

The health status of a population is reflected in the levels of morbidity and the treatment seeking behaviours of its members. NFHS has included questions to ascertain morbidity from common causes since NFHS-1. This chapter presents findings on some common infectious and communicable diseases, health treatment behaviour, risk factors associated with tobacco and alcohol use, and coverage of health insurance. Prevalence estimates of tuberculosis (TB), diabetes, and goitre/thyroid problems are presented. In its National Health Policy (NHP), the Government of India (GOI) has committed to eradicating infectious illnesses and reducing the mortality associated with such illness (MOHFW, 2002). One of the goals of the NHP 2002 is a 50 percent reduction of deaths from TB, malaria, and other vector and water borne diseases by the year 2010.

### 13.1 TUBERCULOSIS (TB)

Tuberculosis has re-emerged as a major public health problem in many parts of the world, often as a concomitant illness to HIV/AIDS. Tuberculosis, once known as the ‘White Plague’, is contagious and spreads through droplets that can travel through the air when a person with the infection coughs, talks, or sneezes. Today, TB is a leading cause of death among people who are HIV-positive. Worldwide, an estimated one-third of the nearly 40 million people living with HIV/AIDS are co-infected with TB. In most developing countries, TB would continue to be a serious health threat even in the absence of HIV/AIDS due to the public health challenges posed by poverty, high illiteracy, and poor sanitation. The GOI has stated that ‘In 2005, a total of 97 percent population was covered under the Revised National Tuberculosis Programme.’ The government allocated Rs. 680 crores for the National Tuberculosis Control Programme (NTCP) in the 10<sup>th</sup> Plan (DGHS and WHO, 2005).

#### 13.1.1 Prevalence of Tuberculosis (TB)

Respondents to the household interview were asked ‘Does any usual resident of your household suffer from tuberculosis?’ For each household member identified as suffering from TB, the respondent was asked: ‘Has (name of person suffering from tuberculosis) received medical treatment for the tuberculosis?’ Tables 13.1.1 and 13.1.2 present the prevalence of TB as estimated from both responses: the number of persons per 100,000 usual household residents suffering from tuberculosis and the number of persons per 100,000 usual household residents suffering from medically treated TB. The vast majority of people who were reported to be suffering from TB were also reported to have been medically treated for the illness (94 percent).

Those who have been medically treated for TB number 418 per 100,000 persons. The prevalence of TB may be underestimated to the extent that the household respondent is unaware that he/she or another household member has TB. On the other hand, the prevalence of TB may be overestimated if cases that are not tuberculosis are incorrectly reported as TB. To reduce the effects of overestimating prevalence based on reports of the household respondent, this discussion will focus on persons who have been reported to be medically treated for tuberculosis, which is likely to be a more accurate indication of TB.

The number of persons suffering from TB that have been medically treated differs greatly by sex, residence, and age. Overall, the risk of TB is much higher for men (526/100,000) than women (309/100,000), and much higher for rural residents (469/100,000) than urban residents (307/100,000). TB prevalence increases with increasing age. Persons age 60 and above (998/100,000) are much more likely than other age groups to be suffering from tuberculosis. Prevalence in the oldest age group is about twice as high as prevalence in the population age 15-59 (519/100,000) and about nine times as high as prevalence among children below age 15 (110/100,000). Both sex and age differentials are more pronounced in rural areas than they are in urban areas.

Table 13.1.1 Prevalence of tuberculosis

Number of persons per 100,000 usual household residents suffering from any tuberculosis and medically treated tuberculosis by age and sex, according to residence, India, 2005-06

Age and sex	Number of persons per 100,000 suffering from:		
	Tuberculosis <sup>1</sup>	Medically treated tuberculosis	Number of usual residents
URBAN			
<b>Age</b>			
< 15	98	98	47,784
15-59	367	354	101,937
60+	768	727	12,405
<b>Sex</b>			
Women	247	246	78,138
Men	385	364	83,995
<b>Total</b>	<b>319</b>	<b>307</b>	<b>162,133</b>
RURAL			
<b>Age</b>			
< 15	115	114	132,938
15-59	653	605	194,540
60+	1,180	1,102	32,394
<b>Sex</b>			
Women	371	337	181,372
Men	634	602	178,522
<b>Total</b>	<b>502</b>	<b>469</b>	<b>359,894</b>
TOTAL			
<b>Age</b>			
< 15	110	110	180,721
15-59	555	519	296,477
60+	1,066	998	44,799
<b>Sex</b>			
Women	334	309	259,510
Men	554	526	262,517
<b>Total</b>	<b>445</b>	<b>418</b>	<b>522,027</b>

Note: Total includes usual residents with missing information on age, who are not shown separately.

<sup>1</sup> Includes medically treated tuberculosis.

### 13.1.2 Prevalence of Tuberculosis by Type of Housing and Fuel

Use of solid fuels (wood, animal dung, crop residues/grasses, coal, and charcoal) expose people to high levels of toxic air pollutants, which have been linked with serious health consequences. NFHS-3 found that 71 percent of India's households use solid fuels for their cooking and that 91 percent of rural households do so.

After studying the effects of smoke from solid fuel combustion, Mishra concluded that 'There is growing evidence that exposure to indoor smoke can cause serious respiratory and other adverse health effects, but the quantity and quality of scientific literature vary considerably by type of health outcome. There is compelling evidence linking indoor smoke to acute respiratory infections in children and chronic obstructive pulmonary disease (COPD) or chronic bronchitis in women' (Mishra, 2004:2). Based on data from NFHS-1, Mishra et al.

(1999) found that the prevalence of active tuberculosis in India could be reduced by 51 percent if everyone were to use cleaner fuels.

Table 13.1.2 presents the prevalence of TB by household crowding (the number of persons per room used for sleeping) and the type of cooking fuel, the place for cooking, and the type of fire or stove among households using solid fuel. There is a great deal of variation in prevalence of TB according to the type of cooking fuel the household uses, ranging from a low of 217 per 100,000 usual residents among households using electricity, liquid petroleum gas, natural gas, or biogas, to a high of 924 per 100,000 among households using straw, shrubs, or grass for cooking. High TB prevalence is also seen among households using agricultural crop residue (703/100,000) or other fuels not specified in the table (755/100,000).

Table 13.1.2 Prevalence of tuberculosis by type of housing and fuel/cooking arrangements			
Number of persons per 100,000 usual household residents suffering from any tuberculosis and medically treated tuberculosis by type of housing and fuel/cooking arrangements, India, 2005-06			
Housing and cooking fuel arrangements	Number of persons per 100,000 suffering from:		Number of usual residents
	Tuberculosis <sup>1</sup>	Medically treated tuberculosis	
<b>Persons per room used for sleeping</b>			
<3	484	456	423,196
3-4	282	259	84,196
5-6	218	218	11,494
7 or more	388	388	3,141
<b>Cooking fuel</b>			
Electricity or gas <sup>2</sup>	220	217	124,028
Kerosene	564	550	13,511
Coal/lignite/charcoal	472	436	12,001
Wood	463	430	257,123
Straw/shrubs/grass	1,012	924	28,038
Agricultural crop residue	703	703	20,872
Dung cakes	440	416	65,681
Other	755	755	640
<b>Place for cooking</b>			
In the house, separate room	303	294	224,520
In the house, no separate room	562	518	160,729
In a separate building	467	423	44,393
Outdoors	573	543	91,479
Other	1,223	1,223	533
<b>Type of fire/stove among households using solid fuels<sup>3</sup></b>			
Stove with a chimney	0	0	118
Open fire/ <i>chullah</i> under a chimney	295	278	32,641
Stove without a chimney	428	428	617
Open fire/ <i>chullah</i> not under a chimney	533	497	350,132
Other	1,516	1,516	175
Total	445	418	522,027

Note: Total includes usual residents with missing information on cooking fuel, place for cooking, and type of fire/stove among households using solid fuels, who are not shown separately.

<sup>1</sup> Includes medically treated tuberculosis.

<sup>2</sup> Includes LPG, natural gas, and biogas.

<sup>3</sup> Includes coal, lignite, charcoal, wood, straw/shrubs/grass, agricultural crop waste, and dung cakes.

NFHS-3 found a higher TB prevalence in households cooking in the house without having a special room for cooking (518/100,000), compared with households that cook in a

separate room of the house (294/100,000), but TB prevalence among households cooking indoors is lower than among households cooking outdoors (543) or in other places not specified in the table (1,223). The higher prevalence among households cooking outdoors may be related to outdoor cooking being more likely than indoor cooking to be done with solid fuels. Table 13.1.2 also shows prevalence levels according to the type of fire or stove used among households burning solid fuels. Cooking arrangements that utilize a chimney divert harmful particulates in the smoke away from members of the household. NFHS-3 found much lower levels of TB among households utilizing a chimney than among households not utilizing a chimney when burning solid fuels. Among households using solid fuels, the small number of households utilizing a stove with a chimney report that no one in the household has tuberculosis. Households cooking on an open fire or *chullah* but utilizing a chimney exhibit the second lowest prevalence of TB (278/100,000). Households burning solid fuels without using a chimney exhibit higher prevalence (497/100,000), while the minority of households using some other arrangement not specified have the highest prevalence (1,516/100,000).

Levels of crowding are not sufficient to explain differentials in prevalence of TB as those households with the highest TB levels are the households with the lowest number of persons per sleeping room.

### 13.1.3 Prevalence of Tuberculosis by State

Table 13.2 shows the number of persons suffering from any TB and medically treated TB according to state. The number of persons suffering from medically treated TB ranges from a low of 96 per 100,000 persons in Jammu and Kashmir to a high of 1,096 per 100,000 persons in Arunachal Pradesh. Between these two extreme levels, there are states at all levels of prevalence. In addition to Arunachal Pradesh, two other states exhibit levels above 700 per 100,000: Manipur (804) and Bihar (735). Seven states exhibit prevalence between 500 and 700 per 100,000: Gujarat (525), Tripura (545), West Bengal (577), Sikkim (583), Nagaland (585), Jharkhand (598), and Assam (605). In addition to Jammu and Kashmir, three other states exhibit levels below 200 per 100,000: Karnataka (136), Goa (166), and Himachal Pradesh (171).

The prevalence of TB by state indicates geographical clustering of the disease. All states in the East Region (with the exception of Orissa) and the Northeast Region exhibit prevalence levels above the national average of 418 per 100,000. All states in the North exhibit prevalence levels well below the national average. The three large states in Central India exhibit middle levels of prevalence: Chhattisgarh (280), Madhya Pradesh (331), and Uttar Pradesh (425). The states in the South Region show a mixed prevalence of TB: low in Karnataka (136) and Kerala (268), and higher in Andhra Pradesh (409) and Tamil Nadu (483).

Table 13.2 Morbidity by state

Number of persons per 100,000 usual household residents suffering from any tuberculosis and medically treated tuberculosis by state, India, 2005-06

State	Number of persons per 100,000 suffering from:	
	Tuberculosis <sup>1</sup>	Medically treated tuberculosis
<b>India</b>	445	418
<b>North</b>		
Delhi	240	231
Haryana	340	324
Himachal Pradesh	182	171
Jammu & Kashmir	104	96
Punjab	201	201
Rajasthan	371	359
Uttaranchal	345	329
<b>Central</b>		
Chhattisgarh	310	280
Madhya Pradesh	353	331
Uttar Pradesh	450	425
<b>East</b>		
Bihar	797	735
Jharkhand	659	598
Orissa	418	371
West Bengal	605	577
<b>Northeast</b>		
Arunachal Pradesh	1,111	1,096
Assam	654	605
Manipur	818	804
Meghalaya	593	446
Mizoram	528	461
Nagaland	633	585
Sikkim	613	583
Tripura	647	545
<b>West</b>		
Goa	166	166
Gujarat	538	525
Maharashtra	321	311
<b>South</b>		
Andhra Pradesh	449	409
Karnataka	141	136
Kerala	275	268
Tamil Nadu	508	483

<sup>1</sup> Includes medically treated tuberculosis.

### 13.1.4 Knowledge and Attitude toward Tuberculosis

Despite being a curable disease, TB is still a stigmatizing illness, due mainly to people's ignorance of its aetiology and transmission. Tables 13.3.1 and 13.3.2 show that 85 percent of women and 92 percent of men age 15-49 have heard of TB. Knowledge of TB is common, but not universal. The percentage of women who have heard of TB increases steadily with increases in education and the wealth index, from three-quarters of women in the lowest education and wealth categories to over 90 percent in the highest education and wealth categories. The same pattern by education and the wealth index exists for men. Differentials by education and wealth status are greater than the urban-rural differentials shown in Figure 13.1.

Table 13.3.1 Knowledge and attitude toward tuberculosis: Women

Percentage of women age 15-49 who have heard of tuberculosis (TB), and among women who have heard of TB, percentage with specific knowledge and beliefs, according to background characteristics, India, 2005-06

Background characteristic	Percentage who have heard of TB	Number of women	Among women who have heard of TB, percentage who:				
			Report that TB is spread through the air by coughing or sneezing	Have misconceptions about transmission of TB	Believe that TB can be cured	Would want a family member's TB kept secret from the neighbours	Number of women who have heard of TB
<b>Age</b>							
15-19	85.2	24,811	47.9	49.3	77.1	17.4	21,151
20-34	85.8	60,852	50.6	51.1	78.7	16.7	52,223
35-49	84.5	38,722	50.8	53.1	79.6	16.2	32,727
<b>Residence</b>							
Urban	92.2	40,817	61.6	52.0	84.9	17.4	37,636
Rural	81.9	83,568	43.8	51.0	75.2	16.3	68,465
<b>Education</b>							
No education	75.8	50,487	36.4	50.1	70.3	16.5	38,283
<5 years complete	83.3	9,918	40.1	47.6	72.5	16.0	8,264
5-7 years complete	86.7	18,820	47.3	49.9	78.3	18.0	16,309
8-9 years complete	93.5	17,383	55.5	50.3	82.5	17.1	16,256
10-11 years complete	95.7	12,887	64.6	53.3	87.3	17.1	12,329
12 or more years complete	98.5	14,882	76.6	57.7	92.6	15.1	14,653
<b>Religion</b>							
Hindu	84.7	100,151	50.1	51.9	78.7	16.7	84,851
Muslim	88.0	16,936	47.7	51.4	77.2	16.4	14,904
Christian	87.1	3,053	64.3	42.7	79.8	19.3	2,660
Sikh	88.3	2,222	44.5	41.7	85.0	13.6	1,961
Buddhist/Neo-Buddhist	87.6	1,010	63.2	40.0	78.0	16.4	885
Jain	94.6	406	73.2	60.3	91.1	16.0	384
Other	71.1	484	34.9	45.7	73.6	12.6	344
<b>Caste/tribe</b>							
Scheduled caste	84.9	23,125	44.7	50.5	76.4	17.9	19,636
Scheduled tribe	68.7	10,119	40.2	45.1	71.4	13.7	6,954
Other backward class	84.6	48,880	49.4	51.1	76.9	18.9	41,367
Other	90.7	41,207	55.9	53.3	83.2	14.2	37,391
Don't know	68.3	649	37.0	49.3	67.3	18.3	443
<b>Wealth index</b>							
Lowest	73.7	21,718	33.6	48.2	68.3	14.2	15,999
Second	80.6	23,616	38.4	49.9	72.1	16.7	19,038
Middle	82.6	25,088	44.5	50.1	74.3	18.1	20,734
Fourth	90.4	26,106	55.0	51.1	82.2	17.5	23,605
Highest	95.9	27,856	68.4	55.3	89.7	16.3	26,725
Total	85.3	124,385	50.1	51.3	78.6	16.7	106,101

Note: Total includes women with missing information on education, religion, and caste/tribe, who are not shown separately.

