

# Executive Summary

## Rwanda Alcohol and Tobacco Mobile Phone Survey

### 1. Overview

This report summarizes results from the Rwanda Alcohol and Tobacco Mobile Phone Survey (ATob MPS) implemented in October - November 2023. This survey was conducted as a follow-up to the Rwanda Noncommunicable Diseases MPS conducted in 2022. Alcohol and tobacco are two of the biggest risk factors for noncommunicable diseases (NCDs), which are the leading cause of death worldwide [1]. According to the World Health Organization country profiles in 2019, NCDs accounted for 50% of all deaths in the United Republic of Rwanda. Tobacco and alcohol use may contribute to up to 45% of all NCD deaths in Rwanda [2]. Electronic cigarette use is a new potential risk factor for NCDs and is not well understood in Africa. Robust prevalence estimates are lacking for the continent as a whole, and only a few African countries have conducted nationally representative surveys which ask about electronic cigarettes [3]. Efficient monitoring and surveillance are cornerstones to track the prevalence of risk factors and effectiveness of policy interventions. The systematic monitoring of risk factors to generate accurate and timely data is essential for Rwanda's ability to prioritize crucial resources and make sound policy decisions to address the growing NCD burden. With increasing access and use of mobile phones globally, opportunities exist to explore the feasibility of using mobile phone technology as an interim method to collect data and supplement household surveys.

In this survey, 3,027 individuals who subscribed to either MTN or Airtel/Tigo mobile phone networks anonymously participated using short message service (SMS - text messaging). The survey was the culmination of significant work by the United Republic of Rwanda's Ministry of Health, including but not limited to study ethical review approval from the Rwanda National Ethics Committee, telecommunications approval from the Rwanda Utilities Regulatory Authority, agreements with mobile network aggregators, and data hosting. The Ministry of Health led questionnaire development, sampling, the mass media campaign, and data collection. Technical assistance was provided by the US Centers for Disease Control and Prevention, RTI International, and InSTEDD. Bloomberg Philanthropies Data for Health Initiative provided financial support through the CDC Foundation.

This report is structured as follows:

- Goals (Section 2)
- Design and Implementation (Section 3)
- Results (Section 4)
- Conclusions (Section 5)
- References (Section 6)

### 2. Goals

The goal of the Rwanda ATob MPS was to provide nationally representative estimates of indicators on alcohol and tobacco use as well as attitudes towards their use to help make programmatic

recommendations to improve and enhance prevention and response in the country. The results may be used to supplement results of key behavior risk factors assessed in the WHO Stepwise survey or other national surveillance systems.

The Rwanda ATob MPS included 41 questions. Not every participant received all 41 questions. The Rwanda ATob MPS included the following topics:

- Demographics (5 questions)
- Tobacco Use (14 possible questions)
- Alcohol Use (4 possible questions)
- Problematic Drinking (9 possible questions)
- Alcohol Influencers (7 questions)
- Reasons for Abstaining (2 questions)

### 3. Design and Implementation

#### 3.1 Design

The design parameters used for the ATob MPS are shown below in Table 1.

**Table 1. MPS Design**

<i><b>Component</b></i>	<i><b>Design</b></i>
Mode	SMS
Sample	A two-phase sample of mobile phone numbers generated via random digit dialing (RDD), using the mobile phone prefixes for MTN and Airtel/Tigo. Rwanda stratified by age and sex in the second phase.
Number of Interviews	3,027 interviews, allocated proportionally across strata to the general population distribution.
Strata	6 strata, created by crossing sex (male, female) with age categories (18-29, 30-44, 45+)
Questionnaire	The ATob MPS questionnaire consisting of 41 questions and was administered in three languages (Kinyarwanda, French, English).
Contact times	All 7 days of the week, between 8am and 8pm each day
Contact attempts	<ul style="list-style-type: none"> <li>• Contact #1: SMS</li> <li>• Contact #2: SMS, 26 hours after Contact #1</li> <li>• Contact #3: SMS, 26 hours after Contact #2</li> </ul>
Cost to Respondents	None.
Incentives	FRW 1.000
Tool and Hosting	Surveda, with data hosted at the Rwanda Ministry of Health

#### 3.2 Implementation

The Rwanda ATob MPS implementation process consisted of four stages: Planning and Pre-Test, Full-scale Data Collection, Data Management and Analysis, and Data Release and Use.

