



## Self-reported Practices and Attitudes of Community Health Workers (Accredited Social Health Activist) in Tobacco Control – Findings from two states in India

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### ABSTRACT

**Background:** The 1978 declaration (Alma-Ata declaration) made at the International Conference on Primary Health Care, meeting in Alma-Ata highlighted the critical role played by Community Health Workers (CHWs) to link communities to the health system. The flagship program of Government of India proposed introduction of CHWs namely Accredited Social Health Activist (ASHA). As a link between community and health system ASHA is in a unique position to generate awareness on tobacco-related issues. However, there is limited evidence on practices of ASHAs in tobacco control in India. The present study explores whether CHWs such as ASHAs can be utilized as a resource for informing and educating community on tobacco and its harmful effects. The study captured perceptions and practices of ASHAs regarding tobacco control.

**Methods:** The study was a cross-sectional study conducted among 512 ASHAs in six intervention districts each in Gujarat and Andhra Pradesh. The study settings (i.e., health facilities and villages) were selected through systematic random sampling. The study participants were selected through simple random sampling. Responses were captured through self-administered questionnaire. Logistic regression model was applied to measure associations between variables such as knowledge level of ASHAs and information provided on different tobacco-related diseases by them in both the states, with statistical significance based on the Chi-square test.

**Results:** Our findings indicate that ASHAs linked tobacco usage to diseases such as respiratory problems, lung cancer, tuberculosis, and oral disease. Only one-third of ASHAs reported informing all patients about the harmful health effects of tobacco, whereas more than half of them reported providing information only to patients suffering from specific illness. ASHAs who reported having received training in tobacco control were about Two times more likely to give information on effects of tobacco on respiratory diseases (odds ratio [OR]-1.5; confidence interval [CI]: 1.1–2.4) and adverse reproductive outcomes (OR-2.1; CI: 1.1–20.2).

**Conclusions:** Study findings reflect suboptimal engagement of ASHAs in providing information pertaining to specific tobacco-related diseases. There is an urgent need to sensitize and train ASHAs in appropriate tobacco control practices.

**Keywords:** Community health workers, India, tobacco control

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## INTRODUCTION

The 1978 declaration (Alma-Ata declaration) made at the International Conference on Primary Health Care, meeting in Alma-Ata highlighted the importance of primary health care and the critical role played by Community Health Workers (CHWs) to link communities to the health system.<sup>[1]</sup> By identifying community problems, developing innovative solutions, and translating them into practice, CHWs can respond creatively to local needs.<sup>[2]</sup>

In order to provide effective healthcare to the rural population, National Rural Health Mission (NRHM), a flagship program of Government of India, proposed introduction of CHWs namely Accredited Social Health Activist (ASHA).<sup>[3]</sup> ASHAs have grown to become the most important facet of NRHM with 866,251 ASHAs across 31 states and union territories. ASHA act as a “bridge” between the rural people and health service outlets and play a central role in achieving national health and population policy goals.<sup>[4]</sup> An ASHA is deployed for every 1000 population. ASHA is a health worker in the community, who raises awareness of health and its determinants, mobilizes the community towards local health planning and raise community ownership of health-related programs.<sup>[5]</sup> Although ASHA's role is primarily focused on counselling women on the importance of safe delivery, nutrition, immunisation and well-being of the young child,<sup>[6]</sup> they also play an important role in initiating community-based interventions for various noncommunicable diseases (NCDs). Thus, they are expected to educate community regarding the risk factors for NCDs like unhealthy diet, physical inactivity, and intake of tobacco.<sup>[6]</sup>

Nationwide studies on ASHAs impact on generating health demand and mobilizing clients to services have shown positive results. As a link between the community and health system ASHA is in a unique position to generate awareness on tobacco-related issues. In a study in India, ASHAs had successfully assessed the difficult task of tobacco status and nicotine dependence in rural population.<sup>[7]</sup> There is a huge burden of tobacco in India with about 35% of adults using tobacco in some or another<sup>[8]</sup> which is deeply connected to socio-cultural acceptance.<sup>[9]</sup> The present study explores whether CHWs such as ASHAs can be utilized as a resource for informing and educating the community on tobacco and its harmful effects. The study measured perceptions and practices of ASHAs regarding tobacco control and address the following questions:

- What is the current level of information provided by ASHA's to patients on harmful health effects of tobacco?

