based on round III survey data only

	Intervention group		Control group		Unadjusted (OR)			Adjusted (OR)			Unadjusted (ME)			Adjusted (ME)		
	n/N (%)				Odds ratio (95% CI)	p value		Odds ratio (95% CI)	p value		Marginal effect (95% CI)	p value		Marginal effect (95% CI)	p value	
<b>Providers VS Non Providers</b>																
4 ANC visits	368/1286	(29%)	380/1212	(31%)	0.81	(0.59,1.12)	0.206	0.83	(0.60,1.14)	0.252	-0.04	(-0.10,0.02)	0.205	-0.04	(-0.10,0.03)	0.251
Counselling on all danger signs	219/1286	(17%)	192/1212	(16%)	1.07	(0.82,1.40)	0.612	1.06	(0.81,1.39)	0.661	0.01	(-0.03,0.04)	0.612	0.01	(-0.03,0.04)	0.661
TT immunisation during ANC	1092/1277	(86%)	1012/1203	(84%)	1.14	(0.82,1.57)	0.441	1.18	(0.85,1.63)	0.321	0.01	(-0.02,0.05)	0.441	0.02	(-0.02,0.05)	0.321
Asha visit during ANC	1068/1286	(83%)	951/1212	(78%)	1.35	(0.90,2.03)	0.144	1.17	(0.85,1.63)	0.335	0.04	(-0.01,0.09)	0.147	0.02	(-0.02,0.06)	0.335
Delivered in facility	1024/1286	(80%)	947/1212	(78%)	1.11	(0.80,1.52)	0.531	0.96	(0.74,1.25)	0.766	0.02	(-0.03,0.06)	0.531	-0.01	(-0.04,0.03)	0.766
Immediately breastfed	923/1286	(72%)	905/1212	(75%)	0.86	(0.67,1.09)	0.207	0.86	(0.67,1.09)	0.203	-0.03	(-0.08,0.02)	0.207	-0.03	(-0.08,0.02)	0.203
Clean cord-care	620/1286	(48%)	599/1212	(49%)	0.95	(0.77,1.16)	0.596	0.94	(0.77,1.16)	0.584	-0.01	(-0.06,0.04)	0.596	-0.01	(-0.07,0.04)	0.584
Received birth certificate	355/1286	(28%)	323/1212	(27%)	1.04	(0.80,1.34)	0.765	0.96	(0.76,1.20)	0.725	0.01	(-0.04,0.06)	0.765	-0.01	(-0.05,0.03)	0.725
<b>Community VS Non Community</b>																
4 ANC visits	354/1262	(28%)	394/1236	(32%)	0.83	(0.60,1.14)	0.251	0.81	(0.59,1.11)	0.19	-0.04	(-0.10,0.03)	0.25	-0.04	(-0.10,0.02)	0.189
Counselling on all danger signs	227/1262	(18%)	184/1236	(15%)	1.24	(0.95,1.63)	0.116	1.23	(0.94,1.62)	0.129	0.03	(-0.01,0.06)	0.116	0.03	(-0.01,0.06)	0.129
TT immunisation during ANC	1057/1251	(84%)	1047/1229	(85%)	0.92	(0.67,1.27)	0.618	0.88	(0.64,1.22)	0.458	-0.01	(-0.05,0.03)	0.618	-0.01	(-0.05,0.02)	0.459
Asha visit during ANC	1045/1262	(83%)	974/1236	(79%)	1.34	(0.90,2.02)	0.151	1.23	(0.89,1.71)	0.209	0.04	(-0.01,0.09)	0.154	0.03	(-0.02,0.07)	0.209
Delivered in facility	1006/1262	(80%)	965/1236	(78%)	1.14	(0.83,1.57)	0.409	1.14	(0.88,1.47)	0.328	0.02	(-0.03,0.07)	0.41	0.02	(-0.02,0.06)	0.328
Immediately breastfed	913/1262	(72%)	915/1236	(74%)	0.92	(0.73,1.17)	0.516	0.92	(0.73,1.17)	0.503	-0.02	(-0.06,0.03)	0.516	-0.02	(-0.06,0.03)	0.503
Clean cord-care	610/1262	(48%)	609/1236	(49%)	0.97	(0.79,1.19)	0.793	0.97	(0.79,1.19)	0.755	-0.01	(-0.06,0.04)	0.793	-0.01	(-0.06,0.04)	0.755
Received birth certificate	352/1262	(28%)	326/1236	(26%)	1.06	(0.82,1.37)	0.667	0.96	(0.77,1.21)	0.747	0.01	(-0.04,0.06)	0.667	-0.01	(-0.05,0.04)	0.747

**Table S7.** Primary outcome by strata and treatment group

	Providers only		Community only		Providers & Community		Control	
ANC stratum 1 (lowest tercile)	72/286	(25%)	70/362	(19%)	74/323	(23%)	95/296	(32%)
ANC stratum 2 (middle tercile)	54/233	(23%)	48/169	(28%)	71/223	(32%)	66/210	(31%)
ANC stratum 3 (highest tercile)	101/276	(37%)	99/250	(40%)	70/252	(28%)	84/253	(33%)
Social franchising stratum 1 (franchise)	123/518	(24%)	145/522	(28%)	135/531	(25%)	173/508	(34%)
Social franchising stratum 2 (no franchise)	104/277	(38%)	72/259	(28%)	80/267	(30%)	72/251	(29%)