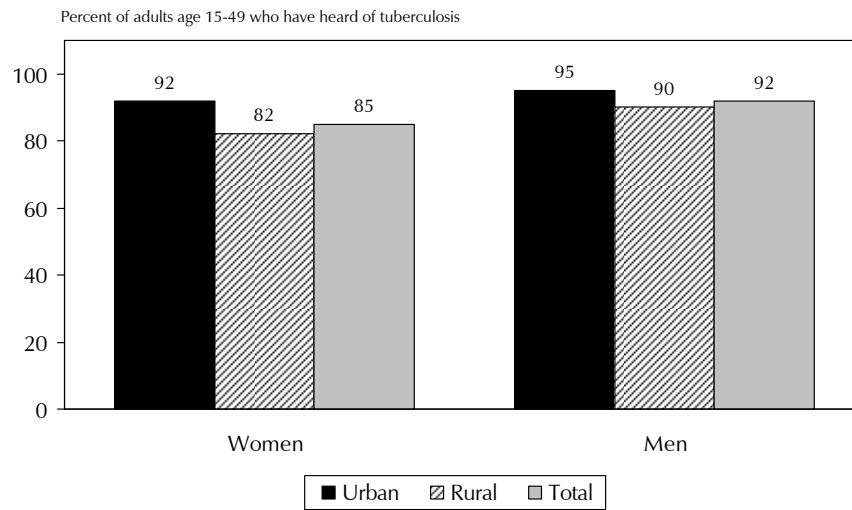
Table 13.3.2 Knowledge and attitude toward tuberculosis: Men

Percentage of men age 15-49 who have heard of tuberculosis (TB), and among men who have heard of TB, percentage with specific knowledge and beliefs, according to background characteristics, India, 2005-06

Background characteristic	Percentage who have heard of TB	Number of men	Among men who have heard of TB, percentage who:				
			Report that TB is spread through the air by coughing or sneezing	Have misconceptions about transmission of TB	Believe that TB can be cured	Would want a family member's TB kept secret from the neighbours	Number of men who have heard of TB
<b>Age</b>							
15-19	89.9	13,008	50.6	45.3	82.7	18.4	11,689
20-34	92.6	32,586	55.4	50.9	86.3	16.6	30,162
35-49	91.8	24,157	57.0	55.5	86.6	15.6	22,172
<b>Residence</b>							
Urban	95.4	25,504	63.6	51.1	89.3	15.6	24,331
Rural	89.7	44,247	49.9	51.7	83.6	17.2	39,694
<b>Education</b>							
No education	81.6	12,571	37.1	48.9	75.2	20.4	10,258
<5 years complete	85.9	7,109	42.4	46.6	78.3	18.1	6,104
5-7 years complete	90.3	11,523	48.5	48.9	82.8	17.6	10,402
8-9 years complete	94.9	14,398	55.3	51.8	86.8	16.0	13,671
10-11 years complete	96.3	10,380	62.2	50.9	90.0	15.4	9,993
12 or more years complete	98.7	13,754	74.0	57.8	95.2	13.7	13,580
<b>Religion</b>							
Hindu	91.6	57,112	55.6	51.9	86.1	16.9	52,334
Muslim	93.7	8,747	50.7	51.6	83.9	15.8	8,198
Christian	86.9	1,567	63.6	40.0	80.8	19.8	1,363
Sikh	92.3	1,270	48.3	41.1	88.2	11.7	1,172
Buddhist/Neo-Buddhist	95.3	596	65.2	51.5	89.5	7.7	568
Jain	99.4	213	76.0	63.4	92.0	11.5	212
Other	72.2	232	32.7	55.8	79.3	9.9	167
<b>Caste/tribe</b>							
Scheduled caste	91.6	13,188	51.3	51.7	85.1	17.9	12,084
Scheduled tribe	83.0	5,725	44.3	50.5	76.9	17.0	4,749
Other backward class	91.7	27,219	56.4	52.6	85.8	19.7	24,952
Other	94.4	23,214	58.3	50.4	88.0	12.2	21,915
Don't know	68.5	177	51.0	50.0	72.5	23.0	121
<b>Wealth index</b>							
Lowest	84.6	11,031	38.0	52.1	77.0	18.6	9,330
Second	89.1	12,666	44.9	53.1	81.6	17.7	11,281
Middle	90.2	14,301	53.4	51.7	84.3	18.7	12,904
Fourth	94.4	15,493	59.6	49.0	88.2	16.4	14,620
Highest	97.7	16,260	69.6	52.0	92.7	13.0	15,889
Total age 15-49	91.8	69,751	55.1	51.5	85.7	16.6	64,024
Age 50-54	91.0	4,618	59.4	53.9	87.0	14.2	4,205
Total age 15-54	91.7	74,369	55.4	51.6	85.8	16.4	68,229

Note: Total includes men with missing information on education, religion, and caste/tribe, who are not shown separately.

**Figure 13.1 Knowledge of Tuberculosis by Sex and Residence**



NFHS-3, India, 2005-06

Only about half the population that has heard of TB knows that it is spread through the air by coughing or sneezing. Fifty percent of women and 55 percent of men who have heard of TB mentioned coughing or sneezing as a mode of transmission for TB. Not surprisingly, knowledge of transmission varies greatly by education. Among those who have heard about TB, only 36 percent of women and 37 percent of men with no education know that TB is spread through the air by coughing or sneezing, compared with three-quarters of women and men with 12 or more years of schooling. Knowledge of transmission rises equally steadily and dramatically with increases in the wealth index among both women and men.

While correct knowledge of transmission varies by population subgroups, misconceptions occur across all subgroups shown in the tables. About half the population that has heard of TB has some misconceptions regarding its transmission. One in every six women and men report they would want the TB positive status of a family member to remain a secret. This level of secrecy is generally seen across all population subgroups. There is no decrease in stigma with increasing education or wealth. Interestingly, there is less stigma attached to tuberculosis than to HIV/AIDS. More than one-third of women and men would want it to remain a secret if a family member was HIV positive (see Chapter 11). Seventy-nine percent of women and 86 percent of men who have heard of TB know that it can be cured.

### 13.1.5 Knowledge and Attitude toward Tuberculosis by State

Tables 13.4.1 and 13.4.2 present levels of knowledge and stigma toward TB by state. The percentage of women who have heard of TB is somewhat lower among women than it is among men in most, but not all, states. The percentage of women who have heard of TB ranges from a low of 65 percent in Karnataka and Andhra Pradesh to a high of 98 percent in Delhi. Awareness among women is over 90 percent in 11 states. Awareness levels among



men range from a low of 77 percent in Karnataka and Andhra Pradesh to a high of 99 percent in Delhi. All states in the North Region and the Northeast Region (except Meghalaya) have levels above 90 percent among men. Awareness among men is over 90 percent in 22 states.

Table 13.4.1 Knowledge and attitude toward tuberculosis by state: Women					
Percentage of women age 15-49 who have heard of tuberculosis (TB), and among women who have heard of TB, percentage with specific knowledge and beliefs, according to state, India, 2005-06					
State	Percentage who have heard of TB	Among women who have heard of TB, percentage who:			
		Report that TB is spread through the air by coughing or sneezing	Have misconceptions about transmission of TB	Believe that TB can be cured	Would want a family member's TB kept secret from the neighbours
<b>India</b>	85.3	50.1	51.3	78.6	16.7
<b>North</b>					
Delhi	98.0	76.2	78.4	95.5	15.4
Haryana	85.8	46.1	38.3	81.9	6.1
Himachal Pradesh	85.7	45.6	52.3	89.4	20.8
Jammu & Kashmir	86.1	44.6	49.4	67.9	18.9
Punjab	87.5	42.6	41.1	84.6	14.0
Rajasthan	82.8	44.7	64.5	75.7	16.7
Uttaranchal	86.3	51.7	43.7	87.1	15.2
<b>Central</b>					
Chhattisgarh	75.2	40.4	33.6	84.5	7.3
Madhya Pradesh	86.0	54.4	68.5	82.6	13.0
Uttar Pradesh	93.4	48.0	58.2	80.0	20.3
<b>East</b>					
Bihar	96.9	47.2	73.6	81.5	13.6
Jharkhand	77.2	36.8	51.4	85.6	12.1
Orissa	80.1	40.4	32.1	77.5	1.8
West Bengal	90.4	37.6	57.3	80.6	10.4
<b>Northeast</b>					
Arunachal Pradesh	88.7	44.9	52.9	74.4	9.8
Assam	92.2	35.0	44.5	74.0	2.2
Manipur	96.7	71.1	44.2	89.8	5.7
Meghalaya	88.4	47.1	63.6	78.0	6.0
Mizoram	94.9	78.6	21.7	96.0	8.0
Nagaland	87.4	59.4	49.8	81.5	7.5
Sikkim	91.8	71.5	70.2	87.1	11.6
Tripura	92.9	28.2	46.0	73.3	11.9
<b>West</b>					
Goa	91.4	56.9	17.4	76.0	22.8
Gujarat	84.6	55.3	60.7	78.9	25.6
Maharashtra	85.6	67.0	37.0	80.0	13.6
<b>South</b>					
Andhra Pradesh	65.4	53.5	44.8	73.3	29.9
Karnataka	64.7	50.4	50.3	72.7	19.9
Kerala	93.5	73.9	35.0	78.6	11.5
Tamil Nadu	88.7	52.7	19.8	63.4	35.9

**Table 13.4.2 Knowledge and attitude toward tuberculosis by state: Men**  
Percentage of men age 15-49 who have heard of tuberculosis (TB), and among men who have heard of TB, percentage with specific knowledge and beliefs, according to state, India, 2005-06

State	Percentage who have heard of TB	Among men who have heard of TB, percentage who:			
		Report that TB is spread through the air by coughing or sneezing	Have misconceptions about transmission of TB	Believe that TB can be cured	Would want a family member's TB kept secret from the neighbours
<b>India</b>	91.8	55.1	51.5	85.7	16.6
<b>North</b>					
Delhi	99.2	79.4	69.0	97.3	8.0
Haryana	92.0	58.2	39.4	90.2	13.9
Himachal Pradesh	93.2	64.5	55.1	93.9	9.8
Jammu & Kashmir	91.0	40.3	49.3	79.7	9.8
Punjab	92.3	47.4	38.9	88.9	12.2
Rajasthan	93.7	66.8	78.4	84.3	26.5
Uttaranchal	96.7	62.0	50.4	92.7	8.9
<b>Central</b>					
Chhattisgarh	89.3	38.3	45.0	86.0	12.8
Madhya Pradesh	95.6	50.2	75.9	85.4	18.1
Uttar Pradesh	96.9	54.8	60.4	89.0	16.6
<b>East</b>					
Bihar	96.1	42.4	58.5	93.1	17.2
Jharkhand	87.1	29.5	64.4	92.1	8.9
Orissa	89.1	53.6	24.8	88.5	4.8
West Bengal	95.9	43.8	57.2	85.4	10.0
<b>Northeast</b>					
Arunachal Pradesh	90.6	52.4	56.5	87.9	11.0
Assam	95.6	42.2	44.9	79.4	3.0
Manipur	98.0	77.2	37.2	91.7	4.1
Meghalaya	77.9	44.2	53.5	81.3	13.5
Mizoram	94.2	80.7	30.4	97.5	4.7
Nagaland	93.9	65.3	47.3	85.1	4.9
Sikkim	94.8	73.8	73.7	91.5	7.5
Tripura	96.0	39.5	40.3	83.9	13.1
<b>West</b>					
Goa	88.8	46.8	25.3	81.5	23.9
Gujarat	93.7	58.0	49.2	87.4	13.3
Maharashtra	92.2	67.7	38.7	87.0	8.0
<b>South</b>					
Andhra Pradesh	77.1	53.4	38.9	77.5	33.1
Karnataka	76.9	57.2	52.8	79.3	19.6
Kerala	95.6	63.8	26.8	77.6	11.4
Tamil Nadu	92.4	72.9	28.2	75.9	45.7

Despite having heard of TB, women and men in many states do not know how TB is spread. The proportion of women and men who report that TB is spread through the air by coughing or sneezing varies widely across states. The percentage of women who have heard of TB that have knowledge about how it is spread ranges from 28 percent in Tripura to 79 percent in Mizoram. Other states with high proportions of women who are knowledgeable about the spread of TB (among those who have heard of TB) are Delhi (76 percent), Kerala (74 percent), Sikkim (72 percent), and Manipur (71 percent). There are 15 states in which fewer than 50 percent of women who have heard of TB know how it is spread, including all states in the East Region.

The percentage of men who have heard of TB who have knowledge about how it is spread ranges from 30 percent in Jharkhand to 81 percent in Mizoram. States with low

percentages in each region are Jammu and Kashmir in the North Region (40 percent), Chhattisgarh in the Central Region (38 percent), Jharkhand in the East Region (30 percent), Tripura in the Northeast Region (40 percent), Goa in the West Region (47 percent), and Andhra Pradesh in the South Region (53 percent).

The percentage of the population that has misconceptions about TB varies as greatly across states as does the proportion of the population that has correct knowledge of transmission of the illness. The percentage of women who have heard of TB who have misconceptions about its transmission ranges from 17 percent in Goa to 78 percent in Delhi. The percent of men who have heard of TB who have misconceptions about its transmission ranges from 25 percent in Goa and Orissa to 78 percent in Rajasthan. In nearly all states, over three-quarters of women and men who have heard of TB believe it can be cured.

Even states with a high level of literacy and those that are economically advanced have a sizable percentage of their populations that would not like to disclose the status of a family member with TB to their neighbours. More than one in five women who have heard of TB would not want to divulge that a family member has TB in Tamil Nadu (36 percent), Andhra Pradesh (30 percent), Gujarat (26 percent), Goa (23 percent), and Himachal Pradesh (21 percent). States with low percentages of women with this attitude are Assam and Orissa (2 percent each), and Manipur, Meghalaya, and Haryana (6 percent each). States in the Northeast and East Regions exhibit lower proportions of women who would want to keep it a secret if a family member had TB status.

Nearly half of men (46 percent) who have heard of TB would not like to disclose the status of a family member with TB to their neighbours in Tamil Nadu. Other states with high proportions of men with such negative attitudes are Andhra Pradesh (33 percent), Rajasthan (27 percent), Goa (24 percent), and Karnataka (20 percent). States in the Northeast and East Regions exhibit lower proportions of men who would want to keep secret from neighbours a family member's TB status than men in other states.

## **13.2 HEALTH PROBLEMS**

All women and men interviewed with the Individual Questionnaire were asked whether they have diabetes, asthma, or goitre or any other thyroid disorder. Table 13.5 shows the number of women and men age 15-49 per 100,000 who have diabetes, asthma, or goitre or any other thyroid disorders by background characteristics. The overall prevalence of diabetes, asthma, and goitre is substantial for women, and the prevalence of diabetes and asthma is substantial for men.

