

Executive Summary

NCD Mobile Phone Survey

1. Overview

This report summarizes results from the Philippines Noncommunicable Diseases (NCD) Mobile Phone Survey conducted in 2024. NCDs are the leading cause of death worldwide and according to the World Health Organization country profiles in 2019, NCDs are estimated to account for 70% of all deaths in the Philippines [1]. According to national data from 2022 NCDs comprise the top five leading cause of death in the Philippines: ischemic heart diseases, cancers, cerebrovascular disease, diabetes, and hypertensive diseases [2]. It is estimated that the probability of Filipinos and Filipinas aged 30-70 years dying from one of the four main NCDs is 29% (cancer, cardiovascular diseases, diabetes and chronic respiratory disease) [1]. The high human costs due to NCDs contribute to rising health-care costs and social care and welfare resulting in reduced productivity. A 2019 report from the World Health Organization estimated that the economic costs of NCDs to the Philippine economy was PHP 756.5 billion per year or 4.8% of the country's annual gross domestic product [3]. Though NCDs result in high in human and economic costs the impact can be reversed by modification of population behavior including reducing tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity.

Efficient monitoring and surveillance efforts to track the progress of the NCD burden, related risk factors, and policy interventions serves as the cornerstone to an effective response to combat NCDs. The systematic monitoring of risk factors to generate accurate and timely data is essential for Philippines' ability to prioritize crucial resources and make sound policy decisions to address the growing NCD burden.

The increase in accessibility and mobile phone ownership provides opportunities to use mobile phone technology as an interim method to collect data and supplement household surveys. The Philippines with one of the highest mobile phone penetration rates of 144 mobile cellular subscriptions (per 100 people) [4] is well poised to utilize this opportunity. In 2018 the Philippines' Department of Health spear-headed one of the first national surveys on NCDs risk factors using mobile phone technology. Given the success of the 2018 data collection effort the Philippines was the first country to repeat the NCD mobile phone survey in 2021 using a global standard protocol to further enhance the Department of Health's capacity to monitor NCDs.

In the 2024 NCD mobile phone survey, 2,429 individuals subscribed to the Globe, Smart, and Dito mobile phone networks participated in the survey using short message service (SMS) and mobile web modes.

The survey was the culmination of significant work by the Department of Health, including but not limited to telecommunications approval from the Philippines National Telecommunications Commission, agreements with mobile network aggregators, data hosting, and management at the Philippines Knowledge Management and Information Technology Service at the Department of Health. The Department of Health, Epidemiology Bureau (EB) in coordination with the Disease Prevention and Control Bureau (DPCB) and Health Promotion Bureau (HPB) led questionnaire development, sampling, the mass media campaign, data collection, and analysis. 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)

2. Goals

The goal of the Philippines 2024 NCD mobile phone survey is to provide nationally representative estimates of indicators that can provide information on NCDs to help make programmatic recommendations to improve and enhance NCD prevention and response in the Philippines. In addition to providing data to inform NCD prevention and response strategies, findings from the 2024 survey will also be compared to the results of the 2021 survey to help assess the feasibility and reliability of mobile phone survey data. The results may be used to supplement results of key behavior risk factors assessed in other national surveillance systems.

The NCD Mobile Phone Survey included 30 core questions on the following topics:

- Demographics
- Tobacco Use
- Alcohol Use
- Diet (Fruit, Vegetable, and Salt Consumption)
- Diabetes
- Hypertension
- Physical Activity
- Healthcare Lifestyle Advice

In order to facilitate comparison between the 2024 and the 2021 NCD Mobile Phone Survey the same questions were used.

3. Design and Implementation

3.1 Design

The survey employed mobile phone communication short-message-texting (SMS), and mobile web to deliver automated surveys to mobile network subscribers from the three major mobile network operators in the Philippines. Mobile phone numbers were randomly selected using the pre-fixes assigned to Globe, SMART, and DITO. Respondents were asked to select their preferred language to conduct the survey; available languages included Bikol, Cebuano, English, Filipino, and Iloko. Once a language was selected respondents were asked to provide consent after receiving information on the goals of the survey, the respondent selection process, and information on anonymity and confidentiality of the data provided. Respondents chose one of two prompts that corresponded with “yes” or “no” to consent. Those who selected “no” and declined to participate were thanked and the call was ended. Consent was recorded and maintained as part of the final dataset.