- What is the attitude of ASHA towards counselling practices in tobacco control?
- To what extent is training of ASHAs in tobacco control related to the information given by them on health effects of tobacco?

## METHODS

The study is the subset of a baseline survey done under project Strengthening of Tobacco Control Efforts through innovative Partnerships and Strategies undertaken by Public Health Foundation of India (PHFI) to understand current efforts of health systems in tobacco control.<sup>[10]</sup>

The study was conducted in six districts each in Gujarat and Andhra Pradesh (AP) from January 2011 to March 2011. These districts were selected based on the consultation with the state health departments in the two states. All the health facilities providing primary care in the district were listed. The first health facility was selected at random and then every fifth health facility was selected for inclusion in the sample. The list of villages in the intervention area was obtained from the census 2001 data.<sup>[11]</sup> The study settings (i.e., health facilities and villages) were selected through systematic random sampling. A total of 512 ASHAs corresponding to the selected villages and health facilities were recruited by random sampling and a semi-structured questionnaire was administered to them. The questionnaire was pilot tested, translated into local language and back translated to check for the accuracy of translation. The survey items involved examining the survey questions for validity, reliability and acceptability. A research agency was hired for data collection. A training session was conducted to make the investigators fully adept at using the research instruments. In addition to socio-demographic characteristics the questionnaire measured knowledge of ASHAs about different tobacco-related diseases, information provided on tobacco-related diseases and their attitude towards counselling in tobacco control. A total of 12 closed-ended questions in four different sections were asked. The project received ethical approval from the PHFI institutional ethics committee.

The data was scrutinized for field errors as per a scrutiny note that contained a series of logical checks. Data was analysed using SPSS version 17.0. (SPSS Inc., Chicago). Frequency distributions were used to describe the data. Bi-variate analysis was used to measure associations between variables such as knowledge level of ASHAs and information provided on different tobacco-related diseases by them in both the states, with statistical significance based on the Chi-square test. We performed binary-logistic regression to examine factors that may

affect “information provided on various diseases.” Factors such as demographic factors and training in tobacco control were included in the analyses. Unadjusted odds ratios (OR) and 95% confidence intervals (95% CI) were first estimated for each of the predictor variables.

## RESULTS

A total of 512 ASHAs (Gujarat-47%, AP-52%) were interviewed. The response rate of the survey was 90%. All of the respondents were female with a mean age of 30 years. About one-third of them (28%) received training related to their current work. Among those who were trained, two-thirds (67%) received ASHA worker training and about one-third (23%) undertook certified course by government pertaining to their assigned work. Revised guidelines pertaining to their work profile emphasizes providing information on tobacco as a risk factor for NCDs and ideally should have been a part of the trainings.<sup>[12]</sup>

### Knowledge of Accredited Social Health Activists about effects of tobacco

*Knowledge of Accredited Social Health Activists about health effects of tobacco*

The medical conditions which ASHAs linked to tobacco usage were respiratory problems (75%), lung cancer (66%), tuberculosis (63%), and tooth and gum disease (42%). Table 1 illustrates that only about one-third of ASHAs associated heart diseases with tobacco. ASHAs were unaware about the ill effects of tobacco on reproductive health and adverse birth outcomes such as low birth weight, premature delivery, and sudden infant death syndrome (SIDS).

### Practices of Accredited Social Health Activists with regard to tobacco control

*Information given by Accredited Social Health Activists on harmful health effects of tobacco*

Only one-third (36%) of ASHAs reported informing all patients about the harmful health effects of tobacco, whereas more than half (55%) reported providing information only to patients suffering from specific illness. Table 2 illustrates that about half of the ASHAs reported giving information on respiratory diseases and only one-fifth of ASHAs reported giving information on the ill effects of tobacco on heart diseases. Only 4% of ASHAs reported providing information on the effect of tobacco use on adverse reproductive health outcomes such as still birth, low birth weight baby and SIDS. Only 2% of ASHAs reported that they are providing information about the effect of tobacco and tuberculosis to their patients. Significant difference was observed on information provided by ASHA on effects of tobacco on heart diseases and respiratory diseases in Gujarat and AP. Overall, less than half of ASHAs in both the

states regarded community sensitization meetings as an effective method to create awareness about harmful effects of tobacco in the community.