### ***Diabetes***

Diabetes is a non-communicable disease, commonly known as 'sugar' illness. A person has diabetes when the body fails to produce or properly use insulin to convert sugar, starch, etc., into energy. As shown in Table 13.5, diabetes affects all ages although the number with this illness climbs drastically with age. Over 2 percent of women and men age 35-49 have diabetes. By age 50-54, over 5 percent of men have diabetes. Diabetes is much

more prevalent in urban areas (1,374 per 100,000 among women and 1,383 per 100,000 among men) than in rural areas (641 per 100,000 among women and 860 per 100,000 among men).

The prevalence of diabetes among those in the highest wealth quintile is far greater than the prevalence among those in the lowest wealth quintile. Among women, the number of persons with diabetes increases from 371 per 100,000 in the lowest wealth quintile to 1,503 per 100,000 in the highest wealth quintile. Among men, the prevalence increases from 705 per 100,000 to 1,957 per 100,000. While the prevalence of diabetes generally increases with increasing wealth quintile, there is no clear pattern by education.

Table 13.5 Health problems								
Number of women and men age 15-49 per 100,000 who reported that they have diabetes, asthma, or goitre or any other thyroid disorders by background characteristics, India, 2005-06								
Background characteristic	Number of women per 100,000				Number of men per 100,000			
	Diabetes	Asthma	Goitre or other thyroid disorder	Number of women	Diabetes	Asthma	Goitre or other thyroid disorder	Number of men
<b>Age</b>								
15-19	191	841	441	24,811	101	941	216	13,008
20-34	403	1,349	794	60,852	442	1,116	346	32,586
35-49	2,075	2,787	1,517	38,722	2,385	2,685	524	24,157
<b>Residence</b>								
Urban	1,374	1,648	1,339	40,817	1,383	1,329	369	25,504
Rural	641	1,719	758	83,568	860	1,799	392	44,247
<b>Education</b>								
No education	690	1,914	646	50,487	1,172	2,440	390	12,571
<5 years complete	1,358	2,283	833	9,918	1,111	2,640	268	7,109
5-7 years complete	1,050	1,682	858	18,820	713	1,529	434	11,523
8-9 years complete	929	1,391	1,037	17,383	817	1,580	357	14,398
10-11 years complete	958	1,373	1,188	12,887	1,033	975	445	10,380
12 or more years complete	878	1,217	1,856	14,882	1,454	984	378	13,754
<b>Marital status</b>								
Never married	149	968	661	25,462	247	1,013	300	25,307
Currently married	1,045	1,823	1,036	93,089	1,514	1,899	431	43,501
Widowed/divorced/separated/deserted	1,470	2,840	812	5,834	1,288	5,537	433	942
<b>Religion</b>								
Hindu	824	1,631	877	100,151	1,020	1,544	381	57,112
Muslim	1,037	2,024	1,090	16,936	1,237	2,218	481	8,747
Christian	1,849	2,188	2,437	3,053	1,238	2,027	321	1,567
Sikh	963	1,089	727	2,222	1,318	955	120	1,270
Buddhist/Neo-Buddhist	684	2,191	551	1,010	683	1,334	77	596
Jain	1,600	1,033	2,529	406	1,025	2,252	44	213
Other	462	2,681	2,297	484	97	881	260	232
<b>Caste/tribe</b>								
Scheduled caste	798	1,494	754	23,125	991	1,688	348	13,188
Scheduled tribe	349	1,749	753	10,119	477	1,973	567	5,725
Other backward class	774	1,498	819	48,880	955	1,276	328	27,219
Other	1,189	2,035	1,240	41,207	1,336	1,919	424	23,214
Don't know	950	1,219	1,675	649	1,307	3,551	871	177
<b>Wealth index</b>								
Lowest	371	1,723	529	21,718	705	2,416	384	11,031
Second	657	1,853	677	23,616	801	1,754	268	12,666
Middle	651	1,638	679	25,088	566	1,427	479	14,301
Fourth	1,068	1,647	958	26,106	1,001	1,543	315	15,493
Highest	1,503	1,639	1,739	27,856	1,957	1,248	454	16,260
Total age 15-49	881	1,696	949	124,385	1,051	1,627	383	69,751
Age 50-54	na	na	na	na	5,641	4,858	669	4,618
Total age 15-54	na	na	na	na	1,336	1,827	401	74,369

Note: Total includes women/men with missing information on education, religion, and caste/tribe, who are not shown separately.  
na = Not applicable

Prevalence of illness by marital status is confounded by the effects of age, as illness tends to be lower among younger respondents. Those who are never married (who are on average younger) exhibit lower prevalence levels of illness and those who are formerly married (who are on average older) tend to exhibit higher levels of illness.

### ***Asthma***

Asthma, also known as reactive airway disease, is a chronic respiratory disease that affects the lungs. Asthma is often mistaken for TB due to the similarity of symptoms. The number of persons who have asthma is over 1,600 per 100,000 among both women and men. Asthma is much more common in women and men than TB, diabetes, or goitre/other thyroid disorders. The number of women with asthma climbs steadily with age, from 841 per 100,000 women age 15-19 to 2,787 per 100,000 women age 35-49. Men exhibit a similar progression of asthma by age; men age 35-49 are three times more likely to have asthma than are men age 15-19 (2,685 versus 941 per 100,000).

The number of people with asthma is high in both urban and rural areas, but it is somewhat higher in rural areas (1,719 per 100,000 for women and 1,799 per 100,000 for men). The highest levels of asthma are seen among less educated persons. Prevalence is highest among those with less than five years of schooling (2,283 among women and 2,640 among men), and among those with no education (1,914 among women and 2,440 among men).

As with diabetes, prevalence of illness by marital status is confounded by the effects of age, as asthma prevalence tends to be lower among younger respondents. Those who have never been married (who are on average younger) exhibit lower prevalence levels of illness and those who are formerly married (who are on average older) exhibit higher levels of illness.

Asthma prevails across all the wealth strata with prevalence levels above 1,200 per 100,000 among all wealth quintiles. However, for men asthma is more prevalent in the lower wealth quintiles than among the higher wealth quintiles. Men from the lowest wealth quintile show a substantially higher prevalence of asthma (2,416 per 100,000) than any other group.

### ***Goitre or other thyroid disorders***

Goitre is usually caused by an iodine deficiency and it leads to an enlargement of the thyroid gland. In many cases, there are no symptoms apart from the appearance of a swelling in the neck. NFHS-3 included testing of household salt for iodine content (see Chapter 10). In NFHS-3, women age 15-49 and men age 15-54 were asked whether they have goitre or any other thyroid disorder. As shown in Table 13.5, the prevalence of goitre is 2.5 times higher among women than men (949 per 100,000 women compared to 383 per 100,000 men). The number with goitre or other thyroid disorders increases with age, especially among women. In general, women exhibit greater differentials in prevalence of goitre across background characteristics than do men. While men do not exhibit a large urban-rural differential, prevalence of goitre is almost twice as high among urban women as it is among rural women.

Men exhibit no clear pattern of prevalence of thyroid disorders by education, but women exhibit increasing prevalence with increasing education. More educated women (12 or more years of completed education) are nearly three times as likely to have a thyroid disorder as women with no education.

Differentials in prevalence are especially large by religion, especially among women. The lowest prevalence level is seen among Buddhist/Neo-Buddhist women (551 per 100,000), while Jain and Christian women have prevalence levels more than four times higher. Jain men, on the other hand, exhibit the lowest levels of thyroid disorders of any religious group (44 per 100,000), followed by Buddhist/Neo-Buddhist men (77 per 100,000). Scheduled caste women, scheduled tribe women, and women belonging to other backward classes exhibit lower prevalence than other women, while among men the lowest prevalence by caste is for men belonging to other backward classes and scheduled castes.

The prevalence of goitre and other thyroid diseases increases with increasing wealth quintiles for women. The prevalence is highest for women in the highest wealth quintile (1,739 per 100,000), more than three times higher than among women in the lowest wealth quintile (529 per 100,000). Men exhibit no particular pattern in the prevalence of goitre or other thyroid disorders by the wealth index.

### 13.2.1 Health Problems by State

Table 13.6 presents the distribution of women and men who have diabetes, asthma, or goitre/other thyroid disorders by state.

Table 13.6 Health problems by state						
Number of women and men age 15-49 per 100,000 who reported that they have diabetes, asthma, or goitre or any other thyroid disorders by state, India, 2005-06						
State	Number of women per 100,000			Number of men per 100,000		
	Diabetes	Asthma	Goitre or other thyroid disorder	Diabetes	Asthma	Goitre or other thyroid disorder
<b>India</b>	881	1,696	949	1,051	1,627	383
<b>North</b>						
Delhi	1,692	547	1,481	1,229	736	133
Haryana	1,169	1,552	388	608	1,266	739
Himachal Pradesh	1,048	384	678	344	527	304
Jammu & Kashmir	540	897	237	278	816	0
Punjab	849	945	601	802	802	241
Rajasthan	282	1,565	376	362	1,739	246
Uttaranchal	825	537	257	965	972	215
<b>Central</b>						
Chhattisgarh	659	746	563	932	858	358
Madhya Pradesh	558	1,283	599	555	1,102	424
Uttar Pradesh	383	1,089	517	456	1,225	138
<b>East</b>						
Bihar	1,024	1,696	853	940	981	273
Jharkhand	652	1,291	858	629	407	74
Orissa	556	2,533	362	1,179	1,592	122
West Bengal	1,641	3,304	1,626	2,323	4,365	667
<b>Northeast</b>						
Arunachal Pradesh	537	2,037	2,037	606	2,072	567
Assam	402	1,411	760	601	1,105	1,371
Manipur	1,006	1,400	2,623	1,059	1,106	1,389
Meghalaya	910	1,618	864	641	746	179
Mizoram	1,189	3,563	1,857	315	2,351	315
Nagaland	577	1,414	629	1,217	2,464	725
Sikkim	1,160	5,150	1,574	1,698	2,769	1,191
Tripura	1,656	5,924	2,439	2,392	5,086	552
<b>West</b>						
Goa	1,921	1,836	841	3,016	1,588	584
Gujarat	968	1,530	484	524	1,844	72
Maharashtra	479	1,714	590	906	1,855	201
<b>South</b>						
Andhra Pradesh	838	2,151	1,155	2,116	2,189	829
Karnataka	681	1,259	798	973	691	285
Kerala	2,549	4,037	5,744	3,078	2,984	1,888
Tamil Nadu	2,188	1,126	1,568	1,351	687	170

### *Diabetes*

The number of women who have diabetes ranges from 282 per 100,000 women in Rajasthan to 2,549 per 100,000 women in Kerala. In five other states (Tamil Nadu, Goa, Tripura, West Bengal, and Delhi) the number with diabetes is relatively high (above 1,500 per 100,000 women). None of the states in the Central Region have prevalence levels above 1,000 per 100,000 women. Rajasthan, Uttar Pradesh, Assam, and Maharashtra all have diabetes prevalence levels below 500 per 100,000 women.

Four of the six states with the highest levels of diabetes among men (above 1,500 per 100,000 men) are also states which exhibit some of the highest levels among women, although prevalence of diabetes among men exceeds that of women in each of the four states: Kerala (3,078 per 100,000), Goa (3,016 per 100,000), Tripura (2,392 per 100,000), and West Bengal (2,323 per 100,000). Andhra Pradesh (2,116 per 100,000) and Sikkim (1,698 per 100,000) are the other two states with prevalence levels exceeding 1,500 among men. Only five states have diabetes prevalence levels below 500 per 100,000 men, namely Jammu and Kashmir (278 per 100,000), Mizoram (315 per 100,000), Himachal Pradesh (344 per 100,000), Rajasthan (362 per 100,000), and Uttar Pradesh (456 per 100,000). The latter two states (Rajasthan and Uttar Pradesh) have the lowest prevalence levels among women as well.

### ***Asthma***

Prevalence of asthma ranges from 384 per 100,000 in Himachal Pradesh to 5,924 per 100,000 in Tripura among women and from 407 per 100,000 in Jharkhand to 5,086 in Tripura among men. The number of women with asthma exceeds 1,000 per 100,000 in 23 states and is exceptionally high (above 3,000 per 100,000) in five states: West Bengal (3,304), Mizoram (3,563), Kerala (4,037), Sikkim (5,150), and Tripura with the highest prevalence. Prevalence exceeds 1,000 per 100,000 men in 18 states and is exceptionally high (above 3,000 per 100,000) in two states: West Bengal (4,365) and Tripura. The lowest prevalence levels (below 1,000 per 100,000) are seen among women in Himachal Pradesh (384), Uttaranchal (537), Delhi (547), Chhattisgarh (746), Jammu and Kashmir (897), and Punjab (945). Prevalence levels fall below 1,000 per 100,000 men in 11 states. Overall, the Northeast Region stands out as the region exhibiting the highest prevalence levels of asthma.

### ***Goitre or other thyroid disorders***

The number of persons who report goitre or other thyroid disorders varies widely across states, especially among women, and shows some tendency toward geographic clustering. Prevalence of goitre or other thyroid disorders is lowest in Jammu and Kashmir among both women and men (237 per 100,000 women and nil among men) and highest in Kerala among both women and men (5,744 per 100,000 women and 1,888 per 100,000 men). Prevalence of thyroid disorders exceeds 1,000 per 100,000 among women in 10 states and in men in four states. In addition to Kerala, reporting of goitre or other thyroid disorders is highest (above 2,000 per 100,000 women) in Manipur, Tripura, and Arunachal Pradesh, and above 1,000 per 100,000 men in Manipur, Assam, and Sikkim. The Northeast Region exhibits the highest prevalence levels of goitre or other thyroid disorders, followed by the South Region.

## **13.3 USE OF TOBACCO**

Tobacco use is associated with a wide range of major diseases, including several types of cancers and heart and lung diseases. Studies have shown that in addition to sharing the same health risks as men, women who use tobacco also experience difficulty in becoming pregnant, are at an increased risk of infertility, pregnancy complications, premature births, low-birth-weight infants, stillbirths, and infant deaths (USDHHS, 2004).



While cigarettes are the dominant form of tobacco use in much of the world, oral use of smokeless tobacco (chewing or applying to the teeth or gums) and smoking of *bidis* are the dominant forms of tobacco consumption in India. While the 50<sup>th</sup> round of the National Sample Survey (NSSO, 1998) and NFHS-2 collected data on tobacco use from household respondents who reported on tobacco use by all household members, NFHS-3 collected data on tobacco use directly by asking respondents to report on their own tobacco use. Four specific questions on current use of tobacco (smoke and non-smoke variants) were asked of all women and men who were interviewed with the Individual Questionnaire.