Respondents were contacted between 8am-8pm, seven days a week via SMS, with a maximum of three contact attempts made at 26-hour intervals. A secondary mode, mobile web, was also used to contact respondents for an additional three contact attempts made at 26-hour intervals.

Reverse billing, which prevents respondents from being charged for data charges was established for participants who answered the survey using SMS. Respondents who utilized mobile web were advised to connect to wifi to complete survey and avoid data charges. All respondents who completed the survey were provided a mobile credit of 50 pesos load as a token of appreciation.

The survey parameters used for the NCD Mobile Phone Survey are shown below in Table 1.

Table 1. Mobile Phone Survey Design	
Component	Design
Mode	SMS and mobile web
Mode Strategy	The primary mode of contact was SMS with mobile web as the fallback. The “fallback” mode initiated if the respondent did not complete the survey in the primary mode.
Sample	A two-phase sample of mobile phone numbers generated via random digit dialing (RDD), using the mobile phone prefixes for Globe, Smart, and Dito stratified by age and sex in the second phase.
Number of Interviews	2,429 interviews, allocated proportionally across strata to the general population distribution.
Strata	6 strata, created by crossing sex (male, female) with age (18-29, 30-44, 45+)
Questionnaire	The NCD Mobile Phone Survey questionnaire, which included 35 questions in 5 languages: Filipino, English, Cebuano, Bikol, and Iloko.
Contact times	All 7 days of the week, between 8am and 8pm each day
Contact attempts	<ul style="list-style-type: none"> ● Contact #1: SMS ● Contact #2: SMS, 26 hours after Contact #1 ● Contact #3: Mobile Web, 26 hours after Contact #2 ● Contact #4: Mobile Web, 26 hours after Contact #3
Cost to Respondents	None. Incoming SMS messages are free. The channels were configured to not invoice any data charges to respondents.
Incentives	Every person who completed the survey were sent 50 Pesos load.
Tool and Hosting	Surveda, with data hosted at the Philippines Department of Health

3.2 Implementation

The Philippines NCD Mobile Phone Survey implementation process consisted of four stages: Planning and Pre-Test, Full-scale Data Collection, Data Management and Analysis, and Data Release and Use.

Data collection ran from April-May 2024. Data collection was paused briefly in April for the Easter holidays. A total of 2,429 individuals completed or partially completed (defined as answering at least five NCD behavior or risk factor questions) the survey through the three major mobile network operators, Globe, SMART, and DITO in 50 days.

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)
- Diet (section 4.4)
- Diabetes (section 4.5)
- Hypertension (section 4.6)
- Physical Activity (section 4.7)
- Healthcare Lifestyle Advice (section 4.8)
- 2024 vs. 2021 NCD MPS Survey Comparison (section 4.9)

4.1 Demographics and Response Rates

The Philippines Mobile Phone Survey included 3,087 interviews across six age by sex groups. Table 2 shows the Mobile Phone Demographic distribution compared to the 2020 Philippines Statistical Authority population national statistics for sex and age.

As designed the Mobile phone sample was drawn to proportionally to represent men and women in six age by sex groups. A total of 2,429 respondents represented in the each of the age and sex categories. The 2024 Mobile Phone Sample consisted of 1,110 male and 1,319 respondents. The sample was weighted and adjusted to the age and sex data from the 2020 Census based population projections provided by the Philippines Statistical Authority.

Survey respondents were asked to provide their highest level of completed education: 64.8% self-reported a college/higher educational attainment; 17.6% reported a Secondary (Junior or Senior High) educational attainment; 12.1% achieved a Post-secondary/Vocational level; and 5.5% self-reported Elementary or No formal educational attainment (Table 2).