Full-scale data collection commenced on October 23<sup>rd</sup>, 2023 and was completed on November 23<sup>rd</sup> for Airtel/Tigo subscribers. Data collection for MTN ran from October 23<sup>rd</sup> to November 27<sup>th</sup>. A

total of 3,027 adults aged 18 years and older completed or partially completed the survey through the two mobile network operators.

## 4. Results

This section presents the following results:

- Demographics and Response Rates (section 4.1)
- Tobacco Use (section 4.2)
- Alcohol Use (section 4.3)
- Problematic Drinking (section 4.4)
- Alcohol Influencers (section 4.5)

### 4.1. Demographics and Response Rates

The Rwanda ATob MPS included 3,027 interviews across six age by sex groups. Table 2 shows the mobile phone demographic distribution compared to the UN population national statistics for sex and age. Results presented are restricted to respondents who were 18-99 years of age.

**Table 2. Mobile Phone Demographics**

	<i>Mobile Phone Sample</i>	<i>National</i>
	3,027	7,491,548
<b>Sex</b>		
Male	52.2%	47.6%
Female	47.8%	52.4%
<b>Age</b>		
18-29	42.4%	38.7%
30-44	38.5%	35.1%
45+	19.1%	26.2%

By the end of data collection, all strata sample sizes were achieved, except for 45+ females (40.2% achieved).

To achieve the 3,027 interviews, we sent invitations to 191,972 mobile phone numbers over the course of both the pre-test and full-scale survey. Out of these, 14,757 provided some sort of response but only 12,140 consented and provided the age and sex information necessary to be eligible to participate. Of these, 546 were ineligible due to age, and 8,281 respondents of eligible age were rejected due to stratum sample size being full. The result was 3,313 eligible respondents, of which 3,027 provided interviews (completed or partial). The interview rate was 91.4% ( $3,027/3,313 \times 100$ ) and the overall response rate was 5.8%, which is described in detail below. The final disposition codes for this sample are shown in Table 3.

**Table 3. Final disposition codes for all dialed mobile phone numbers.**

Disposition	Definition	N	Percent
<b>1. Complete</b>	Answered all survey questions	2,774	1.4%
<b>2. Partial</b>	Answered at least <b>five</b> questions but did not finish the survey	253	0.1%
<b>3. Breakoff: Eligible</b>	Answered age and sex questions but did not answer 5+ questions	286	0.1%
<b>4. Ineligible: Age</b>	Under age 18	546	0.3%
<b>5. Ineligible: Quotas</b>	Answered age and sex questions but quotas were full	8,281	4.3%
<b>6. Refused</b>	Refused consent	2,012	1.0%
<b>7. Breakoff: unknown eligibility</b>	Answered some questions but stopped before completing eligibility	605	0.3%
<b>8. No answer</b>	No answer, possibly nonworking number	177,215	92.3%
<b>Total</b>		<b>191,972</b>	<b>100.0%</b>

In this project, the sampling design involved two Phases. Each phase had a response rate. The final response rate was the product of Phase I and Phase II response rates.

$$\text{Phase I Response Rate} = \frac{\text{Number MPNs screened}}{\text{Number MPNs dialed}}$$

Or,

$$\text{Phase I Response Rate} = \frac{12,140}{191,972} = 6.32\%$$

$$\text{Phase II Response Rate } RR6_s = \frac{IP_s}{IP_s + O_s}, \text{ for stratum } s^*.$$

\*Where I = completed interviews, P = partial interviews, and O = others (eligible participants who consented but did not complete 5 or more NCD questions)

RR<sub>6</sub> was derived from the 2016 Standard Definitions of the [American Association for Public Opinion Research \(AAPOR\)](#). Phase II stratum-specific response rates (RR #6) are in Table 4.