**Table S8** Intraclass correlation coefficients of the study outcomes

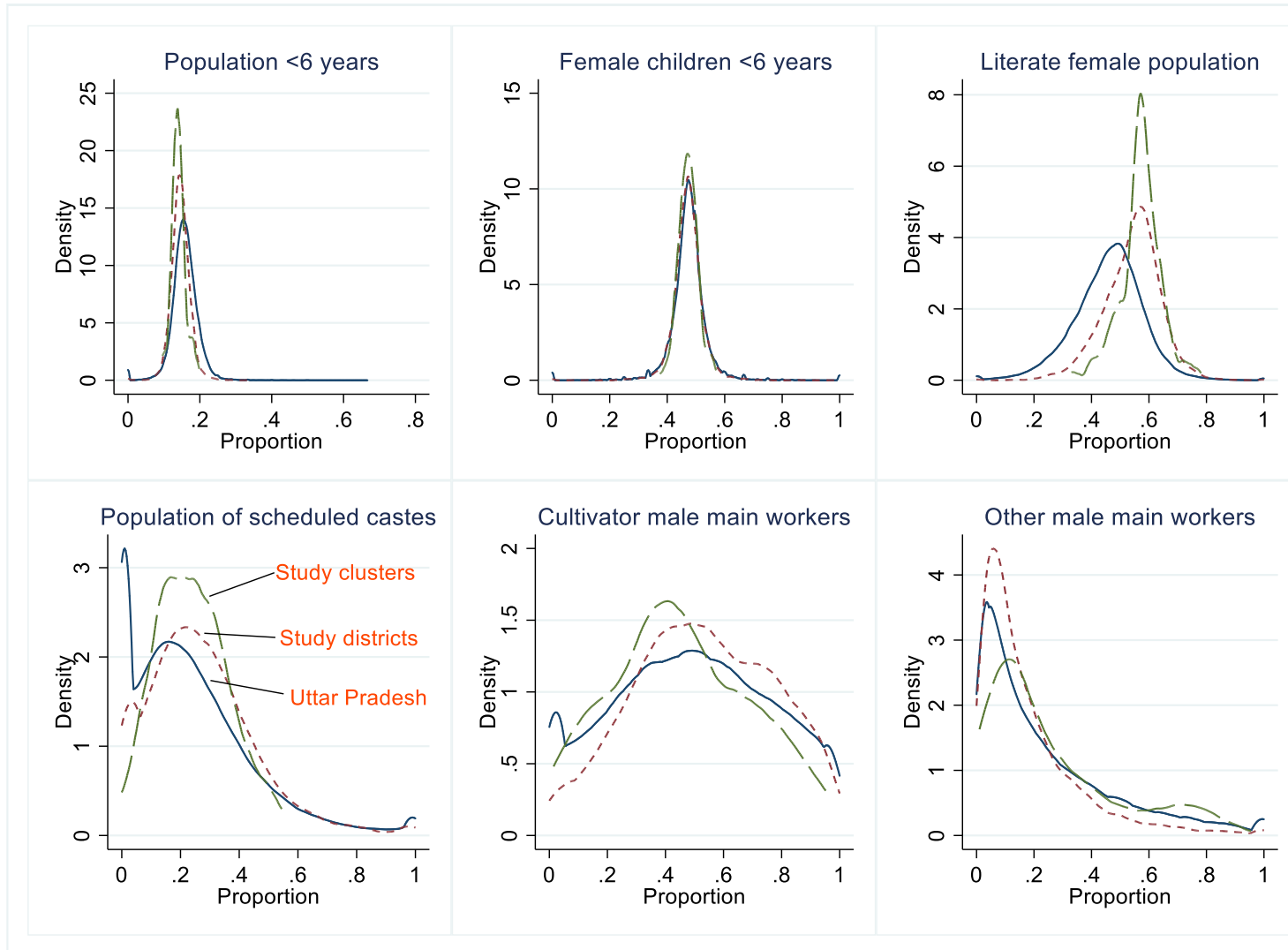
Study outcome	ICC
4 or more ANC visits	0.04178
Counselling on all danger signs	0.01135
TT immunisation during ANC	0.03587
ASHA visit during ANC	0.17179
Delivered in facility	0.09171
Immediately breastfed	0.02932
Clean cord-care	0.03759
Received birth certificate	0.04437

**Table S9** Negative binomial regression of the number of ANC visits (unadjusted)

	Intervention Group	Control Group	Coefficient		Incidence rate ratio	
	Mean (SD)		Effect, (95% CI)	p value	Effect, (95% CI)	p value
<b>Factorial analysis</b>						
Provider vs no provider report cards	2.23 (1.49)	2.34 (1.69)	0.0003 (-0.068,0.069)	0.994	1.0003 (0.934,1.071)	0.994
Community vs no community report cards	2.30 (1.58)	2.27 (1.60)	-0.034 (-0.102,0.034)	0.323	0.966 (0.903,1.034)	0.323
<b>Treatment group analysis</b>						
Providers only vs control	2.19 (1.52)	2.36 (1.68)	0.00156 (-0.097,0.100)	0.975	1.002 (0.908,1.105)	0.975
Community vs control	2.32 (1.70)	2.36 (1.68)	-0.033 (-0.124,0.059)	0.481	0.968 (0.883,1.060)	0.481
Providers and community vs control	2.27 (1.45)	2.36 (1.68)	-0.034 (-0.127,0.060)	0.477	0.967 (0.880,1.061)	0.477

#### 4. Additional figures

**Figure S2.** Comparison between selected, study district, and state clusters using Census 2011 indicators



**Figure S3.** Map of study districts and clusters by treatment arm