	Mobile Phone Sample		National*	
Sex	2,429		74,978,190	
Men	1,110	45.7%	50.1%	
Women	1,319	54.3%	49.9%	
Age				
18-29	626	25.8%	32.7%	
30-44	952	39.2%	31.7%	
45+	851	35.0%	35.6%	
Highest Educational Attainment	Mobile Phone Weighted %		Mobile Phone Weighted %	
			Men	Women
College or higher	64.8	(62.8 - 66.7)	63.3	66.3
Post-secondary / Vocational	12.1	(10.8 - 13.5)	12.8	11.4
Secondary (Junior /Senior High)	17.6	(16 - 19.1)	16.9	18.3
Elementary	2.6	(2 - 3.3)	3.2	2.0
No formal education	2.9	(2.2 - 3.6)	3.8	2.0

*2020 Census Based Population Projection (Midyear 2024, Scenario 2) provided by Philippines Statistical Authority

To achieve the 2,429 interviews, we sent invitations to 337,528 mobile phone numbers with mobile network prefixes for Globe, Smart, and DITO. Due to the nature of the RDD (random digit dialing) sampling, it was expected that many of these mobile phone numbers were invalid or non-working. Out of these, 7,111 provided some sort of response but only 3,644 consented and provided the age and sex information necessary to be eligible to participate. Of these, 202 were ineligible due to age, and 372 respondents of eligible age were rejected due to stratum sample size being full. The result was 3,070 eligible respondents, of which 2,429 provided interviews (completed or partial) with known gender. Completed interviews were defined as answering all survey questions. Partial interviews were defined as answering at least five NCD questions and not finishing the survey. The interview rate was 79.1% and the overall response rate was 1.1%, 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
1. Complete (I)	Answered all survey questions	1,960	0.6%
2. Partial (P)	Answered at least five NCD question but did not finish the survey	469	0.1%
3. Breakoff: Eligible (O)	Answered age and sex questions but did not answer any NCD questions	641	0.2%
4. Ineligible: Age	Under age 18	202	0.1%
5. Ineligible: Quotas	Answered age and sex questions but quotas were full	372	0.1%
6. Refused	Refused consent	2,614	0.8%
7. Breakoff: unknown eligibility	Answered some questions but stopped before age or sex	853	0.3%
8. No answer	No answer, possibly nonworking number	330,417	97.9%
Total		337,528	

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,

$$\text{Phase I Response Rate} = \frac{3,644}{337,528} = 0.0108$$

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

RR₆ 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:

Age	Males	Females
18-29	RR ₆₁ = 0.7988	RR ₆₂ = 0.7794
30-44	RR ₆₃ = 0.8013	RR ₆₄ = 0.7687
45+	RR ₆₅ = 0.8025	RR ₆₆ = 0.7923

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 Mobile Phone Survey in Philippines:

$$RR6_{overall} = \frac{IP_{overall}}{IP_{overall} + O_{overall}} * RR_{phase I} = \frac{2,429}{2,429 + 641} * 0.0108 = 0.85\%$$

4.2 Tobacco Use

Overall, 18.8% of adults (aged 18 years and older) reported current tobacco use in the form of smoked or smokeless tobacco products (27.9% among men and 9.6% among women). The prevalence of current tobacco smokers among all adults was 17.9%, and the prevalence of current smokeless tobacco users was 6.7% for all adults. Men reported higher rates of current tobacco smoking compared to women (26.7% among men and 8.9% among women), as well as for current smokeless tobacco use (10.4% among men and 6.7% among women.) Men also reported higher rates of daily tobacco smoking compared to women (16.8% vs. 5.5% respectively).

In total, 12.1% of adults reported current use of either electronic cigarettes or vaping devices. Men reported higher rates of current electronic cigarette or vaping device use compared to women (17.5% vs. 6.7% respectively). Daily use of electronic cigarette or vaping device use was reported overall by 5.6% of adults – 8.0% for men and 3.2% for women. The main reasons for using electronic cigarettes or vaping devices mentioned by current users were: to quit smoking tobacco (39.2%); the enjoyment of using electronic cigarettes/vaping devices (24.7%); and think electronic cigarette/vaping use is less harmful (12.2%).

Table 5 shows key outcomes from the 2021 NCD Mobile Phone Survey on tobacco use.