**Table 4. Phase II response rates for stratum s**

Age	Males	Females
<b>18-29</b>	RR <sub>6</sub> <sub>1</sub> = 86.2%	RR <sub>6</sub> <sub>2</sub> = 84.2%
<b>30-44</b>	RR <sub>6</sub> <sub>3</sub> = 84.8%	RR <sub>6</sub> <sub>4</sub> = 86.2%
<b>45+</b>	RR <sub>6</sub> <sub>5</sub> = 81.7%	RR <sub>6</sub> <sub>6</sub> = 81.4%

The overall response rate is the product of Phase I and Phase II response rates, resulting in an overall response rate for the entire NCD MPS in Sri Lanka:

$$RR6_{overall} = \frac{IP_{overall}}{IP_{overall} + O_{overall}} * RR_{Phase I} = \frac{3,027}{3,027 + 286} * 0.0632 = 5.77\%$$

#### 4.2. Tobacco Use

Tobacco use is one of the most important risk factors for NCDs, shared across the world's four leading NCDs: cardiovascular disease, diabetes, cancer, and chronic respiratory diseases. Overall, 5.6% of Rwandan adults aged 18 years and older currently used some form of smoked or smokeless tobacco (6.2% among men and 4.9% among women). Overall, 3.7% of Rwandans reported being current tobacco smokers. Men reported higher prevalence of current tobacco smoking than women, 4.4% and 3.1%, respectively. Men also reported higher prevalence of daily tobacco smoking compared to women (1.7% vs. <1.0%, respectively). Overall, 2.2% reported current smokeless tobacco use with women reporting slightly higher use than men (2.1% among men and 2.3% among women).

Most adult Rwandans surveyed report never having used electronic cigarettes (95.5%) with only slight differences between men and women (95.8% vs. 95.2%, respectively). Among those who report current use of electronic cigarettes, only 14.0% report daily use with men reporting higher prevalence of daily use than women (19.5% vs. 10.8%, respectively).

For environmental exposure to tobacco smoke, almost 1 in 3 adult Rwandans reported exposure to tobacco smoke in their home (29.3%). Overall, 13.0% reported exposure to tobacco smoke while at work (16.2% for men and 9.9% for women). Table 5 shows key outcomes from the ATob MPS on tobacco use.

**Table 5. Tobacco and electronic cigarette use overall and by sex**

Tobacco Use	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Tobacco Smokers</b>						
Current tobacco smokers	3.7	(3.1, 4.5)	4.4	(3.5, 5.6)	3.1	(2.2, 4.3)
Daily tobacco smokers	1.2	(0.9, 1.7)	1.7	(1.2, 2.5)	0.7	(0.3, 1.5)
Non-daily tobacco smokers	2.3	(1.8, 3.0)	2.4	(1.8, 3.3)	2.2	(1.5, 3.3)
Never smokers	89.1	(87.9, 90.2)	84.2	(82.4, 86.0)	93.6	(92.0, 94.9)
Former smokers	7.1	(6.3, 8.1)	11.3	(9.9, 13.0)	3.3	(2.4, 4.5)
Current daily smokers among smokers	33.9	(24.8, 44.3)	41.5	(29.9, 54.2)	24.0	(11.4, 43.7)
Ever smokers	10.9	(9.8, 12.1)	15.8	(14.0, 17.6)	6.4	(5.1, 8.0)
Ever daily smokers	4.9	(4.1, 5.7)	7.4	(6.3, 8.8)	2.5	(1.7, 3.7)
<b>Smokeless Tobacco Users</b>						
Current smokeless tobacco users	2.2	(1.7, 2.9)	2.1	(1.5, 3.0)	2.3	(1.5, 3.3)