### Predictors of tobacco control practices of Accredited Social Health Activists

Less than one-third of ASHAs (Gujarat 15%, AP 20%) reported that they had received “on the job” training in tobacco control. We find that amongst those who reported having received training in tobacco control was one and a half times more likely to give information on effects of tobacco on cough and respiratory diseases (OR-1.5; CI: 1.1–2.4). Findings also suggest that ASHAs who reported to receive training in tobacco control were 2 times more likely to provide information on adverse outcomes of pregnancy such as low birth weight baby and still birth than ASHAs who reported not having received training (OR-2.1; CI: 1.1–20.2) [Table 3].

### Attitude of Accredited Social Health Activists towards tobacco use in the community and counselling in tobacco control

The attitude of ASHAs towards tobacco control was measured using the questions – “Patients may just listen to me and not revisit again if I counsel them to reduce tobacco,” “Patients often equate counselling to nagging them,” “Smoking/chewing tobacco is more like a cultural practice for my patients”. Figure 1 shows that

**Table 1: Knowledge of ASHAs about health effects of tobacco**

Health effects (n=512)	Gujarat (%)	Andhra Pradesh (%)	Overall (%)
Cough and respiratory problems	167 (68)	217 (81)	384 (75)
Tuberculosis	203 (83)	148 (55)	351 (63)
Lung cancer	148 (60)	191 (72)	339 (66)
Tooth and gum diseases	84 (34)	130 (49)	214 (42)
Heart diseases	43 (18)	118 (44)	161 (31)
Low birth weight	21 (9)	31 (12)	52 (10)
Premature delivery	6 (2)	22 (8)	28 (6)
SIDS	4 (2)	15 (6)	19 (4)

SIDS=Sudden infant death syndrome, ASHA=Accredited Social Health Activist

**Table 2: Information given by ASHAs on harmful health effects of tobacco**

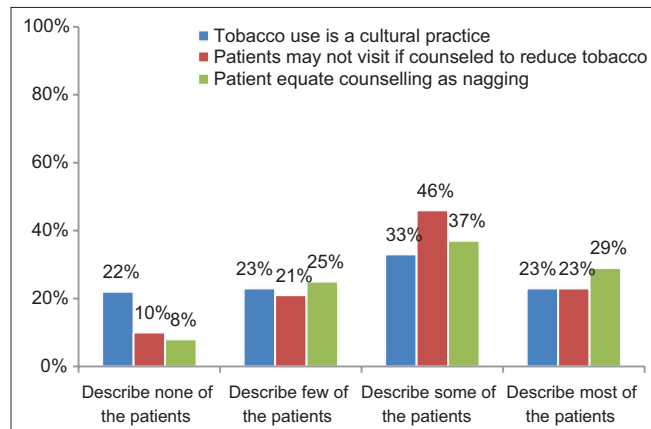
Harmful health effects of tobacco (n=512)	Gujarat (%)	Andhra Pradesh (%)	Overall (%)
*Respiratory diseases	118 (48)	143 (54)	261 (51)
Tooth and gum diseases	63 (26)	63 (24)	126 (25)
*Heart diseases	14 (6)	84 (32)	98 (19)
Adverse reproductive health outcomes	15 (6)	5 (2)	20 (4)
Tuberculosis	2 (1)	8 (3)	11 (2)

\*P<0.05, ASHA=Accredited Social Health Activist

**Table 3: Predictors of practices of ASHAs in tobacco control**

	Information on respiratory diseases		Information on Tuberculosis		Information on heart diseases		Information on adverse reproductive outcomes	
	OR	CI	OR	CI	OR	CI	OR	CI
Age	2.3	0.4-12.6	0.4	0.1-2.1	0.4	0.1-2.7	0.5	0.3-1.1
State	1.2	0.8-1.7	3.9	0.8-18.6	0.1	0.02-0.1	0.7	0.3-1.6
“On the job” training in tobacco control	1.5	1.1-2.4	0.3	0.1-1.3	0.9	0.4-2.1	2.1	1.1-20.2

ASHA=Accredited Social Health Activist, OR=Odds ratio, CI=Confidence interval



**Figure 1: Attitude of ASHAs towards tobacco use and counselling in tobacco control**

about two-thirds of ASHAs believed that patients equate counselling as nagging and patients may not revisit if counselled on reducing tobacco.