Table 5. Tobacco Use Overall and by Sex

Tobacco Use	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Tobacco Smokers						
Current tobacco smokers	17.9	(16.3 - 19.5)	26.7	(23.9 - 29.5)	8.9	(7.3 - 10.5)
Daily tobacco smokers	11.2	(9.9 - 12.6)	16.8	(14.5 - 19.2)	5.5	(4.2 - 6.8)
Smokeless Tobacco Users						
Current smokeless tobacco users	6.7	(5.6 - 7.8)	10.4	(8.4 - 12.3)	6.7	(5.2 - 8.1)
Daily smokeless tobacco users	3.3	(2.5 - 4.1)	5.0	(3.6 - 6.4)	3.2	(2.2 - 4.3)
Tobacco Users (any use)						
Current tobacco users	18.8	(17.2 - 20.5)	27.9	(25.1 - 30.7)	9.6	(7.9 - 11.3)
Electronic Cigarette/Vaping Use						
Current E-cigarette/Vaping device users	12.1	(10.7 - 13.5)	17.5	(15 - 19.9)	6.7	(5.2 - 8.1)
Daily E-cigarette/vaping device users	5.6	(4.6 - 6.7)	8.0	(6.3 - 9.8)	3.2	(2.2 - 4.3)
Main reason for using an electronic cigarette or vaping device:						
To Quit Smoking Tobacco	39.2	(32.8 - 45.7)	42.0	(34.1 - 50)	32.4	(22 - 42.8)
Enjoyment	24.7	(18.9 - 30.4)	24.6	(17.6 - 31.7)	24.8	(15 - 34.5)
I am Addicted	5.9	(3 - 8.8)	6.2	(2.7 - 9.7)	5.1	(0.2 - 10)
Think E-cigarette/Vaping Use Is Less Harmful	12.2	(7.9 - 16.5)	11.8	(6.7 - 17)	13.2	(5.5 - 20.9)
Has Many Flavors	5.8	(2.8 - 8.9)	5.6	(1.9 - 9.3)	6.3	(0.9 - 11.7)
People Around Me Use Them	3.4	(1.2 - 5.6)	1.5	(0 - 3.3)	7.9	(1.8 - 14.1)
Other Reason	8.8	(5.3 - 12.3)	8.1	(4 - 12.2)	10.3	(3.5 - 17.2)

4.3 Alcohol Use

Overall, 36.0% of adult Filipinos consumed alcohol in the past 30 days, with males reporting higher rates of alcohol consumption than females (45.8% vs. 26.1% respectively). One in three adult Filipinos (30.7%) reported drinking six or more drinks in a single drinking occasion. Men reported higher rates of heavy drinking occasions than females (40.3% vs. 21.4%.)

Table 6 shows reported alcohol use overall and by sex from the NCD Mobile Phone Survey.

Table 6. Alcohol Use overall and by Sex

Alcohol Use	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Current alcohol users (past 30 days)	36.0	(34 - 38)	45.8	(42.7 - 48.9)	26.1	(23.7 - 28.6)
Heavy episodic drinkers (percentage of drinkers had 6+ drinks)	30.7	(28.8 - 32.7)	40.3	(37.2 - 43.4)	21.4	(19 - 23.7)

4.4 Diet

Regarding salt consumption, 44.7% of adult Filipinos always or often added salt or salty sauces to their food before eating. Six out of ten (62.2%) adults reported always or often added salt in some form to food when cooking or preparing foods. Three out of ten (30.4%) of adult Filipinos reported always or often eating processed foods high in salt.

For fruit and vegetable consumption, 87.8% of all adult Filipinos consumed less than five servings of fruit or vegetables per day with an average of 1.4 servings of vegetables and 1.2 servings of fruits per day. Less than 1% (0.7%) reported consuming no fruits or vegetables per day.

Table 7 presents salt, fruit, and vegetable consumption overall and by sex.

Table 7. Diet Overall and by Sex

Diet	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Salt Consumption						
Always or often add salt or salty sauce to food before eating or as they're eating	44.7	(42.6 - 46.8)	43.7	(40.5 - 46.8)	45.7	(42.9 - 48.5)
Always or often add salt or salty seasoning when cooking or preparing foods	62.2	(59.9 - 64.5)	61.2	(57.7 - 64.7)	63.2	(60.2 - 66.1)
Always or often eat processed foods high in salt	30.4	(28.4 - 32.3)	31.2	(28.2 - 34.2)	29.5	(26.9 - 32.1)
Always or often see marketing/advertising processed foods on TV, social media, or on billboards outside of home	57.0	(54.8 - 59.1)	56.4	(53.2 - 59.6)	57.5	(54.6 - 60.4)
Fruit Consumption	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)
Average number of days per week fruits are consumed	3.2	(3.2 - 3.3)	3.2	(3.1 - 3.3)	3.3	(3.2 - 3.4)
Average number of servings of fruit consumed per day	1.2	(1.2 - 1.3)	1.3	(1.2 - 1.3)	1.2	(1.1 - 1.3)
Vegetable Consumption	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)
Average number of days per week vegetables are consumed	4.0	(4 - 4.1)	3.9	(3.8 - 4.1)	4.1	(4 - 4.2)
Average number of servings of vegetables consumed per day	1.4	(1.4 - 1.5)	1.5	(1.4 - 1.6)	1.4	(1.3 - 1.5)