Daily smokeless tobacco users	0.6	(0.4, 1.0)	0.7	(0.4, 1.3)	0.5	(0.2, 1.3)
Non-daily smokeless tobacco users	1.5	(1.1, 2.1)	1.3	(0.8, 2.0)	1.7	(1.1, 2.7)
Never smokeless tobacco users	96.5	(95.7, 97.1)	96.2	(95.2, 97.1)	96.6	(95.4, 97.5)
Former smokeless tobacco user	1.4	(1.0, 1.9)	1.6	(1.1, 2.4)	1.1	(0.7, 1.9)
Current daily smokeless tobacco users among smokeless tobacco users	29.0	(17.6, 43.8)	36.0	(20.0, 54.8)	23.6	(9.3, 48.2)
Ever smokeless users	3.5	(2.9, 4.3)	3.7	(2.9, 4.8)	3.4	(2.5, 4.6)
Ever daily smokeless users	1.1	(0.8, 1.6)	1.4	(0.9, 2.1)	0.8	(0.4, 1.5)
<b><i>Tobacco Users (any smoked or smokeless use only)</i></b>						
Current tobacco users	5.6	(4.7, 6.5)	6.2	(5.1, 7.5)	4.9	(3.8, 6.4)
<b><i>Electronic cigarette (e-cig) users</i></b>						
Current e-cig users	3.7	(3.0, 4.5)	2.9	(2.2, 3.9)	4.4	(3.4, 5.8)
Daily e-cig users	0.5	(0.3, 0.9)	0.5	(0.3, 1.0)	0.5	(0.2, 1.1)
Non-daily e-cig users	3.0	(2.4, 3.8)	2.2	(1.5, 3.0)	3.8	(2.8, 5.1)
Never e-cig users	95.5	(94.6, 96.2)	95.8	(94.7, 96.7)	95.2	(93.8, 96.3)
Former e-cig users	0.9	(0.6, 1.3)	1.3	(0.8, 2.0)	0.5	(0.2, 1.0)
Current daily e-cig users among current e-cig users	14.0	(8.0, 23.4)	19.5	(9.7, 35.4)	10.8	(4.3, 24.5)
Ever e-cig users	4.5	(3.8, 5.4)	4.2	(3.3, 5.3)	4.8	(3.7, 6.2)
Ever daily e-cig users	1.0	(0.7, 1.4)	1.0	(0.6, 1.6)	1.0	(0.5, 1.7)
<b><i>Tobacco Smoke in Home or Work</i></b>						
Tobacco smoke in home	29.3	(27.6, 31.0)	32.3	(30.0, 34.7)	26.5	(24.1, 29.1)
Tobacco smoke at work	13.0	(11.8, 14.2)	16.2	(14.5, 18.2)	9.9	(8.4, 11.7)

#### 4.3. Alcohol Use

Two out of five adult Rwandans report consuming alcohol in the past 12 months (41.9%), and 30.8% report alcohol consumption in the past 30 days, with men reporting current alcohol consumption 2.3 times more frequently than women (43.6% vs. 19.3%, respectively). Of those who consumed alcohol in the past 12 months, one in eight (12.5%) reported consuming alcohol daily over the past 12 months, with men reporting daily consumption almost twice as frequently as women (15.2% vs. 8.1%, respectively). For men, the most common frequency of alcohol consumption was 1-2 days per week (24.3%) while for women, the most common frequency was less than once per month (39.8%). Women were almost twice as likely to report never having consumed any alcohol (52.6%) as men (27.9%). Among those who reported never consuming any alcohol, upbringing was the most common reason

given by both men and women (33.0% and 41.9%, respectively). Table 6 shows reported alcohol use overall and by sex from the ATob MPS.