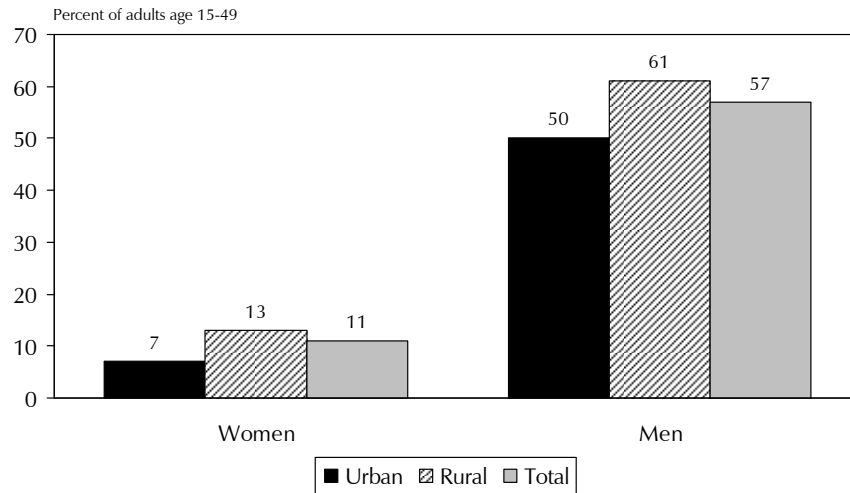
**Table 13.7 Tobacco use by women and men**  
Percentage of women and men age 15-49 and men age 15-54 by their use of tobacco, and percent distribution of those who smoke cigarettes or *bidis*, by number of cigarettes/*bidis* smoked in the 24 hours preceding the survey, India, 2005-06

Tobacco use	Women			Men			
	Urban	Rural	Total 15-49	Urban	Rural	Total 15-49	Total 15-54
<b>Use of tobacco</b>							
Smokes cigarettes or <i>bidis</i>	0.5	1.8	1.4	28.7	35.0	32.7	33.4
Smokes cigars or pipe	0.0	0.2	0.2	0.4	0.8	0.6	0.7
Chews <i>paan masala, gutkha,</i> or other tobacco	5.5	9.8	8.4	31.1	39.6	36.5	36.3
Uses snuff	0.5	0.9	0.8	0.3	0.9	0.7	0.7
Other	0.3	0.9	0.7	0.3	1.3	0.9	1.0
Does not use tobacco	93.3	87.1	89.1	50.1	38.9	43.0	42.4
Number of respondents	40,817	83,568	124,385	25,504	44,247	69,751	74,369
<b>Number of cigarettes/<i>bidis</i> smoked in the past 24 hours</b>							
0	5.0	1.4	1.9	8.2	9.6	9.1	8.8
1-4	40.6	46.5	45.8	35.2	29.2	31.2	30.1
5-9	26.4	23.5	23.9	18.3	16.1	16.8	16.9
10 or more	24.0	25.8	25.6	38.1	45.0	42.8	44.0
Missing	3.9	2.7	2.8	0.2	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of cigarette/ <i>bidi</i> smokers	196	1,510	1,707	7,322	15,478	22,800	24,875

Tobacco use is much more prevalent among men than among women (Table 13.7). More than half of men use one or more forms of tobacco, compared with only 11 percent of women. One-third of men age 15-49 smoke cigarettes or *bidis*. *Paan masala, gutkha*, or other chewed tobaccos are consumed by 37 percent of men age 15-49. While only 1 percent of women age 15-49 smoke cigarettes or *bidis*, 8 percent chew *paan masala, gutkha*, or other tobacco products.

Tobacco use is more prevalent in rural areas than in urban areas among both men and women. Thirty-five percent of rural men age 15-49 smoke cigarettes or *bidis*, compared with 29 percent of urban men. About four in every 10 rural men age 15-49 chew tobacco, while three in every 10 urban men do so. Rural women are also more likely than urban women to smoke or chew tobacco. Two percent of rural women smoke cigarettes or *bidis*, while less than 1 percent of urban women smoke. Ten percent of rural women and 6 percent of urban women chew tobacco. Figure 13.2 illustrates overall levels of tobacco use by rural-urban residence.

**Figure 13.2 Tobacco Use by Sex and Residence**



Note: Tobacco use includes smoking cigarettes, *bidis*, cigars, or pipes, or chewing *paan masala*, *gutkha*, or other tobacco.

NFHS-3, India, 2005-06

Respondents who smoke were asked how many cigarettes or *bidis* they smoked in the 24 hours preceding the survey. Four in 10 male smokers reported they smoked 10 or more cigarettes/*bidis* in the previous 24 hours (38 percent of urban men who smoke and 45 percent of rural men who smoke). One-quarter of female smokers reported they smoked 10 or more cigarettes/*bidis* (26 percent of rural smokers and 24 percent of urban smokers).

### 13.3.1 Use of Tobacco by Background Characteristics

As shown in Table 13.8, use of tobacco is fairly common in India, particularly for men, and there are subgroups of the population among whom use of tobacco is particularly common. More than three-quarters of men with no education use tobacco. Tobacco use shows a clear and continual decrease with increasing levels of education, among both men and women. Yet 4 in 10 men with the highest education level use tobacco. There is an equally clear and continual decrease in tobacco use with increasing wealth quintiles. Four in 10 men in the highest wealth quintile use tobacco, while 7 in 10 men in the lowest wealth quintile do so. Twenty-two percent of women in the lowest wealth quintile use tobacco.

By religion, tobacco use is lowest among Sikhs and Jains (less than 1 percent of Sikh and Jain women, one-third of Jain men, and one-fifth of Sikh men use tobacco). Women and men from scheduled tribes are more likely to use tobacco than those from other castes or tribes. The use of tobacco by pregnant and breastfeeding women is about equal to the use of tobacco by women who are neither pregnant nor breastfeeding, indicating that women who use tobacco may be unaware of the negative reproductive consequences of tobacco use.

Table 13.8: Use of tobacco by background characteristics

Percentage of women and men age 15-49 who use any kind of tobacco and percentage who smoke cigarettes or *bidis*, and among those who smoke cigarettes or *bidis*, percentage who smoked at least one cigarette or *bidi* in the 24 hours preceding the survey by background characteristics, India, 2005-06

Background characteristic	Women					Men				
	Percentage who use any kind of tobacco	Percentage who smoke cigarettes or <i>bidis</i>	Number of women	Percentage who smoked at least one cigarette/ <i>bidi</i> in the past 24 hours	Number of women who smoke cigarettes/ <i>bidis</i>	Percentage who use any kind of tobacco	Percentage who smoke cigarettes or <i>bidis</i>	Number of men	Percentage who smoked at least one cigarette/ <i>bidi</i> in the past 24 hours	Number of men who smoke cigarettes/ <i>bidis</i>
<b>Age</b>										
15-19	3.5	0.1	24,811	80.5	26	28.6	12.3	13,008	80.6	1,594
20-34	9.1	0.9	60,852	92.7	542	59.3	32.6	32,586	88.4	10,625
35-49	18.3	2.9	38,722	96.9	1,139	69.0	43.8	24,157	94.4	10,582
<b>Residence</b>										
Urban	6.7	0.5	40,817	91.0	196	49.9	28.7	25,504	91.5	7,322
Rural	12.9	1.8	83,568	95.9	1,510	61.0	35.0	44,247	90.3	15,478
<b>Maternity status</b>										
Pregnant	8.5	1.0	6,429	85.5	62	na	na	na	na	na
Breastfeeding (not pregnant)	10.8	1.5	23,375	94.0	351	na	na	na	na	na
Neither	11.0	1.4	94,581	96.1	1,294	na	na	na	na	na
<b>Education</b>										
No education	18.1	3.0	50,487	96.2	1,528	77.5	50.1	12,571	94.9	6,294
<5 years complete	14.5	0.9	9,918	95.4	85	72.7	44.0	7,109	92.0	3,125
5-7 years complete	8.2	0.3	18,820	89.7	56	64.3	37.7	11,523	91.4	4,342
8-9 years complete	4.9	0.1	17,383	73.5	22	55.0	28.5	14,398	88.5	4,107
10-11 years complete	2.1	0.0	12,887	(72.2)	4	40.8	20.8	10,380	86.5	2,155
12 or more years complete	1.4	0.1	14,882	53.2	11	38.2	20.1	13,754	84.6	2,771
<b>Religion</b>										
Hindu	10.9	1.4	100,151	95.7	1,380	57.5	32.8	57,112	90.3	18,748
Muslim	11.2	1.6	16,936	94.1	277	60.5	36.2	8,747	92.8	3,166
Christian	11.4	1.2	3,053	93.8	36	49.4	32.9	1,567	93.2	515
Sikh	0.1	0.0	2,222	*	0	20.8	9.4	1,270	88.0	120
Buddhist/Neo-Buddhist	16.7	0.6	1,010	97.4	6	56.4	24.3	596	85.4	145
Jain	0.7	0.0	406	*	0	33.9	15.3	213	(82.1)	33
Other	29.8	1.5	484	(75.5)	7	66.1	31.2	232	87.2	72
<b>Caste/tribe</b>										
Scheduled caste	13.7	2.3	23,125	95.9	528	63.8	38.9	13,188	92.8	5,134
Scheduled tribe	26.3	2.1	10,119	95.2	214	71.2	36.7	5,725	89.4	2,102
Other backward class	8.2	1.2	48,880	95.9	611	54.5	31.3	27,219	89.9	8,506
Other	8.4	0.8	41,207	93.9	341	52.4	29.8	23,214	90.4	6,922
Don't know	9.6	0.5	649	*	3	51.8	37.4	177	98.8	66
<b>Wealth index</b>										
Lowest	21.6	3.3	21,718	96.1	709	74.0	42.9	11,031	91.5	4,736
Second	14.9	2.1	23,616	96.3	496	68.3	39.5	12,666	91.7	5,001
Middle	10.3	1.2	25,088	96.3	306	60.0	35.1	14,301	90.9	5,023
Fourth	6.7	0.5	26,106	89.7	139	52.0	29.1	15,493	91.1	4,512
Highest	3.3	0.2	27,856	85.4	58	38.6	21.7	16,260	87.1	3,529
Total age 15-49	10.8	1.4	124,385	95.3	1,707	57.0	32.7	69,751	90.7	22,800
Age 50-54	na	na	na	na	na	66.9	44.9	4,618	94.3	2,075
Total age 15-54	na	na	na	na	na	57.6	33.4	74,369	91.0	24,875

Note: Total includes women and men with missing information on education, religion, and caste/tribe, who are not shown separately.

na = Not applicable

( ) Based on 25-49 unweighted cases.

\* Percentage not shown; based on fewer than 25 unweighted cases.

### 13.4 USE OF ALCOHOL

A national survey found that the prevalence of current use of alcohol ranged from a low of 7 percent in Gujarat (officially under prohibition) to a high of 75 percent in Arunachal Pradesh and that alcohol use among women exceeded 5 percent only in the northeastern states (Srivastava et al., 2004).

Tables 13.9.1 and 13.9.2 present alcohol use among women and men by selected background characteristics. Only 2 percent of women drink alcohol. Drinking is more

common among women from scheduled tribes (14 percent) than among women from any other caste or tribe. The percent of women who drink alcohol is also somewhat higher than average among women in the lowest wealth quintile (6 percent) and women with no education (4 percent). Among women who drink alcohol, 15 percent drink alcohol almost every day, 40 percent drink alcohol about once a week, and 43 percent drink alcohol less than once a week. Overall, drinking alcohol is clearly not a common behaviour among women, and the majority of women who drink alcohol do so once a week or less than once a week (84 percent).

Table 13.9.1 Use of alcohol: Women

Percentage of women age 15-49 who drink alcohol and percent distribution of alcohol drinkers by frequency of drinking, according to background characteristics, India, 2005-06

Background characteristic	Percentage of women who drink alcohol	Number of women	Among women who drink alcohol, frequency of drinking				Total	Number of women
			Almost every day	About once a week	Less than once a week	Missing		
<b>Age</b>								
15-19	1.0	24,811	6.8	39.8	51.0	2.4	100.0	236
20-34	2.1	60,852	13.6	40.7	44.5	1.2	100.0	1,252
35-49	3.2	38,722	18.1	40.2	41.0	0.8	100.0	1,245
<b>Residence</b>								
Urban	0.6	40,817	12.3	22.6	61.2	3.9	100.0	239
Rural	3.0	83,568	15.3	42.1	41.7	0.8	100.0	2,494
<b>Maternity status</b>								
Pregnant	2.3	6,429	14.8	31.0	51.6	2.6	100.0	145
Breastfeeding (not pregnant)	2.5	23,375	12.4	43.4	43.5	0.8	100.0	594
Neither	2.1	94,581	15.9	40.2	42.8	1.1	100.0	1,994
<b>Education</b>								
No education	4.3	50,487	17.7	42.7	38.8	0.8	100.0	2,150
<5 years complete	1.7	9,918	7.9	42.2	49.9	0.0	100.0	168
5-7 years complete	0.8	18,820	5.2	31.4	63.2	0.2	100.0	155
8-9 years complete	0.6	17,383	4.6	28.7	64.2	2.5	100.0	105
10-11 years complete	0.5	12,887	0.8	31.9	64.5	2.8	100.0	66
12 or more years complete	0.6	14,882	6.2	16.5	69.6	7.7	100.0	89
<b>Religion</b>								
Hindu	2.4	100,151	14.7	40.6	43.6	1.1	100.0	2,378
Muslim	0.2	16,936	(14.0)	(67.2)	(18.7)	(0.2)	100.0	39
Christian	3.9	3,053	9.8	33.4	54.5	2.3	100.0	118
Sikh	0.0	2,222	*	*	*	*	100.0	1
Buddhist/Neo-Buddhist	1.4	1,010	9.0	27.0	64.1	0.0	100.0	14
Jain	0.1	406	*	*	*	*	100.0	0
Other	37.2	484	23.9	38.7	37.4	0.0	100.0	180
<b>Caste/tribe</b>								
Scheduled caste	1.9	23,125	12.2	40.1	46.5	1.1	100.0	450
Scheduled tribe	14.1	10,119	17.7	43.1	38.5	0.6	100.0	1,430
Other backward class	1.2	48,880	14.4	35.2	49.0	1.4	100.0	577
Other	0.5	41,207	6.3	32.1	58.0	3.6	100.0	220
Don't know	2.0	649	*	*	*	*	100.0	13
<b>Wealth index</b>								
Lowest	6.2	21,718	17.2	40.7	41.5	0.6	100.0	1,352
Second	2.3	23,616	16.4	43.3	39.1	1.3	100.0	532
Middle	2.0	25,088	12.9	43.5	42.7	0.9	100.0	499
Fourth	0.8	26,106	10.4	38.1	50.8	0.7	100.0	214
Highest	0.5	27,856	4.3	18.1	71.3	6.3	100.0	137
Total	2.2	124,385	15.1	40.4	43.4	1.1	100.0	2,733

Note: Total includes women with missing information on education, religion, and caste/tribe, who are not shown separately.

( ) Based on 25-49 unweighted cases.

\* Percentage not shown; based on fewer than 25 unweighted cases.