<i>Fruit and Vegetable Consumption</i>	%	(95% CI)	%	(95% CI)	%	(95% CI)
Consume less than five servings of fruits OR vegetables per day	87.8	(86.4 - 89.2)	86.0	(83.7 - 88.2)	89.6	(87.8 - 91.3)
Consume no fruits and vegetables per day	0.7	(0.3 - 1.1)	0.8	(0.2 - 1.4)	0.6	(0.1 - 1)

4.5 *Raised Blood Glucose or Diabetes*

Overall, 19.8% of adult Filipinos indicated they were ever told by a doctor or other healthcare professional that they had raised blood glucose or diabetes (20.2% among men and 19.4% among women). Of those, a total of 51.6% reported that they were currently on medication for raised blood glucose or diabetes.

Table 8 shows the rates of self-reported raised blood sugar or diabetes.

Table 8. Raised Blood Glucose/Diabetes Overall and by Sex

<i>Raised Blood Glucose/Diabetes</i>	<i>Overall</i>		<i>Males</i>		<i>Females</i>	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Diagnosed by doctor or health care professional with raised blood glucose/diabetes	19.8	(18.2 - 21.5)	20.2	(17.8 - 22.7)	19.4	(17.2 - 21.6)
Currently taking medication for raised blood glucose/diabetes	51.6	(46.8 - 56.3)	48.1	(41.1 - 55)	55.2	(48.8 - 61.6)

4.6 *Raised Blood Pressure or Hypertension*

Overall 31.3%, reported that they had ever been diagnosed by a doctor or health care professional with raised blood pressure or hypertension (33.2% among men and 29.5% among women). Among those who reported they were diagnosed with raised blood pressure or hypertension 62.5% were currently on medication for the said condition.

Table 9 shows the rates of self-reported raised blood pressure or hypertension.

Table 9. Raised Blood Pressure/Hypertension Overall and by Sex

<i>Raised Blood Pressure/Hypertension</i>	<i>Overall</i>		<i>Males</i>		<i>Females</i>	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Diagnosed by doctor or health care professional with raised blood pressure/hypertension	31.3	(29.5 - 33.2)	33.2	(30.4 - 36)	29.5	(27 - 31.9)
Currently taking medication for raised blood pressure/hypertension	62.5	(58.9 - 66.1)	62.7	(57.6 - 67.9)	62.3	(57.2 - 67.3)

4.7 *Physical Activity*

Adult Filipinos averaged 3.1 days per week of 30 or more minutes of moderate physical activity. Approximately one in 10 adults reported exercising 30+ minutes daily (9.3%); 17.9% exercised 30+ minutes on 5-6 days of the week; 29.6% reported exercising 30+ minutes for 3-4 days of the week; 32.3% exercised 30+ minutes 1-2 days of the week; and 11.0% reported no 30+ minutes of exercise during the week.

Table 10 presents the self-reported average and frequency of days of 30 or more minutes of physical activity in a week.

Table 10. Physical Activity Overall and by Sex

Physical Activity	Overall		Males		Females	
	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)
Average number of days per week with 30 or more minutes of moderate physical activity	3.1	(3 - 3.2)	3.2	(3.1 - 3.3)	2.9	(2.8 - 3.1)
Days in the past week, exercised a total of 30 minutes+ of physical activity (enough to raise your breathing rate):	%	(95% CI)	%	(95% CI)	%	(95% CI)
None	11.0	(9.6 - 12.4)	9.5	(7.6 - 11.5)	12.5	(10.5 - 14.4)
1 - 2	32.3	(30.2 - 34.4)	30.0	(27 - 33)	34.7	(31.8 - 37.6)
3 - 4	29.6	(27.5 - 31.6)	31.3	(28.3 - 34.4)	27.7	(25 - 30.4)
5 - 6	17.9	(16.2 - 19.6)	19.9	(17.3 - 22.5)	15.8	(13.5 - 18)
Daily	9.3	(8 - 10.6)	9.2	(7.3 - 11.1)	9.4	(7.6 - 11.1)