**Table 6. Alcohol use overall and by sex**

Alcohol Use	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Alcohol use in the past 12 months</b>	41.9	(40.1, 43.7)	55.5	(53.1, 58.0)	29.5	(27.0, 32.2)
<b>Alcohol Frequency among users in the past 12 months</b>						
Daily	12.5	(10.8, 14.5)	15.2	(12.9, 17.7)	8.1	(5.6, 11.5)
3-6 days per week	15.7	(13.8, 17.9)	16.5	(14.1, 19.1)	14.5	(11.2, 18.6)
1-2 days per week	21.5	(19.2, 23.9)	24.3	(21.5, 27.2)	16.8	(13.1, 21.3)
1-3 days per month	22.8	(20.5, 25.3)	23.9	(21.2, 26.9)	20.8	(16.8, 25.5)
Less than once per month	27.5	(24.9, 30.1)	20.2	(17.7, 23.0)	39.8	(34.6, 45.2)
<b>Current alcohol users (past 30 days)</b>	30.8	(29.2, 32.5)	43.6	(41.1, 46.1)	19.3	(17.1, 21.7)
<b>Never consumed any alcohol</b>	40.8	(39.1, 42.7)	27.9	(25.7, 30.2)	52.6	(49.8, 55.4)
<b>Among those who report never consuming any alcohol, MAIN reason for not consuming alcohol</b>						
Upbringing	39.0	(36.1, 41.9)	33.0	(28.7, 37.6)	41.9	(38.2, 45.7)
Personal beliefs	17.3	(15.2, 19.7)	17.9	(14.5, 21.8)	17.1	(14.4, 20.1)
Religion	16.2	(14.1, 18.5)	19.9	(16.4, 24.0)	14.4	(11.9, 17.3)
Fear of adverse health consequences	16.9	(14.8, 19.2)	13.9	(11.0, 17.5)	18.3	(15.6, 21.3)
Fear of loss of control	6.1	(4.8, 7.7)	8.8	(6.5, 11.9)	4.8	(3.3, 6.9)
Fear of adverse legal consequences	4.2	(3.2, 5.6)	5.6	(3.8, 8.2)	3.5	(2.4, 5.3)
Cost of alcohol	0.4	(0.2, 0.9)	0.9	(0.3, 2.4)	0.1	(0.0, 0.8)
<b>Among those who report never consuming alcohol, ANOTHER reason for not consuming alcohol</b>						
Upbringing	23.5	(21.0, 26.1)	21.3	(17.6, 25.4)	24.5	(21.3, 28.0)
Religion	21.4	(19.0, 24.0)	23.1	(19.4, 27.4)	20.5	(17.5, 23.9)
Fear of adverse health consequences	19.2	(17.0, 21.6)	14.9	(11.9, 18.7)	21.3	(18.4, 24.5)
Personal beliefs	14.9	(13.0, 17.0)	18.5	(15.0, 22.4)	13.1	(11.0, 15.6)
No other reason	9.7	(8.0, 11.7)	8.6	(6.3, 11.7)	10.2	(8.1, 12.8)
Fear of loss of control	8.5	(7.0, 10.2)	9.8	(7.3, 13.0)	7.8	(6.0, 10.0)
Fear of adverse legal consequences	2.3	(1.6, 3.4)	2.8	(1.6, 4.9)	2.1	(1.3, 3.5)
Cost of alcohol	0.6	(0.2, 1.4)	0.9	(0.3, 2.5)	0.4	(0.1, 1.8)

#### 4.4. Problematic Drinking

Only 5.7% of adult Rwandans report having six or more drinks on one occasion in the past 30 days (binge drinking) with men reporting this behavior 2.9 times more frequently than women (8.8% vs. 3.0%, respectively). Approximately the same percentage of men and women who report consuming six or more drinks on one occasion report consuming some type of homebrewed alcohol in the past 30 days (5.1%). Among those who consumed multiple drinks on one occasion, drinking with friends or family was the most common reason (18.7%). However, the majority of those who drank in the past 30 days reported only consuming one drink at a time (40.9%). Fewer than one in ten (8.8%) of adult Rwandans sought treatment for alcohol in the past 12 months with women slightly more likely to seek treatment than men (9.1% versus 8.7%, respectively), and a majority sought treatment from either a health center or a referral hospital (54.4%). Table 7 shows problematic drinking behaviors overall and by sex from the ATob MPS.