One-third of men drink alcohol, and as is true among women, men from scheduled tribes partake of alcohol in a higher proportion than do men from other castes or tribes. Half of men from scheduled tribes and 42 percent of men from scheduled castes consume alcohol. Urban and rural men are about equally likely to consume alcohol. Forty-three percent of men with no education consume alcohol, while only one-quarter of men with the highest levels of education do so. Not only does the proportion of men who consume alcohol steadily decrease with increasing education, but the proportion who drink almost every day also decreases. Among alcohol drinkers, the percentage of men who drink almost every day decreases from 14 percent among those with no education to 5 percent among men with 12 or more years of education. Alcohol consumption shows the same association with the wealth index as it does with education, with decreasing proportions of men consuming alcohol with increasing

Background characteristic	Percentage of men who drink alcohol	Number of men	Among men who drink alcohol, frequency of drinking					Total	Number of men
			Almost every day	About once a week	Less than once a week	Missing			
<b>Age</b>									
15-19	11.0	13,008	3.4	18.3	77.9	0.4	100.0	1,425	
20-34	34.9	32,586	7.0	25.4	67.3	0.2	100.0	11,375	
35-49	39.1	24,157	13.2	29.5	57.1	0.2	100.0	9,450	
<b>Residence</b>									
Urban	30.9	25,504	8.3	27.0	64.6	0.2	100.0	7,886	
Rural	32.5	44,247	10.1	26.5	63.2	0.3	100.0	14,364	
<b>Education</b>									
No education	42.8	12,571	13.9	32.5	53.4	0.2	100.0	5,385	
<5 years complete	40.5	7,109	12.6	32.4	54.7	0.3	100.0	2,877	
5-7 years complete	33.8	11,523	10.1	27.2	62.5	0.2	100.0	3,891	
8-9 years complete	29.0	14,398	6.8	23.4	69.5	0.3	100.0	4,179	
10-11 years complete	24.2	10,380	5.9	22.7	71.2	0.2	100.0	2,507	
12 or more years complete	24.8	13,754	4.7	19.0	76.0	0.3	100.0	3,405	
<b>Religion</b>									
Hindu	34.4	57,112	9.1	26.6	64.1	0.2	100.0	19,637	
Muslim	10.8	8,747	9.0	23.5	66.6	0.8	100.0	947	
Christian	46.3	1,567	12.4	35.2	52.4	0.0	100.0	725	
Sikh	42.2	1,270	13.1	18.2	68.7	0.0	100.0	536	
Buddhist/Neo-Buddhist	38.3	596	8.3	30.9	60.8	0.0	100.0	228	
Jain	12.6	213	(1.1)	(6.7)	(90.1)	(2.1)	100.0	27	
Other	63.7	232	29.2	40.5	30.3	0.0	100.0	147	
<b>Caste/tribe</b>									
Scheduled caste	41.8	13,188	9.0	26.9	63.9	0.2	100.0	5,510	
Scheduled tribe	49.9	5,725	15.3	38.2	46.4	0.1	100.0	2,859	
Other backward class	29.8	27,219	9.1	24.1	66.5	0.4	100.0	8,124	
Other	24.1	23,214	7.2	23.7	68.9	0.2	100.0	5,605	
Don't know	29.4	177	18.8	51.4	29.8	0.0	100.0	52	
<b>Wealth index</b>									
Lowest	40.7	11,031	11.7	32.2	55.7	0.3	100.0	4,494	
Second	33.8	12,666	10.7	26.5	62.6	0.1	100.0	4,276	
Middle	32.7	14,301	10.1	26.8	62.7	0.4	100.0	4,683	
Fourth	28.9	15,493	8.1	25.4	66.3	0.2	100.0	4,484	
Highest	26.5	16,260	6.3	22.3	71.2	0.2	100.0	4,313	
Total age 15-49	31.9	69,751	9.4	26.7	63.7	0.2	100.0	22,251	
Age 50-54	34.2	4,618	16.5	29.9	53.5	0.1	100.0	1,580	
Total age 15-54	32.0	74,369	9.9	26.9	63.0	0.2	100.0	23,831	

Note: Total includes men with missing information on education, religion, and caste/tribe, who are not shown separately.  
( ) Based on 25-49 unweighted cases.

wealth status. Twenty-seven percent of men in the highest wealth quintile drink alcohol, while 41 percent of men with no education drink alcohol. The proportion of alcohol drinkers who drink almost every day also decreases with increasing levels of education, from 12 percent of men in the lowest wealth quintile to 6 percent of men in the highest wealth quintile. The majority of men who drink alcohol (64 percent) drink less than once a week.

By religion, the proportion of men who drink alcohol is highest among Christian men (46 percent). Alcohol use is less common, yet still substantial, among Sikh men (42 percent), Buddhist/Neo-Buddhist men (38 percent), and Hindu men (34 percent). The proportion of men who drink alcohol is lowest among Muslims (11 percent).

### 13.4.1 Use of Tobacco and Alcohol by State

Table 13.10 presents state-level prevalence of the use of tobacco and alcohol by women and men age 15-49. The national figure of 11 percent of women using tobacco is the result of a great deal of variation across the country, from a low of 1 percent in Punjab and Himachal Pradesh to a high of 61 percent in Mizoram. The vast majority of women who use tobacco partake of tobacco by chewing it, rather than smoking it. The proportion of women who smoke cigarettes or *bidis* exceeds 5 percent in only two states, Mizoram (16 percent) and Tripura (8 percent). Use of tobacco is more common than use of alcohol in almost every state for both women and men. The proportion of women who consume alcohol exceeds 5 percent in eight states, reaching the highest levels in Arunachal Pradesh (34 percent) and Sikkim (19 percent). None of the women in Jammu and Kashmir reported drinking alcohol, and levels are also very low (less than 0.5 percent) in Tamil Nadu, Maharashtra, and all states in the North Region. Despite very high tobacco use in Mizoram, only 1 percent of women there consume alcohol.

The national figure of nearly 6 in 10 men using tobacco is also the result of fairly wide variation across states, ranging from a low of 28 percent in Goa to a high of 83 percent in Mizoram. Cigarette/*bidi* smoking ranges from a low of 14 percent of men in Goa to a high of 74 percent in Mizoram. Consumption of alcohol among men ranges from 13 percent in Jammu and Kashmir to 61 percent in Arunachal Pradesh.

The Northeast Region exhibits high rates of tobacco use, smoking of cigarettes/*bidis*, and drinking alcohol. The percentage of women who use tobacco exceeds the national average in all northeastern states, ranging from 19 percent in Sikkim to 61 percent in Mizoram (six times the national average). Tobacco use among men also exceeds the national average in all states in the Northeast Region, ranging from 62 percent in Sikkim to 83 percent in Mizoram. One plausible reason for such high levels of tobacco use may be the old social customs of serving ‘tobacco water’<sup>1</sup>, especially by women to guests and visitors. In addition

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<sup>1</sup> Tobacco water, known locally as *tuibur*, is a nicotine rich beverage manufactured by passing tobacco smoke through water. The *tuibur* is served to guests, family members, and friends visiting their house. *Tuibur* has a water receptacle, through which smoke is drawn. The women are, therefore, expected to smoke frequently and produce sufficient quantities of the tobacco water. This practice was also common in some parts of Assam, Manipur, and Nagaland, but is no longer common among the younger generation.

Table 13.10 Use of tobacco and alcohol by state

Percentage of women and men age 15-49 who use any kind of tobacco, who smoke cigarettes or *bidis*, and who drink alcohol by state, India, 2005-06

State	Women			Men		
	Who use any kind of tobacco	Who smoke cigarettes/ <i>bidis</i>	Who drink alcohol	Who use any kind of tobacco	Who smoke cigarettes/ <i>bidis</i>	Who drink alcohol
<b>India</b>	10.8	1.4	2.2	57.0	32.7	31.9
<b>North</b>						
Delhi	3.1	1.4	0.4	40.0	26.5	33.1
Haryana	3.3	2.6	0.1	46.3	39.8	27.7
Himachal Pradesh	1.2	1.1	0.1	40.0	33.6	29.5
Jammu & Kashmir	5.3	0.7	0.0	52.7	40.2	12.5
Punjab	0.8	0.5	0.2	33.8	20.9	43.4
Rajasthan	7.8	3.3	0.2	60.4	41.8	19.1
Uttaranchal	5.4	2.7	0.2	53.3	36.3	39.1
<b>Central</b>						
Chhattisgarh	25.2	0.2	11.4	68.6	31.8	52.3
Madhya Pradesh	16.0	0.5	2.1	68.5	40.2	30.8
Uttar Pradesh	12.1	2.4	0.3	64.3	35.5	25.3
<b>East</b>						
Bihar	8.0	4.9	1.0	66.5	29.0	34.9
Jharkhand	11.6	0.6	9.9	61.7	19.4	38.9
Orissa	31.4	0.3	7.3	68.8	27.1	39.6
West Bengal	15.6	1.3	1.7	70.2	50.1	34.0
<b>Northeast</b>						
Arunachal Pradesh	27.2	3.1	33.6	62.6	31.4	61.1
Assam	23.2	0.6	7.5	72.4	36.4	37.8
Manipur	39.6	4.3	1.8	69.5	37.9	47.4
Meghalaya	31.9	1.9	3.8	69.2	60.0	49.2
Mizoram	60.8	16.1	0.7	83.4	73.6	42.0
Nagaland	28.1	0.3	3.5	67.9	39.3	38.5
Sikkim	18.7	5.4	19.1	61.8	33.3	45.4
Tripura	48.2	7.9	9.6	76.0	56.7	40.9
<b>West</b>						
Goa	4.4	0.2	2.1	27.8	13.6	40.0
Gujarat	8.4	0.6	0.8	60.2	26.1	16.0
Maharashtra	10.5	0.1	0.4	48.2	17.7	24.0
<b>South</b>						
Andhra Pradesh	5.2	0.5	6.8	42.8	32.5	47.2
Karnataka	4.8	0.1	1.2	44.7	27.9	28.3
Kerala	1.8	0.1	0.7	43.5	35.8	45.2
Tamil Nadu	2.8	0.0	0.1	40.1	31.2	41.5

to the northeastern states, use of tobacco is also high (60 percent or higher) among men in all states in the East and Central Regions, Gujarat in the West, and Rajasthan in the North. Less than one-quarter of men smoke cigarettes/*bidis* in only four states (Goa, Maharashtra, Jharkhand, and Punjab). Fifty percent or more of men smoke cigarettes/*bidis* in West Bengal, Tripura, Meghalaya, and Mizoram.

The reported high prevalence of tobacco use in Northeast Region is consistent with other survey findings such as the Global School Personnel Survey in NE India, 2001 (Sinha et al., 2003) and the National Household Survey of Drug and Alcohol Abuse, 2002 (Srivastava et al., 2004).

A substantial number of men reported drinking alcohol despite official prohibition in Manipur (47 percent) and Mizoram (42 percent). In only four states do less than one-quarter of men consume alcohol: Jammu and Kashmir (13 percent), Gujarat (16 percent, also under

official prohibition), Rajasthan (19 percent), and Maharashtra (24 percent). Over 40 percent of men in the South Region consume alcohol, with the exception of Karnataka (28 percent). Among states in the North Region, consumption of alcohol is most common among men in Punjab (43 percent). In the Central Region, more than half of men in Chhattisgarh (52 percent) drink alcohol, compared with 25 percent in Uttar Pradesh. In the East Region, the prevalence is almost uniform in the four states, ranging from 35 percent in Bihar to 40 percent in Orissa.

### 13.5 HEALTH INSURANCE COVERAGE

Health insurance coverage in India is far from satisfactory, despite the existence of a large population living below the poverty line and/or illiterate, which lives under great health risks. Existing insurance is largely limited to a small proportion of people in the organized sector (IIPS and WHO, 2006).

NFHS-3 asked the respondent to the Household Questionnaire whether any member of the household is covered by a health scheme or health insurance. Health insurance schemes can be categorized as follows: (1) mandatory or government run schemes such as the Employee State Insurance Scheme (ESIS) or Central Government Health Scheme (CGHS), (2) schemes offered by nongovernmental organizations or community based health insurance, (3) employer-based schemes, and (4) voluntary health insurance schemes or private-for-profit schemes.

Table 13.11 shows the percentage of households in which at least one usual member is covered by a health scheme or health insurance, by type of health insurance coverage. Only 5 percent of households have at least one usual member covered by a health scheme or health insurance. Higher coverage is reported in urban households (10 percent), Jain households (24 percent), and households in the highest wealth quintile (16 percent). Less than 5 percent of scheduled caste, scheduled tribe, and other backward class households have a member with health insurance. Among households in the lowest three wealth quintiles, the proportion having a household member with health insurance does not exceed 2 percent. Survey data clearly highlight the poor health insurance coverage in the country, a situation urgently requiring remedial steps.

Respondents who reported someone in the household to be covered by a health insurance scheme were asked to identify the type of scheme or insurance. While it was possible to report more than one health insurance scheme, 98 percent of households with coverage reported only one type. Those with insurance are most likely to have privately purchased the insurance (28 percent) or to be covered under an ESIS (26 percent). The third most common form of coverage is under a CGHS (20 percent). The remaining households with insurance are either reimbursed by their employer (12 percent), covered under some other insurance with their employer (6 percent), or included in a community health insurance programme (5 percent). The type of health scheme or insurance coverage clearly indicates the predominance of mandatory schemes and employer-based schemes such as the Employee State Insurance Scheme (ESIS), Central Government Health Schemes (CGHS), insurance



Table 13.11 Health insurance coverage

Percentage of households in which at least one usual member is covered by a health scheme or health insurance, and percentage of households in which at least one usual member is covered by a health scheme or health insurance, by type of health insurance coverage, according to background characteristics, India, 2005-06

Background characteristic	Percentage of households covered by a health scheme or health insurance <sup>1</sup>	Number of households	Type of coverage among households in which at least one usual member is covered by a health scheme/health insurance								Number of households	
			Employee state insurance scheme (ESIS)	Central government health scheme (CGHS)	Community health insurance programme	Other health insurance through employer	Medical reimbursement from employer	Other privately purchased commercial health insurance	Other	Missing		
<b>Residence</b>												
Urban	10.4	35,579	28.8	21.3	2.5	6.2	12.9	27.2	2.6	1.3	3,704	
Rural	2.2	73,462	19.9	17.6	11.9	5.2	8.7	28.1	8.5	2.0	1,639	
<b>Religion of household head</b>												
Hindu	5.1	88,968	26.4	20.4	5.5	5.9	11.6	27.2	4.2	1.4	4,567	
Muslim	2.1	13,646	27.9	14.9	5.8	5.8	6.9	29.9	6.6	3.4	287	
Christian	7.3	2,952	21.0	17.4	1.3	10.6	16.3	27.5	7.9	1.7	215	
Sikh	6.5	1,710	30.4	24.5	9.9	3.6	11.0	18.7	4.4	0.6	112	
Buddhist/Neo-Buddhist	6.6	931	30.9	34.9	6.6	1.0	8.8	16.4	2.3	0.0	61	
Jain	23.7	370	9.8	14.1	1.9	2.0	15.0	52.0	3.7	2.1	88	
Other	3.2	437	14.7	12.9	8.4	2.9	41.0	17.2	4.4	0.6	14	
<b>Caste/tribe of household head</b>												
Scheduled caste	3.3	20,982	38.5	23.3	4.7	4.6	12.7	15.5	3.3	1.3	703	
Scheduled tribe	2.6	9,189	23.1	25.9	4.7	6.5	12.2	23.5	3.6	1.0	242	
Other backward class	3.8	43,216	27.8	17.1	8.3	7.0	8.9	25.8	5.7	1.8	1,638	
Other	7.8	34,821	22.3	20.9	3.5	5.7	13.1	31.9	3.7	1.5	2,702	
Don't know	10.9	492	(14.9)	(6.5)	(21.9)	(2.2)	(0.0)	(32.9)	(21.7)	(0.0)	54	
<b>Wealth index</b>												
Lowest	0.1	22,497	(34.1)	(18.4)	(6.2)	(8.0)	(12.1)	(15.8)	(7.4)	(0.0)	31	
Second	0.7	21,617	23.1	9.3	13.2	2.5	2.9	38.8	9.3	1.3	141	
Middle	2.2	21,652	26.4	11.8	15.2	5.8	6.0	24.5	9.5	1.4	486	
Fourth	5.1	21,370	34.2	15.6	8.8	5.9	8.7	22.1	5.5	1.3	1,084	
Highest	16.4	21,905	23.6	23.1	2.7	6.1	13.6	29.1	3.2	1.6	3,602	
Total	4.9	109,041	26.1	20.2	5.4	5.9	11.6	27.5	4.4	1.5	5,343	

Note: Total includes households with missing information on religion and caste/tribe, who are not shown separately.