4.8 Healthcare Lifestyle Advice

Overall, 54.2% of adult Filipinos reported visiting a doctor or healthcare worker in the past year (52.6% men vs. 55.8% women respectively). Regarding healthcare lifestyle advice during any visit in the past year, 64.7% were advised to either maintain a healthy body weight or advised to lose weight. Six out of ten (59.3%) adult Filipinos were advised to start or do more physical activity, and 48.5% were advised by a doctor or healthcare provider to reduce consumption of sugary beverages. Regarding healthcare lifestyle advice on salt and fat dietary intake, 29.4% of adult Filipinos were told to reduce salt and fat by a doctor or other healthcare worker; 13.5% were only told to reduce salt; 10.0% were only told to reduce fat; and 47.0% were given no advice regarding salt or fat dietary intake.

Table 11 shows reported healthcare lifestyle advice in the past year overall and by sex from the NCD Mobile Phone Survey.

Table 11. Healthcare Lifestyle Advice Overall and by Sex

Healthcare Lifestyle Advice	Overall		Males		Females	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Visited a doctor or healthcare worker in the past year	54.2	(52.1 - 56.3)	52.6	(49.4 - 55.8)	55.8	(53 - 58.6)
During any visit to a doctor or other health worker in the past 12 months, was advised to:						
Reduce sugary beverage consumption	48.5	(45.6 - 51.5)	48.0	(43.6 - 52.4)	49.1	(45.2 - 53)
Start or do more physical activity	59.3	(56.4 - 62.2)	58.5	(54.1 - 62.8)	60.1	(56.3 - 64)
Maintain a healthy body weight / lose weight	64.7	(61.9 - 67.5)	64.6	(60.4 - 68.9)	64.8	(61 - 68.5)
During any of your visits to a doctor or other health worker in the past 12 months, were you advised to reduce salt and or fat in your diet?						
Reduce salt only	13.5	(11.5 - 15.6)	14.4	(11.3 - 17.6)	12.7	(10.1 - 15.3)
Reduce fat only	10.0	(8.3 - 11.8)	10.1	(7.5 - 12.7)	10.0	(7.7 - 12.4)
Reduce salt and fat	29.4	(26.7 - 32.1)	29.8	(25.7 - 33.9)	29.0	(25.5 - 32.5)
No advice on salt or fat reduction	47.0	(44.1 - 50)	45.7	(41.3 - 50.1)	48.3	(44.4 - 52.2)

4.9 2024 vs 2021 NCD MPS Comparison

The 2024 NCD MPS used the same process and implementation protocol that was used in the 2021 Philippines NCD mobile phone survey. As mentioned the majority of questions were the same to facilitate comparison. To determine differences between the first and second survey, p-values based on the t-statistic were calculated using SUDAAN.

The overall prevalence of current tobacco use (smoked and/or smokeless) in the Philippines changed significantly, from 16.1% in 2021 to 18.8% in 2024. A significant increase was observed for current tobacco use among men, from 23.4% in 2021 to 27.9% in 2024 (a 19.4% relative increase), and no change among women (see Table 13). The prevalence of current tobacco smoking also increased from 15.5% in 2021 to 17.9% in 2024. Men who currently smoked tobacco increased, from 22.6% in 2021 to 26.7% in 2024 (a 18.5% relative increase). Likewise, men who smoked daily increased from 13.4% to 16.8%. The overall prevalence of smokeless tobacco use also increased from 3.9% in 2021 to 6.7% in 2024m this represents a 71.7% relative increase. Men who currently used smokeless tobacco increased from 6.2% in 2021 to 10.4% in 2024 (a 65.7% relative increase). Current smokeless tobacco use increased in women as well, from 1.6% in 2021 to 3.1% in 2024 (a 92.7% relative increase).

Current alcohol use among adult Filipinos significantly declined from 40.1% in 2021 to 36.0% in 2024, this represents a 10.4% relative decline. There was a significant decline for men engaging in current alcohol use, from 51.4% in 2021 to 45.8% in 2024. There was no difference in the prevalence of heavy episodic drinking overall and among men and women from 2021 to 2024.