**Table 7. Problematic drinking overall and by sex**

Problematic Drinking	Overall		Males			Females	
	%	(95% CI)	%	(95% CI)		%	(95% CI)
<b>Six or more drinks on one occasion in past 30 days</b>	5.7	(5.0, 6.7)	8.8	(7.5, 10.3)		3.0	(2.2, 4.2)
<b>Consumed homebrewed alcohol in the past 30 days</b>	5.1	(4.3, 6.0)	7.0	(5.9, 8.4)		3.4	(2.4, 4.7)
<b>Main reason for multiple drinks on one occasion (among those who report alcohol use in the past 30 days)</b>							
Only consume one drink at a time	40.9	(37.7, 44.3)	40.9	(37.2, 44.7)		41.0	(34.6, 47.8)
Drinking with friends or family	18.7	(16.3, 21.5)	21.2	(18.3, 24.5)		13.7	(9.6, 19.1)
Stress relief or relaxation	15.7	(13.4, 18.3)	14.3	(11.8, 17.2)		18.6	(14.0, 24.3)
Celebration or party	16.8	(14.4, 19.4)	16.4	(13.8, 19.4)		17.5	(13.1, 23.0)
Custom or tradition	4.6	(3.3, 6.4)	4.4	(3.0, 6.2)		5.2	(2.7, 9.7)
Paycheck or extra money	3.2	(2.2, 4.7)	2.9	(1.8, 4.4)		4.0	(2.0, 7.7)
<b>Sought treatment for alcohol use in past 12 months</b>	8.8	(7.3, 10.6)	8.7	(6.9, 10.8)		9.1	(6.4, 12.7)
<b>If treated, where treatment received</b>							
Health Center	29.0	(20.7, 39.1)	29.4	(19.6, 41.7)		28.5	(15.0, 47.4)
Referral Hospital	25.4	(17.6, 35.3)	26.4	(17.3, 38.1)		23.9	(11.3, 43.5)
District Hospital	7.6	(3.3, 16.4)	7.3	(3.0, 16.9)		7.9	(1.5, 32.0)
Rehabilitation Center	2.7	(0.9, 8.1)	2.9	(0.7, 11.2)		2.3	(0.3, 15.8)
Community Health Worker	2.7	(0.9, 8.1)	0.0	(0.0, 0.0)		6.8	(2.1, 20.2)
Other	32.6	(23.6, 43.0)	33.9	(23.7, 45.7)		30.6	(15.5, 51.4)
<b>How often not able to stop drinking once starting in past 12 months</b>							
Never	73.0	(70.3, 75.6)	73.7	(70.6, 76.6)		71.9	(66.6, 76.6)
Less than monthly	12.3	(10.6, 14.4)	12.9	(10.8, 15.4)		11.3	(8.4, 15.1)
Monthly	9.7	(8.1, 11.7)	8.7	(7.0, 10.8)		11.5	(8.3, 15.7)
Weekly	3.2	(2.3, 4.5)	3.5	(2.4, 5.0)		2.7	(1.4, 5.4)
Daily or almost daily	1.7	(1.0, 2.7)	1.2	(0.6, 2.2)		2.5	(1.2, 5.1)