( ) Based on 25-49 unweighted cases.

<sup>1</sup> At least one usual household member is covered by a health scheme or health insurance.

through employers, and medical reimbursement from employers rather than voluntary health insurances/schemes.

Private providers of health insurance have only recently emerged as big players in the Indian health insurance market, after liberalization of the economy. While urban households are more likely to have insurance than rural households, they are equally likely for their coverage to be privately purchased. Those most likely to have obtained their coverage through private channels are Jain households (52 percent). Privately purchased commercial health insurance comprises a smaller component of coverage among scheduled castes (16 percent), scheduled tribes (24 percent), and other backward classes (26 percent) than households of 'other' castes (32 percent). Surprisingly, households in the second wealth quintile (39 percent) are more likely than households at other levels to rely on private insurance, among those households that have coverage.

The ESIS is relied upon by 29 percent of urban households that have insurance, compared with only 20 percent of rural households with insurance. Scheduled castes are more likely than any other caste or tribe to rely on ESIS (39 percent of households with insurance).

The percentage of households that rely on coverage under CGHS (20 percent) is lower than ESIS, but the distribution across background characteristics is similar to the pattern seen for ESIS. CGHS prevalence is higher among households in urban areas (21 percent, compared with 18 percent in rural areas), among Buddhist/Neo-Buddhist households (35 percent), scheduled tribe households (26 percent), and households in the highest wealth quintile (23 percent).

Community health insurance programmes (CHIP) are an emerging scheme introduced recently in some states. Overall, coverage with CHIP is reported by only 5 percent of households that have insurance. CHIP is primarily rural-based; 12 percent of rural households with insurance are covered with CHIP, compared with only 3 percent of urban households.

Health insurance coverage in the form of medical reimbursement from an employer is obtained by 12 percent of households that have insurance. Such coverage is more common in urban areas (13 percent of those with insurance) than rural areas (9 percent) and generally increases with increasing wealth quintiles.

### **13.6 SOURCE OF HEALTH CARE**

Accessibility and availability of health care is important for ensuring a community's general health status and reflects the reach and coverage of health facilities. Respondents to the household interview were asked to identify the place where members of the household generally go when they get sick. The source of health care is categorized under three broad headings, namely (a) public medical sector, (b) private medical sector, and (c) other sources. Table 13.12 presents the distribution of households by source of health care generally used when household members get sick, according to residence and the wealth index. Nearly two-thirds of households (65 percent) generally seek health care from the private medical sector, while one-third of households seek care from the public medical sector.

The private medical sector remains the primary source of health care for the majority of households in both urban areas (70 percent) and rural areas (63 percent). The main provider of care among private providers is a private doctor or clinic. Forty-six percent of urban households and 36 percent of rural households go to a private doctor or private clinic for health care. The next most common sources of health care are public and private hospitals, each relied upon by 16 percent of households. Community health centres (CHC)/rural hospitals/Primary Health Centres (PHC) are relied upon by 15 percent of households. Private hospitals are the second most common source of health care among urban households and CHC/rural hospitals/PHC are the second most common source of health care among rural households.

Table 13.12 Source of health care

Percent distribution of households by the source of health care that household members generally use when they get sick, according to residence and the wealth index, India, 2005-06

Source	Residence		Wealth index					Total
	Urban	Rural	Lowest	Second	Middle	Fourth	Highest	
<b>Public medical sector</b>	29.6	36.8	39.4	37.1	39.0	33.9	22.6	34.4
Government/municipal hospital	22.6	12.1	10.5	13.4	18.3	20.1	15.6	15.5
Government dispensary	1.5	1.5	1.1	1.2	1.7	1.8	1.6	1.5
UHC/UHP/UFWC	0.4	0.2	0.2	0.2	0.4	0.3	0.3	0.3
CHC/rural hospital/PHC	4.2	20.5	24.3	20.0	16.8	10.3	4.1	15.1
Sub-centre	0.1	2.0	2.8	1.9	1.3	0.7	0.2	1.4
Anganwadi/ICDS centre	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1
Government mobile clinic	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Other public medical sector	0.8	0.3	0.1	0.3	0.5	0.6	0.9	0.5
<b>NGO or trust hospital/clinic</b>	0.5	0.3	0.3	0.3	0.3	0.5	0.5	0.4
<b>Private medical sector</b>	69.5	62.5	59.9	62.2	60.4	65.3	76.4	64.8
Private hospital	20.5	13.8	7.0	11.2	15.9	19.5	26.6	16.0
Private doctor/clinic	45.9	36.3	36.0	37.9	35.4	40.4	47.5	39.5
Private paramedic	0.3	1.1	1.5	0.9	0.8	0.8	0.3	0.9
Vaidya/hakim/homeopath	0.7	0.4	0.4	0.4	0.4	0.4	0.7	0.5
Traditional healer	0.0	0.3	0.6	0.3	0.1	0.1	0.0	0.2
Pharmacy/drugstore	0.7	0.8	0.9	1.0	0.7	0.8	0.5	0.8
Dai (TBA)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other private medical sector	1.4	9.8	13.5	10.5	7.1	3.3	0.7	7.1
<b>Other source</b>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Shop	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Home treatment	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Other	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	35,579	73,462	22,497	21,617	21,652	21,370	21,905	109,041

UHC = Urban health centre; UHP = Urban health post; UFWC = Urban family welfare centre; CHC = Community health centre; PHC = Primary Health Centre; ICDS = Integrated Child Development Services; NGO = Nongovernmental organization; TBA = Traditional birth attendant

Households in the lowest three wealth quintiles rely on the public and private medical sector in about equal proportions. It is among the fourth and particularly the highest wealth quintiles that reliance on the public sector declines and reliance on the private sector increases. Thirty-nine percent of households in the lowest wealth quintile rely on the public medical sector, compared with 23 percent of households in the highest wealth quintile. However, private doctors and private clinics are the most commonly used provider of health care among households in all wealth quintiles. Use of private hospitals increases with increasing wealth quintiles, whereas use of CHC/rural hospitals/PHC decreases with increasing wealth quintiles. Overall, the private medical sector dominates health care delivery in the country, and use of private doctors and private clinics is the primary source of health care among rich and poor alike.

### 13.6.1 Reasons for Not Using Government Facilities by State

It was shown in Table 13.12 that two-thirds of India's households generally rely on private sector sources for health care, but reliance on the private sector varies greatly across states. Table 13.13 shows the percentage of households that do not generally use government health facilities. The percentage of households that do not generally use government health facilities ranges from a very low 8 percent in Sikkim to an overwhelming 93 percent in Bihar. The distribution of states can be divided into three parts. Over two-thirds of households do not generally use government facilities in 11 states. Between one-third and two-thirds of

households do not generally use government facilities in 10 states. Less than one-third of households do not rely on government facilities for health care in eight states (Rajasthan in the North Region, Orissa in the East Region, and six states in the Northeast Region).

Table 13.13 Reasons for not using government health facilities by state

Percentage of households whose members do not generally use a government health facility when they are sick, and among households whose members do not generally use a government health facility when they are sick, percentage giving specific reasons for not utilizing a government health facility, according to state, India, 2005-06

State	Percentage of households that do not generally use government health facilities	Reasons for not generally using government health facilities among households that do not generally use government health facilities					
		No nearby facility	Facility timing not convenient	Health personnel often absent	Waiting time too long	Poor quality of care	Other reason
<b>India</b>	65.6	46.8	13.1	9.2	24.8	57.7	3.9
<b>North</b>							
Delhi	70.7	37.2	18.4	2.3	57.4	36.3	1.8
Haryana	72.3	42.1	12.9	7.4	25.2	54.9	5.2
Himachal Pradesh	17.3	34.1	11.9	5.6	31.3	43.1	5.0
Jammu & Kashmir	37.1	33.2	9.3	5.9	22.4	55.3	7.3
Punjab	80.8	42.2	18.1	8.8	22.7	52.3	7.9
Rajasthan	29.8	35.3	9.1	6.7	17.2	62.9	2.1
Uttaranchal	55.6	49.2	14.7	14.4	37.4	64.1	2.6
<b>Central</b>							
Chhattisgarh	63.7	56.4	9.2	6.3	19.0	41.3	9.1
Madhya Pradesh	62.6	50.8	10.0	7.7	26.4	62.9	1.6
Uttar Pradesh	84.7	53.5	4.6	7.4	20.4	65.1	2.5
<b>East</b>							
Bihar	93.3	44.9	8.4	21.4	14.2	83.7	2.1
Jharkhand	77.7	55.3	8.5	9.7	6.5	56.4	7.5
Orissa	24.0	61.0	6.9	7.7	9.7	38.9	5.6
West Bengal	71.2	54.3	14.8	4.3	35.2	41.4	4.7
<b>Northeast</b>							
Arunachal Pradesh	17.5	50.1	24.4	7.0	18.3	36.7	6.5
Assam	34.8	48.9	6.6	6.1	11.2	39.4	7.3
Manipur	21.0	29.8	20.2	11.2	19.4	46.4	10.6
Meghalaya	35.2	33.4	17.2	14.1	21.7	33.3	8.6
Mizoram	9.4	26.4	7.2	2.2	23.2	42.5	8.6
Nagaland	47.9	54.1	14.7	8.3	14.6	29.8	8.3
Sikkim	8.2	8.4	22.0	4.7	50.7	47.7	5.5
Tripura	20.1	29.4	20.4	6.6	23.8	47.1	9.0
<b>West</b>							
Goa	70.4	41.8	14.4	4.4	27.8	29.4	11.2
Gujarat	72.5	45.0	16.0	6.9	31.6	42.6	5.8
Maharashtra	70.3	37.5	16.1	5.3	30.1	56.4	2.9
<b>South</b>							
Andhra Pradesh	74.3	49.2	18.1	12.8	23.4	63.3	3.2
Karnataka	64.0	45.1	25.1	14.3	31.8	50.8	5.2
Kerala	50.0	47.7	20.5	14.5	25.8	34.2	9.8
Tamil Nadu	47.0	28.3	23.0	3.0	32.3	55.4	3.4

In all households that generally do not seek health care from government sources when household members fall sick, the household respondent was asked why household members do not generally use government health facilities when they are sick. The most commonly reported reason for not using government facilities is the poor quality of care, reported by 58 percent of households that do not generally use government facilities. The second most commonly reported reason is that no government facility is nearby, reported by 47 percent of households. The third most commonly reported reason, reported by one-quarter of households, is that waiting times at government facilities are too long. It seems clear that

private providers compete with government providers and are perceived by many to provide better quality services.

Five of the eight states in which at least two-thirds of households use government facilities are in the Northeast Region. One plausible reason for the high dependence on government health facilities in the Northeast is because the availability of private providers is very low. Private health care providers that are available tend to be concentrated in bigger urban centres such as state capitals and district headquarters. Low availability of private facilities is primarily due to the geography of the region, which has difficult terrain and scattered settlements in the rural areas. Therefore, for private providers it may not be commercially viable to operate health facilities in the Northeast Region. Among the minority of households that do not rely on government facilities in those states, the most commonly reported reason is that there is no government facility nearby, the most commonly reported reason in four of the eight northeastern states. Poor quality of care is the most commonly reported reason in three of the eight states.

In the North Region, the percentage of households that do not generally use government health facilities ranges from 17 percent in Himachal Pradesh to 81 percent in Punjab. Non-use of government services is also very high in Haryana (72 percent) and Delhi (71 percent). The main reason cited for non-use in six of the seven states in the North Region is poor quality of care, a reason cited by over half the households that do not rely on government facilities in five states. The second most commonly cited reason is that there is no nearby facility. Households in Delhi are much more likely than households in neighbouring states in the North Region to report that their reason for not using government facilities is that the waiting time is too long, reported by over half of households that rely on private health care sources.

States in the Central Region also show high levels of non-use of government facilities, as high as 85 percent in Uttar Pradesh. The main reason for not using government facilities (cited by about two-thirds of households in two out of three states in the Central Region) is poor quality of care. In Chhattisgarh the primary reason is the lack of a nearby facility. Three of the four states in the East Region are among the highest in the percentage of households not using government health facilities, led by Bihar (93 percent). Only in Orissa is there heavy use of government facilities, with three-quarters of households relying on government facilities. The two main reasons cited for not using government services are poor quality of care and the lack of a nearby facility.

Non-use of government health facilities is equally high across the states in the West Region, where 7 in 10 households do not use government facilities. The most commonly cited reason for non-use given in two out of three states is the lack of a nearby facility. Among states in the South Region, the percentage of households not using government facilities ranges from 47 percent in Tamil Nadu to 74 percent in Andhra Pradesh. The most commonly cited reason for non-use in three of the four states is poor quality of care. In those states, nearly half the households that do not use government health facilities report that there is no nearby facility. Long waiting times and inconvenient facility times are two other important reasons that households do not use government health facilities.

## 13.7 RECENT VISITS TO A HEALTH FACILITY

The provision of high quality health care can have a positive influence on utilization, which in turn can improve the quality of life. Women and men who visited a health facility for themselves or their children in the three months preceding the survey were asked about the quality of care received at the health facility most recently visited. Tables 13.14.1 and 13.14.2 present the percentage of women and men who recently visited a health facility or health camp, and their views about some key quality of care characteristics.

Over one-third (36 percent) of women visited a health facility or camp for themselves or their children in the three months preceding the survey. The percent of women who recently visited a health facility increases gradually with increases in the level of education and the wealth index.