When comparing dietary salt consumption, there was an increase among adult Filipinos who always or often added salt or salty sauce to food before eating, from 39.5% in 2021 to 44.7% in 2024 (a 13.1% relative increase). Adults Filipinos also increased always or often adding salt when cooking or preparing foods, up from 60.2% in 2021 to 62.2% in 2024 (a 3.3% relative increase).

Both adult men and women increased always or often adding salt before eating; men increased from 38.0% to 43.7% while women increased from 41.% to 45.7%.

Self-reported diagnosis of raised blood pressure or hypertension by a doctor or health care professional increased overall and among men and women from 25.8% in 2021 to 31.3 in 2024% (from 29.8% to 33.2% among men and 21.8% to 29.5% among women). Among those who were ever diagnosed with hypertension there was an increase among those who were currently taking hypertensive medication, from 54.5% in 2021 to 62.5% in 2024 (a 14.7% relative increase). Men who were ever hypertensive also increased taking medication, from 51.1% in 2021 to 62.7% in 2024.

The prevalence of self-reported diagnosis of diabetes by a doctor or healthcare professional also increased from 12.7% in 2021 to 19.8% in 2024 (from 14.1% to 20.2% among men and 11.3% to 19.4% among women).

Tables 12 and 13 present the estimates for the 2024 and 2021 NCD mobile phones survey along with corresponding p-values.

Table 12. 2024 vs 2021 NCD Mobile Phone Survey Indicators and p-values – Overall

	2024		2021		p-value
	n	%	n	%	
Tobacco Use					
<i>Tobacco Smokers</i>					
Current tobacco smokers	2,228	17.9	3,014	15.5	0.022
Daily tobacco smokers	2,228	11.2	3,014	8.9	0.007
<i>Smokeless Tobacco Users</i>					
Current smokeless tobacco users	2,198	6.7	2,992	3.9	0.000
Daily smokeless tobacco users	2,198	3.3	2,992	1.9	0.003
<i>Tobacco Users (any use)</i>					
Current tobacco users	2,251	18.8	3,029	16.1	0.011
Alcohol Use					
Current alcohol users (past 30 days)	2,249	36.0	3,010	40.1	0.002
Heavy episodic drinkers (percentage of drinkers had 6+ drinks)	2,209	30.7	2,959	33.1	0.075
Raised Blood Pressure/Hypertension					
Diagnosed by doctor or health care professional with raised blood pressure/ hypertension	2,224	31.3	3,003	25.8	0.000
Currently taking medication for raised blood pressure/ hypertension	692	62.5	740	54.5	0.002
Raised Blood Glucose/Diabetes					
Diagnosed by doctor or health care professional with raised blood glucose/diabetes	2,216	19.8	2,988	12.7	0.000
Currently taking medication for raised blood glucose/ diabetes	441	51.6	363	49.2	0.508
Diet					
<i>Salt Consumption</i>					
Always or often add salt or salty sauce to food before eating or as they're eating	2,226	44.7	2,981	39.5	0.000
Always or often add salt or salty seasoning when cooking or preparing foods	1,813	62.2	2,927	60.2	0.177
Always or often eat processed foods high in salt	2,154	30.4	2,935	31.4	0.440
<i>Fruit Consumption</i>					
Average number of days per week fruits are consumed	2,252	3.2	2,937	3.4	0.025
Average number of servings of fruit consumed per day	2,165	1.2	2,850	1.2	0.065
<i>Vegetable Consumption</i>					
Average number of days per week vegetables are consumed	2,229	4.0	2,938	4.1	0.081
Average number of servings of vegetables consumed per day	2,142	1.4	2,813	1.3	0.053
<i>Fruit and Vegetable Consumption</i>					
Consume less than five servings of fruits OR vegetables per day	2,235	87.8	2,932	90.1	0.010
Consume no fruits and vegetables	2,295	0.7	2,994	0.4	0.135

Table 13. 2024 vs 2021 NCD Mobile Phone Survey Indicators and p-values – Men & Women