How often failed to meet expectations due to drinking in past 12 months								
Never	76.2	(73.6, 78.6)	74.6	(71.5, 77.5)	78.8	(74.0, 83.0)		
Less than monthly	14.1	(12.3, 16.2)	15.9	(13.6, 18.6)	10.9	(8.1, 14.4)		
Monthly	6.4	(5.1, 8.2)	6.2	(4.7, 8.0)	6.9	(4.4, 10.8)		
Weekly	1.5	(0.9, 2.3)	1.7	(1.0, 2.8)	1.1	(0.4, 2.5)		
Daily or almost daily	1.8	(1.2, 2.9)	1.6	(0.9, 2.7)	2.3	(1.1, 4.9)		
How often needed first drink in the morning in past 12 months								
Never	85.0	(82.7, 87.0)	85.6	(83.0, 87.9)	83.9	(79.4, 87.5)		
Less than monthly	7.5	(6.1, 9.2)	7.7	(6.1, 9.8)	7.1	(4.8, 10.4)		
Monthly	4.3	(3.1, 5.7)	3.0	(2.0, 4.4)	6.4	(4.1, 10.0)		
Weekly	1.5	(1.0, 2.4)	2.1	(1.3, 3.3)	0.6	(0.2, 1.9)		
Daily or almost daily	1.7	(1.1, 2.7)	1.6	(0.9, 2.7)	2.0	(0.9, 4.1)		
Family/partner problems due to someone else's drinking in past 12 months								
No	68.0	(65.2, 70.7)	70.4	(67.2, 73.5)	63.9	(58.5, 69.0)		
Yes, once or twice	11.0	(9.3, 13.0)	10.4	(8.5, 12.8)	12.0	(9.0, 16.0)		
Yes, several times but less than monthly	4.8	(3.7, 6.3)	4.0	(2.8, 5.6)	6.2	(4.1, 9.4)		
Yes, monthly	2.7	(1.9, 3.9)	2.7	(1.8, 4.1)	2.7	(1.4, 5.3)		
Yes, more than monthly	13.4	(11.5, 15.6)	12.4	(10.3, 14.9)	15.1	(11.5, 19.4)		

#### 4.5. Alcohol Influencers

Approximately nine out of ten adult Rwandans thought that regular use of alcohol is somewhat to very harmful with only 6% reporting that it is not harmful. Men were more likely to report that alcohol was not harmful than women (7.0% versus 5.1%, respectively). Men were also more likely to report buying alcohol for themselves or others in the household than women (41.5% versus 24.4%, respectively). Fewer than one in six Rwandans 18 and older (18.6%) were asked to show proof of age last time they purchased alcohol, and the majority (67.4%) of those surveyed had seen ads or signs promoting alcohol in stores where alcohol is sold in the past 30 days. The most commonly seen alcohol promotion was clothing with an alcohol logo (18.6%) followed by mailers promoting alcohol (17.2%). More than half of adult Rwandans (55.6%) reported that an increase in the price of alcohol would make them buy alcohol less often, and approximately 84% had seen or heard information on the dangers of alcohol with radio (36.9%) and television (27.3%) being the most common sources of that information. Table 8 shows alcohol influencers overall and by sex from the ATob MPS.

**Table 8. Alcohol influencers overall and by sex**

Alcohol Influencers	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>With regard to health, thinks regular use of alcohol is:</b>						
Very harmful	24.6	(23.0, 26.3)	25.0	(22.9, 27.3)	24.3	(22.0, 26.8)
Harmful	25.6	(24.0, 27.3)	21.3	(19.3, 23.4)	29.5	(27.0, 32.2)
Somewhat harmful	43.7	(41.8, 45.6)	46.7	(44.2, 49.2)	41.0	(38.3, 43.9)
Not harmful	6.0	(5.2, 7.0)	7.0	(5.8, 8.4)	5.1	(4.0, 6.6)