## DISCUSSION

Studies have reported that female health volunteers within the community can be effectively utilised for tobacco control activities because of their accessibility and acceptability to the community.<sup>[13]</sup> A study by Woodruff *et al.* involved lay health workers delivering home-based smoking cessation programmes, tailored specifically to the cultural beliefs and practices of Latino smokers in the US. One week abstinence rates were twice as high in the intervention group (20.5%) compared to control group (8.7%,  $P < 0.005$ ).<sup>[14]</sup> In a study in India, ASHAs had successfully assessed the difficult task of tobacco status and nicotine dependence in rural population.<sup>[7]</sup> Our study assessed perceptions and practices of ASHAs in tobacco control which helps to understand their suitability for tobacco control activities in the community that they serve.

There is a large volume of evidence available on health effects of tobacco which includes respiratory, cardio-vascular and reproductive health effects.<sup>[15]</sup> Findings suggest that ASHAs related tobacco mainly to respiratory diseases and lung cancer which is

promising. However, the fact of concern is the relatively poor recognition of the effects of tobacco on adverse reproductive health outcomes.

Research indicates the harmful effects of tobacco and second hand smoke (SHS) on adverse health outcomes.<sup>[16]</sup> Pregnancy is an appropriate time for motivating women for tobacco cessation.<sup>[17]</sup> ASHAs have inadequate information and thus are not aware of the comprehensive health effects of tobacco. This could be due to the lack of a comprehensive training and motivation to integrate tobacco control practices into their routines.

In India, 40% of patients suffering from tuberculosis are tobacco users.<sup>[18]</sup> Our findings indicate that although ASHAs were aware of harmful health effects of tobacco with regard to tuberculosis, only a few (2%) reported providing information to patients. Considering the co-morbidity of tuberculosis and tobacco and high burden of tuberculosis in the country, CHWs such as ASHAs can be sensitized to record tobacco use and advise patients suffering from Tuberculosis to quit tobacco use. There is a growing recognition of the disproportionate toll of tobacco use among vulnerable group of populations such as women, adolescents and youths.<sup>[19]</sup> Findings suggest that ASHAs do not regard women and adolescents vulnerable to tobacco use. This is troubling in Indian context where 14% of youths are tobacco users,<sup>[20]</sup> 20.3% women consume tobacco and about 51% are affected by SHS.<sup>[21]</sup> Home is often the setting where the highest exposure to SHS occurs. ASHAs do home visits for health promotional activities and thus, are in ideal position to educate families about the harmful health effects of tobacco and SHS.

Accredited Social Health Activist’s plays an important role by facilitating access to health services and mobilizing communities to realize health rights with a key support system of village health and sanitation committee and meetings and self-help groups.<sup>[1]</sup> Less than half of ASHAs identified community sensitization meetings as an effective method to create awareness about harmful impacts of tobacco. This is an important matter of concern as ASHAs mandate is for communisation of health issues in the villages.<sup>[22]</sup> Furthermore, community approach has been proven as an effective tool for tobacco control.<sup>[23]</sup>

Accredited Social Health Activist plays a vital role in providing counselling services to the community. Majority of ASHAs reported that patients hold negative attitudes towards counselling. This perception of ASHAs indicates that ASHAs lack information about the effectiveness of behavioural counselling on influencing quitting behaviour.

Community health workers understand the community health needs and can be trained and deployed relatively quickly. Our findings indicate positive association between training and practices of ASHAs in tobacco control. However, more evidence is needed on what kinds of training CHWs receive and which forms of training are more effective.

The present study is limited by the fact that it relies on self-report, hence, self-presentation and recall bias cannot be ruled out. The convenience sampling method used to recruit study participants introduced selection bias. The study findings provide the self-reported practices of ASHAs in two states of India and cannot be generalized to entire country. Nevertheless, it presents for the first time an in-depth understanding of the challenges and opportunities that exist for engaging CHWs in tobacco control.

## CONCLUSIONS

This study's findings reflect suboptimal engagement of ASHAs in providing information pertaining to specific tobacco-related diseases. There is an urgent need to sensitize and train ASHAs in appropriate tobacco control practices so that they are able to use opportunities of counselling in tobacco control while providing routine services. ASHAs can be involved in tobacco control under the purview of NCD and RCH programs. We hope that the learning and recommendations shared in this study from India will help in addressing issues related to involvement of CHWs in tobacco control. However, further research is needed to understand engagement of CHWs in various tobacco control activities in India and other developing countries.

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