Tobacco Use	2024 Men		2021 Men		p-value	2024 Women		
	n	%	n	%		n	%	
<i>Tobacco Smokers</i>								
Current tobacco smokers	1,028	26.7	1,496	22.6	0.020	1,200	8.9	1
Daily tobacco smokers	1,028	16.8	1,496	13.4	0.021	1,200	5.5	1
<i>Smokeless Tobacco Users</i>								
Current smokeless tobacco users	1,004	10.4	1,479	6.2	0.001	1,194	3.1	1
Daily smokeless tobacco users	1,004	5.0	1,479	3.2	0.034	1,194	1.6	1
<i>Tobacco Users (any use)</i>								
Current tobacco users	1,035	27.9	1,502	23.4	0.012	1,216	9.6	1
Alcohol Use								
Current alcohol users (past 30 days)	1,027	45.8	1,495	51.4	0.006	1,222	26.1	1
Heavy episodic drinkers (percentage of drinkers had 6+ drinks)	1,000	40.3	1,467	43.2	0.148	1,209	21.4	1
Raised Blood Pressure/Hypertension								
Diagnosed by doctor or health care professional with raised blood pressure/ hypertension	1,013	33.2	1,485	29.8	0.061	1,211	29.5	1
Currently taking medication for raised blood pressure/ hypertension	340	62.7	430	51.1	0.001	352	62.3	3
Raised Blood Glucose/Diabetes								
Diagnosed by doctor or health care professional with raised blood glucose/diabetes	1,013	20.2	1,479	14.1	0.000	1,203	19.4	1
Currently taking medication for raised blood glucose/ diabetes	206	48.1	201	48.9	0.873	235	55.2	2
Diet								
<i>Salt Consumption</i>								
Always or often add salt or salty sauce to food before eating or as they're eating	1,014	43.7	1,481	38	0.005	1,212	45.7	1
Always or often add salt or salty seasoning when cooking or preparing foods	791	61.2	1,449	57.7	0.118	1,022	63.2	1
Always or often eat processed foods high in salt	975	31.2	1,453	30.4	0.654	1,179	29.5	1
<i>Fruit Consumption</i>								
Average number of days per week fruits are consumed	1,024	3.2	1,462	3.4	0.012	1,228	3.3	1

Average number of servings of fruit consumed per day	978	1.3	1,415	1.2	0.200	1,187	1.2	1
Vegetable Consumption	n	Mean	n	Mean	p-value	n	Mean	
Average number of days per week vegetables are consumed	1,007	3.9	1,462	4.1	0.026	1,222	4.1	1
Average number of servings of vegetables consumed per day	972	1.5	1,405	1.4	0.143	1,170	1.4	1
Fruit and Vegetable Consumption	n	%	n	%	p-value	n	%	
Consume less than five servings of fruits OR vegetables per day	1,011	86.0	1,455	90	0.004	1,224	89.6	1
Consume no fruits and vegetables	1040	0.8446	1488	0.3	0.088	1,255	0.6	1

5. Conclusions

Conclusions:

NCDs and their associated risk factors continue to have profound consequences on the individual and the Filipino society-at-large. The data presented in the 2024 Philippines NCD mobile survey will help the Department of Health as they improve and enhance NCD prevention and response efforts. The timely reporting of mobile phone survey results such as these will also facilitate comparisons over time. Some key outcomes included:

- Overall, 18.8% of adult Filipinos reported as current tobacco users (smoked and smokeless use), with 17.9% being current tobacco smokers, and 6.7% current smokeless users. Men were more likely to report current or daily tobacco smoking or smokeless use than women. In total, 12.1% currently used electronic cigarettes or vaping devices. Men reported higher electronic and/or vaping use compared to women (17.5% vs 6.7%).
- Overall, one third of adult Filipinos reported current alcohol consumption, of whom three in 10 reported heavy episodic drinking (30.7%). Men compared to women were more likely to drink alcohol in the past 30 days as well as report being heavy episodic drinkers.
- Approximately eight in ten adults (87.8%) reported consuming less than five servings of fruits or vegetables per day.
- Six in ten (62.2%) reported always or often adding a form of salt as they prepared a meal.
- Two fifths (44.7%) reported always or often adding salt or salty sauces to food before or as they are eating it, and three in ten reported always or often eating processed foods high in salt. Over half (57.0%) always or often saw marketing or advertising of processed foods on the television, social media or billboards outside of their homes.
- Three out of ten (31.3%) reported ever receiving a clinical diagnosis of raised blood pressure or hypertension.
- Approximately two in 10 (19.8%) reported ever receiving a clinical diagnosis of raised blood glucose or diabetes.

Limitations:

The main limitation of any mobile phone survey 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 mobile phone survey were based on self-reports and may be influenced by recall or social desirability bias.

6. References

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