Table 13.14.1 Recent visits to a health facility: Women								
Percentage of women age 15-49 who visited a health facility or camp in the three months preceding the survey and, among women who visited a health facility or camp, median waiting time and quality of care indicators for the last visit by background characteristics, India, 2005-06								
Background characteristic	Percentage who visited a health facility or camp <sup>1</sup>	Number of women	Among women who visited a health facility or camp					
			Median waiting time for service <sup>2</sup>	Percentage who said health worker was responsive to their problems and needs	Percentage who said the facility was very clean	Number of women	Percentage who said health worker respected their need for privacy <sup>3</sup>	Number of women for whom privacy was needed
<b>Age</b>								
15-19	25.8	24,811	15.8	96.0	63.1	6,380	85.8	4,270
20-34	42.2	60,852	20.7	96.1	64.0	25,634	87.5	17,188
35-49	33.3	38,722	30.0	96.1	66.6	12,870	87.5	8,866
<b>Residence</b>								
Urban	41.5	40,817	20.4	96.8	73.2	16,890	90.2	11,765
Rural	33.6	83,568	20.9	95.7	59.5	27,994	85.4	18,558
<b>Education</b>								
No education	31.1	50,487	30.0	94.7	55.7	15,668	82.8	9,720
<5 years complete	37.8	9,918	30.1	95.6	59.2	3,746	84.4	2,476
5-7 years complete	38.5	18,820	30.1	96.1	64.3	7,242	87.0	4,963
8-9 years complete	39.2	17,383	20.1	96.6	67.6	6,801	89.0	4,734
10-11 years complete	39.1	12,887	20.2	97.7	74.1	5,027	92.2	3,720
12 or more years complete	43.1	14,882	15.6	98.0	79.4	6,400	92.6	4,710
<b>Marital status</b>								
Never married	22.2	25,462	15.4	96.4	67.5	5,642	87.5	3,678
Currently married	40.3	93,089	20.9	96.1	64.2	37,396	87.3	25,396
Widowed/divorced/ separated/deserted	31.7	5,834	30.2	95.2	64.4	1,845	86.2	1,250
<b>Religion</b>								
Hindu	35.3	100,151	20.6	96.1	64.9	35,278	87.0	23,973
Muslim	41.1	16,936	30.1	95.8	61.4	6,941	85.3	4,273
Christian	36.5	3,053	30.1	97.1	73.0	1,113	95.2	921
Sikh	37.0	2,222	10.0	98.0	69.4	822	93.4	577
Buddhist/Neo-Buddhist	42.5	1,010	20.4	93.6	59.1	429	90.8	366
Jain	39.1	406	10.9	99.1	84.3	159	98.3	117
Other	22.6	484	30.2	92.2	44.5	109	82.8	73
<b>Caste/tribe</b>								
Scheduled caste	36.7	23,125	20.7	95.3	61.4	8,466	85.2	5,527
Scheduled tribe	27.0	10,119	20.9	94.2	51.6	2,730	85.0	1,943
Other backward class	35.3	48,880	25.4	95.7	66.2	17,209	86.6	11,826
Other	39.2	41,207	20.3	97.2	67.0	16,125	89.4	10,816
Don't know	35.2	649	30.7	96.4	59.6	229	85.5	124
<b>Wealth index</b>								
Lowest	28.8	21,718	30.0	93.5	48.9	6,223	78.4	3,648
Second	33.0	23,616	30.1	95.2	54.9	7,774	83.0	4,904
Middle	35.4	25,088	30.1	95.8	60.8	8,874	86.2	5,969
Fourth	39.5	26,106	20.7	96.3	68.6	10,279	88.9	7,223
Highest	42.2	27,856	15.7	98.1	78.9	11,734	92.9	8,580

Continued...

Table 13.14.1 Recent visits to a health facility: Women—Continued

Background characteristic	Percentage who visited a health facility or camp <sup>1</sup>	Number of women	Among women who visited a health facility or camp					
			Median waiting time for service <sup>2</sup>	Percentage who said health worker was responsive to their problems and needs	Percentage who said the facility was very clean	Number of women	Percentage who said health worker respected their need for privacy <sup>3</sup>	Number of women for whom privacy was needed
<b>Health facility last visited</b>								
Public sector	na	na	30.3	92.3	47.7	15,505	81.5	10,394
NGO or trust	na	na	30.2	99.2	79.5	269	92.0	181
Private sector	na	na	16.0	98.2	73.8	28,618	90.6	19,474
Other	na	na	20.2	99.0	61.6	424	79.8	214
Total	36.2	124,385	20.7	96.1	64.6	44,884	87.2	30,324

Note: Total includes women with missing information on education, religion, caste/tribe, and health facility last visited, who are not shown separately.  
na = Not applicable  
NGO = Nongovernmental organization  
<sup>1</sup> For any reason for herself or her children.  
<sup>2</sup> Median waiting time before service was received. Excludes women who did not receive the service they went for.  
<sup>3</sup> Excludes women who said that privacy was not needed.

Overall, high levels of satisfaction are reported for quality of care received. Ninety-six percent of women reported that the health care provider was responsive to their problems and needs. More than 9 out of 10 women across all background characteristics shown in Table 13.14.1 reported that the health worker was responsive to their needs. Nearly 9 in 10 women (87 percent) reported that the health care provider respected their need for privacy if privacy was needed. At least 80 percent reported similarly across every background characteristic shown in the table. These are very high levels of reported satisfaction with health providers. However, there is some variation in meeting privacy needs of clients by education and the wealth index of the client.

Whether or not the health facility last visited was very clean receives mixed reviews. Overall, almost two-thirds (65 percent) of women reported that their last visit to a health facility was to a facility that was very clean. The percentage of women who reported that the health facility was very clean increases steadily with increasing education and increasing wealth quintiles. This may be a reflection of the type of facility women of varying education levels and varying wealth statuses visit. More than three-quarters of women in the highest education and wealth categories reported the last facility visited to have been very clean, compared with only about half of women in the lowest education and wealth quintiles. Eighty percent of women who visited an NGO or trust health facility and 74 percent of women who visited a private sector health facility reported the facility to be very clean. However, only 48 percent of women who visited a public sector health facility reported the facility to have been very clean.

Overall, the median waiting time before being offered services of 21 minutes seems reasonable. However, it is notable that median waiting times double from 15 minutes to 30 minutes between women at the highest and lowest levels of education and wealth status. Median waiting times do not vary by urban-rural residence.

Table 13.14.2 Recent visits to a health facility: Men

Percentage of men age 15-49 who visited a health facility or camp in the three months preceding the survey and, among men who visited a health facility or camp, median waiting time and quality of care indicators for the last visit by background characteristics, India, 2005-06

Background characteristic	Among men who visited a health facility or camp							
	Percentage who visited a health facility or camp <sup>1</sup>	Number of men	Median waiting time for service <sup>2</sup>	Percentage who said health worker was responsive to their problems and needs	Percentage who said the facility was very clean	Number of men	Percentage who said health worker respected their need for privacy <sup>3</sup>	Number of men for whom privacy was needed
<b>Age</b>								
15-19	22.0	13,008	15.5	94.8	59.0	2,840	86.6	1,535
20-34	31.7	32,586	20.6	94.7	61.0	10,296	85.3	6,162
35-49	32.0	24,157	30.1	94.9	61.2	7,715	87.0	4,808
<b>Residence</b>								
Urban	30.2	25,504	20.2	95.7	67.8	7,675	87.5	4,988
Rural	29.9	44,247	20.9	94.3	56.7	13,176	85.1	7,516
<b>Education</b>								
No education	25.7	12,571	25.3	94.5	52.7	3,226	84.3	1,832
<5 years complete	30.6	7,109	30.2	92.2	57.9	2,162	83.3	1,326
5-7 years complete	30.6	11,523	20.9	94.4	60.0	3,518	85.5	2,082
8-9 years complete	30.5	14,398	20.3	95.6	61.4	4,382	85.8	2,548
10-11 years complete	31.4	10,380	20.4	94.8	64.5	3,238	88.1	2,046
12 or more years complete	31.5	13,754	15.9	95.7	65.5	4,320	87.9	2,668
<b>Marital status</b>								
Never married	22.5	25,307	15.6	95.0	61.4	5,665	87.2	3,319
Currently married	34.4	43,501	25.7	94.7	60.8	14,950	85.8	9,044
Widowed/divorced/separated/deserted	25.1	942	30.1	92.7	49.7	235	81.5	141
<b>Religion</b>								
Hindu	29.7	57,112	20.6	95.1	60.6	16,908	86.1	10,172
Muslim	31.5	8,747	25.7	92.8	58.4	2,755	84.9	1,636
Christian	31.6	1,567	30.2	96.0	66.8	494	93.9	395
Sikh	31.0	1,270	10.5	96.1	80.1	393	80.2	94
Buddhist/Neo-Buddhist	30.2	596	15.8	91.8	59.0	180	82.0	130
Jain	31.6	213	15.3	93.2	66.8	67	85.7	39
Other	22.2	232	15.8	95.4	54.9	51	86.4	37
<b>Caste/tribe</b>								
Scheduled caste	30.6	13,188	20.6	94.3	58.2	4,018	86.1	2,347
Scheduled tribe	25.2	5,725	20.9	93.8	50.8	1,438	82.8	829
Other backward class	30.4	27,219	20.9	95.1	62.2	8,243	86.5	4,948
Other	30.4	23,214	20.2	94.8	62.7	7,031	86.3	4,304
Don't know	43.9	177	30.5	99.0	59.3	78	80.3	55
<b>Wealth index</b>								
Lowest	26.5	11,031	25.2	92.4	48.5	2,918	79.7	1,492
Second	29.9	12,666	20.9	93.8	53.1	3,773	83.4	2,156
Middle	30.2	14,301	30.0	95.1	57.7	4,308	85.7	2,597
Fourth	30.9	15,493	20.7	94.9	65.4	4,774	87.5	3,117
Highest	31.3	16,260	15.8	96.6	71.9	5,078	89.9	3,143
<b>Health facility last visited</b>								
Public sector	na	na	30.2	90.2	45.5	7,366	78.7	4,348
NGO or trust	na	na	30.3	97.8	84.1	210	85.2	152
Private sector	na	na	15.9	97.3	69.0	13,145	90.2	7,936
Other	na	na	(20.4)	(98.5)	(74.7)	98	(79.2)	48
Total age 15-49	30.0	69,751	20.6	94.8	60.8	20,851	86.1	12,505
Age 50-54	31.3	4,618	30.0	93.8	62.0	1,441	85.7	915
Total age 15-54	30.1	74,369	20.7	94.7	60.9	22,291	86.1	13,419

Note: Total includes men with missing information on education, religion, caste/tribe, and health facility last visited, who are not shown separately.

na = Not applicable

NGO = Nongovernmental organization

( ) Based on 25-49 unweighted cases.

<sup>1</sup> For any reason for himself or his children.

<sup>2</sup> Median waiting time before service was received. Excludes men who did not receive the service they went for.

<sup>3</sup> Excludes men who said that privacy was not needed.



Overall levels of satisfaction with the quality of care are about the same among men as they are among women. Ninety-five percent of men reported that the health care provider was responsive to their needs (96 percent of women reported similarly). Nearly 9 in 10 men (86 percent) reported that the health care provider respected their need for privacy if privacy was needed (87 percent of women reported similarly). Sixty-one percent of men reported that their last visit to a health facility was to a facility that was very clean (65 percent of women reported similarly). The median waiting time before being offered services of 21 minutes is the same as that reported by women. In general, patterns by background characteristics for men are similar to what is reported by women.

### 13.7.1 Recent Contacts with Health Workers

Grass-roots health personnel can provide a wide array of health services. Table 13.15 presents the percentage of women who had any contact with a health worker in the three months preceding the survey by type of health worker. The term 'health worker' encompasses auxiliary nurse-midwives (ANM), lady health visitors (LHV), *anganwadi* workers (AWW), accredited social health activists (ASHA), multipurpose workers (MPW), and other community health workers.

Table 13.15 Recent contacts with health workers

Percentage of women who had any contact with a health worker in the 3 months preceding the survey by type of health worker, and among those who had contact with a health worker, percentage who met a worker at home, at an *anganwadi* centre, at a health facility or camp, or elsewhere, according to background characteristics, India, 2005-06

Background characteristic	Percentage of women who had any contact with a health worker in the past 3 months						Number of women	Among women who met a health worker in the past 3 months, percentage who met a worker:				Number of women who met a health worker
	ANM/LHV	AWW	ASHA	MPW	Other community health worker	Any health worker		At home	At an <i>anganwadi</i> centre	At a health facility or camp	Elsewhere	
<b>Age</b>												
15-19	7.3	6.5	0.1	0.4	0.1	11.0	24,811	62.8	29.4	19.4	10.8	2,731
20-34	16.4	13.0	0.1	0.8	0.4	23.6	60,852	63.1	30.8	20.3	9.0	14,340
35-49	7.4	6.2	0.1	0.7	0.2	11.3	38,722	74.2	21.5	13.9	11.5	4,386
<b>Residence</b>												
Urban	6.8	4.1	0.0	0.7	0.3	10.0	40,817	62.7	20.1	25.2	7.3	4,083
Rural	14.2	12.3	0.1	0.7	0.2	20.8	83,568	66.0	30.8	17.4	10.3	17,374
<b>Education</b>												
No education	12.4	10.2	0.1	0.6	0.3	18.3	50,487	68.7	26.5	14.9	9.2	9,245
<5 years complete	13.0	11.1	0.1	1.0	0.2	19.1	9,918	62.8	33.0	20.0	10.6	1,891
5-7 years complete	12.4	10.4	0.1	0.7	0.2	18.1	18,820	62.0	32.5	20.5	9.4	3,405
8-9 years complete	12.3	10.3	0.1	0.8	0.3	18.3	17,383	63.4	31.2	20.5	9.9	3,183
10-11 years complete	10.3	8.3	0.1	0.7	0.3	14.9	12,887	65.7	28.8	22.6	10.7	1,923
12 or more years complete	8.8	5.8	0.1	0.5	0.4	12.2	14,882	60.3	24.3	28.2	10.7	1,810
<b>Marital status</b>												
Never married	3.4	4.2	0.1	0.3	0.1	6.5	25,462	69.5	22.7	10.8	12.2	1,650
Currently married	14.4	11.3	0.1	0.8	0.3	20.6	93,089	64.8	29.3	19.7	9.4	19,204
Widowed/divorced/separated/ deserted	6.6	6.4	0.0	0.4	0.2	10.4	5,834	71.0	27.7	13.4	13.9	604
<b>Religion</b>												
Hindu	11.8	9.8	0.1	0.7	0.3	17.3	100,151	64.9	29.4	18.4	9.8	17,355
Muslim	12.8	9.0	0.0	0.4	0.3	18.3	16,936	71.7	22.7	20.1	8.0	3,095
Christian	8.6	6.8	0.1	0.6	0.2	12.6	3,053	56.6	32.5	22.7	12.0	383
Sikh	6.4	7.3	0.0	0.6	0.1	11.5	2,222	55.3	29.8	31.6	27.8	256
Buddhist/Neo-Buddhist	14.8	13.5	0.3	1.7	0.5	21.2	1,010	59.2	38.6	21.9	2.8	215
Jain	3.5	1.5	0.0	0.0	0.1	4.7	406	*	*	*	*	19
Other	13.8	16.1	0.0	0.3	0.0	21.5	484	19.8	76.5	12.7	4.0	104
<b>Caste/tribe</b>												
Scheduled caste	13.7	11.4	0.1	0.8	0.2	19.9	23,125	63.4	31.9	20.3	9.3	4,593
Scheduled tribe	12.5	13.5	0.1	1.2	0.3	19.8	10,119	53.6	44.5	14.3	11.0	2,006
Other backward class	12.0	9.4	0.1	0.5	0.2	17.2	48,880	67.3	27.6	17.4	9.0	8,427
Other	10.4	7.7	0.1	0.7	0.3	15.2	41,207	67.8	23.0	21.4	10.8	6,245
Don't know	14.4	15.7	0.0	0.4	0.4	21.9	649	75.1	28.5	9.7	5.1	142

Continued...

Table 13.15 Recent contacts with health workers—Continued

Background characteristic	Percentage of women who had any contact with a health worker in the past 3 months						Among women who met a health worker in the past 3 months, percentage who met a worker:					Number of women who met a health worker
	ANM/LHV	AWW	ASHA	MPW	Other community health worker	Any health worker	At home	At an <i>anganwadi</i> centre	At a health facility or camp	Else-where		
<b>Wealth index</b>												
Lowest	14.7	12.9	0.1	0.6	0.2	21.7	21,718	63.5	33.9	15.5	10.2	4,709
Second	14.6	12.5	0.1	0.7	0.2	21.1	23,616	65.4	30.9	16.8	9.7	4,985
Middle	12.8	10.7	0.1	0.7	0.2	18.5	25,088	65.1	30.5	19.2	8.9	4,645
Fourth	11.1	8.7	0.1	0.9	0.3	16.6	26,106	67.6	26.1	20.7	9.5	4,329
Highest	7.0	4.4	0.1	0.5	0.3	10.0	27,856	65.4	17.5	24.9	10.8	2,788
Total	11.8	9.6	0.1	0.7	0.3	17.3	124,385	65.3	28.8	18.9	9.7	21,457

Note: Total includes women with missing information on education, religion, and caste/tribe, who are not shown separately.