<b>Bought alcohol for themselves or others in household</b>	32.5	(30.8, 34.3)	41.5	(39.0, 44.0)	24.4	(22.0, 27.0)
<b>Last time purchased alcohol, were asked to show proof of age</b>	18.6	(16.2, 21.3)	19.9	(17.0, 23.3)	16.6	(12.7, 21.4)
<b>Increase in price of alcohol would make them buy less often</b>	55.6	(52.2, 58.9)	56.1	(52.1, 60.0)	54.7	(48.8, 60.6)
<b>During the past 30 days, has seen ads or signs promoting alcohol where alcohol is purchased</b>	67.4	(65.5, 69.2)	74.4	(72.2, 76.6)	61.0	(58.2, 63.8)
<b>During the past 30 days, where seen information on dangers of alcohol or quitting alcohol</b>						
<b>Newspapers or magazines</b>	12.7	(11.4, 14.1)	12.3	(10.7, 14.1)	13.0	(11.2, 15.1)
<b>Television</b>	27.3	(25.6, 29.1)	26.9	(24.7, 29.2)	27.7	(25.2, 30.4)
<b>Radio</b>	36.9	(35.1, 38.8)	38.0	(35.6, 40.5)	35.9	(33.2, 38.7)
<b>Other</b>	7.3	(6.3, 8.4)	7.7	(6.5, 9.2)	6.9	(5.5, 8.6)
<b>Have not seen any</b>	15.8	(14.4, 17.2)	15.0	(13.3, 16.9)	16.4	(14.5, 18.6)
<b>During the past 30 days, most frequently seen alcohol promotion</b>						
<b>Alcohol at sales prices</b>	10.0	(8.9, 11.3)	11.3	(9.7, 13.0)	8.9	(7.4, 10.7)
<b>Alcohol promotions in mail</b>	17.2	(15.8, 18.8)	19.0	(17.1, 21.1)	15.6	(13.6, 17.9)
<b>Clothing with alcohol logo</b>	18.6	(17.2, 20.1)	18.7	(16.8, 20.8)	18.5	(16.4, 20.8)
<b>Coupons for alcoholic drinks</b>	7.3	(6.4, 8.4)	7.6	(6.4, 9.1)	7.1	(5.7, 8.7)
<b>Free gifts or special discounts</b>	4.6	(3.9, 5.5)	5.3	(4.3, 6.6)	3.9	(3.0, 5.2)
<b>Free samples of alcohol</b>	7.5	(6.6, 8.7)	8.1	(6.8, 9.6)	7.1	(5.7, 8.8)
<b>Have not seen any</b>	34.7	(32.8, 36.5)	30.0	(27.7, 32.4)	38.9	(36.1, 41.8)

## 5. Conclusions

Alcohol and tobacco and their associated risk factors have profound consequences on individuals and Rwandan society at large. The data presented in the Rwanda ATob MPS provide a strong foundation for the development of prevention and response strategies in Rwanda. Some key outcomes include:

- Approximately 5.6% of Rwandan adults reported being current tobacco users with 3.7% reporting current tobacco smoking and 2.2% reporting current smokeless tobacco use. Men were more likely to report any type of tobacco use than women. Very few adult Rwandans reported ever using e-cigarettes (4.5%). Overall, 29.3% of adult Rwandans reported exposure to tobacco smoke in their home while 13.0% reported exposure at work.
- Overall, two in five (41.9%) reported alcohol consumption in the past year, and 12.5% reported daily use. Approximately one in three adult Rwandans reported consuming alcohol in the past 30 days (30.8%). Approximately 40% reported never having consumed any alcohol. Men were more likely to drink alcohol in the past 12 months, 30 days, as well as report higher frequency consumption. Women were almost twice as likely as men to report never having consumed any alcohol.
- Less than 6% of adult Rwandans reported drinking six or more drinks on one occasion, and

drinking with friends or family as well as a celebration or party were the primary reasons for consuming multiple drinks at one time. Fewer than one in ten adult Rwandans sought treatment for alcohol in the past 12 months with women slightly more likely to seek treatment than men.

- Nine out of ten adult Rwandans thought regular use of alcohol is somewhat to very harmful with only 6% reporting that it is not harmful. More than half of adult Rwandans reported that an increase in the price of alcohol would make them buy alcohol less often, and approximately 84% had seen or heard information on the dangers of alcohol with radio (36.9%) and television (27.3%) being the most common sources of that information. Men were more likely than women to report that alcohol was not harmful, buy alcohol for themselves or others in the household, be asked to show proof of age for alcohol purchases, and to have seen ads promoting alcohol in the past 30 days.

Findings from this survey help provide a national baseline on two modifiable NCD risk factors for Rwandan adults aged 18 years and older. Results will inform the Ministry of Health in Rwanda as they improve and enhance alcohol and tobacco prevention and control efforts. The timely reporting of MPS results such as these also facilitate comparisons over time and across countries.

Limitations:

The main limitation of any MPS includes the population's access to a mobile phone. Therefore, the population who do not have access to mobile phones was not represented in this survey. The results of the MPS were based on self-reports and may be influenced by recall or social desirability bias.

## 6. References

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