ANM = Auxiliary nurse midwife; LHV = Lady health visitor; AWW = *Anganwadi* worker; ASHA = Accredited social health activist;

MPW = Multipurpose worker

\* Percentage not shown; based on fewer than 25 unweighted cases.

Women are more likely to have contact with an ANM/LHV or an AWW than any other type of community health worker. Twelve percent of women had contact with an ANM/LHV and 10 percent with an *anganwadi* worker in the three months prior to the survey. Other health workers such as ASHA and MPW were seen by less than 1 percent of women.

Contact with a community health worker is twice as common for rural women (21 percent) as urban women (10 percent). It is similarly more common for women with no education or fewer than 10 years of schooling (about 18 percent) than it is for women who have had 12 or more years of schooling (12 percent). Similarly, women in lower wealth quintiles are more likely to have seen a community health worker (22 percent) than are women in the highest wealth quintile (10 percent).

Women who had recent contact with a health worker (in the three months preceding the survey) were asked to identify where the visit took place. Women who had more than one contact with a health worker or contact with more than one kind of health worker reported on all the places in which contact was made. Thus, the column percentages shown in Table 13.15 are independent of each other and do not add to 100 percent. Women have contact with community health workers mainly at home or at *anganwadi* centres. Two-thirds of women who had recent contacts with a community health worker were seen in their homes, and this is generally true for women with varying background characteristics. Approximately 3 in 10 women who recently saw a community health worker made contact with a worker at an *anganwadi* centre. Approximately one-fifth of women who had a recent contact with a community health worker made contact at a health facility or camp. Although contact with a community health worker at a health facility is rather low, it increases with increasing education and wealth quintiles.

### 13.7.2 Matters Discussed with Health Workers

Women who had contact with a community health worker in the three months prior to the survey were asked to identify all the topics that were discussed with the health worker. Table 13.16 presents the percentage of women who discussed each topic. By far the most commonly reported topic discussed with a community health worker is immunization.

Three specific topics top the list of matters discussed with never married women: immunization (27 percent), followed by disease prevention (24 percent) and medical treatment for themselves (20 percent). Topics such as nutrition (8 percent), family life education (7 percent), and menstrual hygiene (6 percent) were also discussed, but not with as many women. The topic most commonly discussed with women who are either pregnant or have a young child under three years of age is immunization (discussed with 70 percent of such women who saw a community health worker). The next most commonly discussed topics among women in this group are antenatal care (13 percent) and supplementary food (11 percent). Non-users of family planning are slightly less likely to have discussed family planning with a community health worker than are women who use family planning. Users and non-users of family planning generally discuss the same topics in equal measure.

**Table 13.16 Matters discussed during contacts with a health worker**  
Among women who had at least one contact with a health worker in the 3 months preceding the survey, percentage who discussed specific topics with the worker, India, 2005-06

Topic discussed	Never married women	Ever-married women		
		Pregnant women and women with children under age 3	Non-pregnant women <sup>1</sup>	
		Current contraceptive users	Current non-users	
Family planning	2.2	9.0	11.3	8.1
Immunization	26.5	70.1	54.6	68.1
Antenatal care	1.1	12.5	1.4	3.7
Delivery care	0.5	4.4	1.1	3.5
Delivery preparedness	0.3	1.0	0.4	0.9
Postnatal care	0.2	2.3	1.4	2.3
Disease prevention	24.1	3.9	11.6	5.6
Medical treatment for self	20.1	6.4	13.6	9.3
Treatment for sick child	2.2	5.9	6.4	5.5
Treatment for other person	4.4	0.6	2.3	1.4
Malaria control	7.4	1.3	5.2	1.8
Supplementary food	5.1	10.7	7.6	9.9
Growth monitoring for children	2.4	7.5	7.2	7.2
Early childhood care	1.1	2.4	3.0	2.0
Pre-school education	5.3	3.8	6.8	3.9
Nutrition or health education	7.6	4.1	6.2	4.1
Family life education	7.4	1.4	3.9	1.9
Menstrual hygiene	6.3	0.2	1.3	0.8
Other	6.8	0.9	2.7	1.6
Number of women	1,650	11,680	9,641	7,871

Note: Table includes only women who had contacts with auxiliary nurse midwives (ANM), lady health visitors (LHV), *anganwadi* workers (AWW), accredited social health activists (ASHA), multipurpose workers (MPW), or other community health workers.

<sup>1</sup> Includes women with children under age 3.

### 13.7.3 Quality of Health Care Indicators by State

Use of health care services depends on the experiences and perceptions people have about the quality of care they receive. Table 13.17 presents the percentage of women who had any contact with a community health worker across all states. It also presents assessments of the quality of care provided.

While 17 percent of women had contact with a community health worker in the three months prior to the survey for the country as a whole, that percentage ranges from a low of 3 percent in Delhi to a high of 27 percent in Gujarat. With the exception of Gujarat, less than one-quarter of women had a recent contact with a community health worker. Contact with a health worker is highest in the East Region (between 15 percent in Jharkhand and 23 percent in West Bengal), the Central Region (17 percent in Madhya Pradesh and 20 percent in Uttar Pradesh), the West Region (15 percent in Goa and 27 percent in Gujarat), and most states in

Table 13.17 Quality of health care indicators by state

Quality of health care indicators by state, India, 2005-06

State	Percentage of women with any contact with a health worker <sup>1</sup>	Among women who met with a health worker in the previous three months, percentage who said:	
		Worker talked nicely	Worker made sure that she understood the information given <sup>2</sup>
<b>India</b>	17.3	98.0	89.4
<b>North</b>			
Delhi	2.9	98.2	94.4
Haryana	11.2	97.9	92.1
Himachal Pradesh	9.1	98.1	91.5
Jammu & Kashmir	4.1	97.7	83.2
Punjab	11.9	98.9	98.3
Rajasthan	11.7	97.9	88.1
Uttaranchal	18.7	96.8	82.5
<b>Central</b>			
Chhattisgarh	19.4	97.7	84.1
Madhya Pradesh	16.9	97.6	82.1
Uttar Pradesh	19.8	96.3	74.1
<b>East</b>			
Bihar	19.2	98.2	96.2
Jharkhand	14.7	94.0	76.2
Orissa	22.6	97.2	86.1
West Bengal	23.3	98.6	93.1
<b>Northeast</b>			
Arunachal Pradesh	9.6	97.4	88.4
Assam	8.9	98.3	91.1
Manipur	4.6	96.7	82.0
Meghalaya	7.6	98.4	96.3
Mizoram	6.2	99.1	98.0
Nagaland	4.5	95.9	89.2
Sikkim	13.2	99.5	95.2
Tripura	14.4	97.5	92.0
<b>West</b>			
Goa	14.5	95.7	93.1
Gujarat	27.3	98.9	92.3
Maharashtra	16.5	99.4	93.1
<b>South</b>			
Andhra Pradesh	9.0	98.9	96.1
Karnataka	19.9	97.8	91.6
Kerala	22.6	99.4	97.8
Tamil Nadu	15.2	99.7	95.1

<sup>1</sup> Contact with an auxiliary nurse midwife, lady health visitor, *anganwadi* worker, or community health worker.  
<sup>2</sup> Excludes women who say they did not need anything explained to them.

the South Region. Overall, states in the Northeast Region have low levels of contact with community health workers, ranging from 5 percent in Nagaland and Manipur to 14 percent in Tripura.

Community health workers receive high praise with regard to the quality of client contacts. More than 9 in 10 women report that the community health worker spoke very nicely or somewhat nicely with them in all states. At least 80 percent of women in every state except Uttar Pradesh and Jharkhand reported that the community health worker made sure that they understood the information being communicated.

### 13.8 PROBLEMS IN ACCESSING HEALTH CARE

Many factors can prevent women from getting medical treatment for themselves. NFHS-3 asked all women about a series of potential obstacles to obtaining medical treatment or advice for themselves when they are sick and want to seek treatment or advice. The questions did not specify any particular source of care but pertained to wherever it is the woman would seek care. Women were asked for each potential obstacle whether it posed a

Table 13.18 Problems in accessing health care

Percentage of women who reported that specific problems are big problems for them in accessing medical advice or treatment for themselves when they are sick, according to background characteristics, India, 2005-06

Background characteristic	Big problem in accessing medical advice or treatment									Mean number of problems	Number of women
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern that no female provider available	Concern that no provider available	Concern that no drugs available	At least one problem in accessing health care		
<b>Age</b>											
15-19	9.3	16.3	24.6	22.1	12.8	21.0	23.5	22.9	47.8	1.5	24,811
20-34	6.9	17.4	25.6	23.2	11.9	18.8	22.9	23.1	46.6	1.5	60,852
35-49	4.8	17.8	25.2	22.7	10.7	16.9	22.0	22.5	45.7	1.4	38,722
<b>Number of living children</b>											
0	7.8	14.5	21.9	19.6	11.2	19.0	22.0	21.2	43.9	1.4	36,450
1-2	5.9	15.6	22.8	20.5	10.6	16.8	21.0	21.2	43.0	1.3	43,482
3-4	6.6	20.0	28.4	26.0	12.7	19.3	24.1	24.8	49.9	1.6	32,994
5+	6.6	24.4	36.0	33.0	14.7	23.0	27.8	28.9	59.0	1.9	11,459
<b>Residence</b>											
Urban	3.1	8.3	8.9	6.6	4.7	10.2	13.2	13.0	27.1	0.7	40,817
Rural	8.5	21.7	33.2	30.8	15.1	22.8	27.4	27.7	56.1	1.9	83,568
<b>Education</b>											
No education	9.1	25.4	35.4	32.9	16.2	23.6	28.1	28.7	58.6	2.0	50,487
<5 years complete	7.5	22.8	29.2	25.8	13.6	21.4	26.1	28.3	54.3	1.7	9,918
5-7 years complete	7.0	15.9	23.4	20.4	11.2	18.4	21.8	21.8	45.8	1.4	18,820
8-9 years complete	5.4	12.1	19.9	17.3	8.9	16.8	20.4	19.9	41.3	1.2	17,383
10-11 years complete	3.8	6.7	12.9	11.6	6.4	12.5	16.8	15.5	31.1	0.9	12,887
12 or more years complete	1.7	3.0	7.4	6.2	3.5	7.8	11.2	10.6	21.3	0.5	14,882
<b>Marital status</b>											
Never married	7.1	13.5	20.2	18.0	10.5	18.2	21.3	20.3	42.0	1.3	25,462
Currently married	6.7	17.7	26.4	24.0	11.9	18.7	22.9	23.3	47.5	1.5	93,089
Widowed/divorced/separated/deserted	4.8	26.3	29.4	25.9	14.0	20.2	25.9	27.2	52.2	1.7	5,834
<b>Religion</b>											
Hindu	6.6	17.2	25.6	23.2	11.7	18.7	22.9	22.8	46.8	1.5	100,151
Muslim	8.5	19.4	26.8	23.4	12.7	20.4	23.4	24.9	49.3	1.6	16,936
Christian	2.3	17.0	19.5	18.4	9.0	14.4	21.8	22.8	40.9	1.3	3,053
Sikh	5.3	7.3	11.0	9.7	6.7	10.8	15.1	10.0	31.2	0.8	2,222
Buddhist/Neo-Buddhist	3.2	8.1	12.7	12.7	6.4	9.6	11.0	13.0	28.5	0.8	1,010
Jain	2.0	2.1	4.6	2.8	2.7	7.7	9.5	10.1	15.1	0.4	406
Other	6.8	32.4	52.7	51.8	26.1	38.5	52.9	49.9	78.0	3.1	484
<b>Caste/tribe</b>											
Scheduled caste	7.0	20.4	27.3	25.3	12.8	19.7	23.9	24.2	50.4	1.6	23,125
Scheduled tribe	9.5	31.2	44.0	42.0	20.1	28.4	35.2	35.8	67.0	2.5	10,119
Other backward class	6.9	16.4	26.0	23.6	12.2	19.7	23.2	22.8	47.4	1.5	48,880
Other	5.5	12.9	18.5	15.9	8.4	14.3	18.2	18.7	38.2	1.1	41,207
Don't know	8.6	22.6	30.5	24.7	16.1	26.9	33.9	35.6	58.6	2.0	649
<b>Employment (past 12 months)</b>											
Not employed	6.5	14.5	21.4	18.7	9.8	16.7	20.5	20.9	42.2	1.3	71,121
Employed for cash	6.2	20.9	27.2	25.0	12.8	19.3	23.3	23.9	48.7	1.6	35,626
Employed not for cash	8.7	21.3	36.7	35.4	17.3	25.5	30.8	28.8	60.0	2.0	17,582
<b>Wealth index</b>											
Lowest	10.9	34.8	47.4	45.4	21.4	30.0	35.4	36.8	71.5	2.6	21,718
Second	8.6	24.3	36.1	33.1	15.9	24.0	28.7	29.7	60.0	2.0	23,616
Middle	7.5	18.5	26.3	23.3	12.2	19.4	23.8	23.5	49.7	1.5	25,088
Fourth	5.5	10.4	16.6	13.9	8.2	14.9	18.6	18.3	38.5	1.1	26,106
Highest	2.3	3.0	5.9	4.5	3.3	8.2	10.8	9.9	20.5	0.5	27,856
Total	6.7	17.3	25.2	22.9	11.7	18.7	22.7	22.9	46.6	1.5	124,385

Note: Total includes women with missing information on education, religion, caste/tribe, and employment (past 12 months), who are not shown separately.

big problem, a small problem, or no problem at all in accessing medical advice or treatment. Table 13.18 reports that nearly half of all women (47 percent) report there to be at least one big problem for themselves in obtaining medical care.

The most commonly reported problem is distance to a health facility, reported to be a big problem by one-quarter of women. As one would expect, distance is a more common challenge among rural women than among urban women. One-third of rural women cite distance to be a big obstacle to obtaining medical care. Forty-four percent of women from scheduled tribes report distance to be a big problem.

Three other problems are each cited by nearly as many women (23 percent) as cite distance as a big problem: having to take transport, concern that there may be no provider available, and concern that there may be no drugs available.

Nineteen percent of women report concern that no female provider will be available as being a big problem. Hindu (19 percent) and Muslim (20 percent) women are equally likely to report this as a big problem. Less than 11 percent of women in any subgroup shown in the table report getting permission to go for treatment to be a big problem, although the percentage who report getting permission to be a big problem decreases with increasing education and wealth quintiles.

Every potential problem asked about becomes steadily less of an obstacle as wealth status increases. The percentage of women who have at least one big problem in accessing health care declines rapidly with increasing wealth status. Seven in 10 women in the lowest wealth quintile report at least one of the obstacles to be a big problem, and this percentage declines to 20 percent in the highest wealth quintile. Women report, on average, 1.5 obstacles as big problems to their obtaining medical care. The mean number of big problems reported decreases from 2.6 to 0.5 as wealth status increases from the lowest to the highest wealth quintile.