

# GALLUP®

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## Mexico Methodology Report

### Phase 1 Baseline Harmful Alcohol Use Survey



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# Project Background

## Research Objective

The research objective for the Baseline Harmful Alcohol Use Survey is to develop a Global Harmful Use of Alcohol Module and collect baseline data for AB InBev's initiative to reduce the harmful use of alcohol in pilot cities in seven countries. These seven countries include Belgium, Bolivia, Brazil, China, Mexico, South Africa and the U.S. Gallup selected control cities in each of the seven countries to allow for a comparison between program and control cities in each country. This technical report covers methodological details for the fieldwork conducted in Zacatecas and Aguascalientes (Mexico) during the Phase 1 Baseline Harmful Alcohol Use Survey.

## Research Impact

AB InBev aims to improve the health and well-being of its consumers and their communities by meaningfully reducing alcohol-related harm and its effects on individuals and society. The Global Harmful Use of Alcohol Module will assist AB InBev in achieving its Global Smart Drinking Goals, which include reducing the harmful use of alcohol in nine cities by 2020, creating global best practices by 2025, increasing alcohol health literacy by 2025 and creating social marketing campaigns by 2025. The Global Harmful Use of Alcohol Module will assist AB InBev in achieving its Global Smart Drinking Goals because it measures harmful alcohol use and knowledge about the harms of excessive alcohol use. As a result, AB InBev will be able to better target specific at-risk populations, along with their respective alcohol-related behaviors and attitudes, to design interventions that inform the public about harmful alcohol use and reduce the harmful use of alcohol in various cities around the world.

## Mexico Methodology

**Program City:** Zacatecas

**Control City:** Aguascalientes

**Dates of Interviewing:** Nov. 24–Dec. 20, 2016

**Mode of Interviewing:** Face-to-face CAPI

**Languages:** Spanish

## Sampling

The target population for this study was the civilian, non-institutionalized adult population living in the cities of Zacatecas and Aguascalientes. The population information for the sampling frame was derived from the 2010 population census from INEGI (National Bureau of Statistics). The 2010 census in Mexico was carried out in both a short form and a long form. The long form was used for 2.9 million households (10% of the total population). Fieldwork took place from May 31 until June 15, 2010. Data such as household assets, employment, food security, education, migration, health care use, and birth histories were collected<sup>1</sup>.

The smallest geographic divisions in Mexico are AGEBs, or basic geo-statistical areas. Population size information is available for each AGEB in the census data. The sampling frame for this study thus consisted of all the AGEBs included in the Metropolitan Areas of each city.

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<sup>1</sup> Further details about the 2010 Census are available here: <http://www.beta.inegi.org.mx/proyectos/ccpv/2010/>

*Sampling Frame: Total available census clusters (AGEBs) and total population per city*

Metropolitan Area	Municipality	Population over 18 years old	Total AGEBS available
<b>Aguascalientes</b>	Aguascalientes	584,983	326
	Jesus Maria		
	San Francisco de los Romo		
<b>Zacatecas</b>	Guadalupe	198,199	338
	Morelos		
	Zacatecas		

The sample was stratified by city and by socio-economic status (SES). In Mexico, there is no census information of SES distribution by state or city. But the AMAI (Mexican Marketing Research Association) estimates SES distribution aggregated for cities over 100,000 inhabitants nationwide. Therefore, Gallup’s local partners used this SES distribution to determine the number of ultimate clusters (AGEBS) needed in each city for each SES stratum.

*Total number of clusters and interviews needed per SES stratum*

SES	%	Clusters needed per city	Interviews
ABC+ (high)	0.205	31	310
CC- (medium)	0.321	48	480
D+DE (low)	0.474	71	710

Once the number of clusters (AGEBS) needed for each SES stratum was defined, AGEBS were selected randomly with a Probability Proportional to Size method (PPS) — that is, by assigning each cluster a probability of being selected that is proportional to the size of its population. Researchers selected clusters with replacement — larger clusters had a greater chance of being selected more than once. The distribution of interviews per cluster was proportionate to the number of times it was selected.

*Final distribution of selected clusters: Zacatecas*

SES	Selected Clusters	Interviews		
ABC+ (high)	31	10 (10 interviews each) 6 (20 interviews each) 3 (30 interviews each)	100 120 90	
	CC- (medium)	48	28 (10 interviews each) 7 (20 interviews each) 2 (30 interviews)	280 140 60
		D+DE (low)	71	20 (10 interviews each)

10 (20 interviews each)	200
3 (30 interviews each)	90
2 (40 interviews each)	80
1 (60 interviews)	60
1 (80 interviews)	80

*Final distribution of selected clusters: Aguascalientes*

SES		Selected Clusters	Interviews
ABC+ (high)	31	13 (10 interviews each)	130
		6 (20 interviews each)	120
		2 (30 interviews each)	60
CC- (medium)	48	25 (10 interviews each)	250
		8 (20 interviews each)	160
		1 (30 interviews)	30
		1 (40 interviews)	40
D+DE (low)	71	38 (10 interviews each)	380
		12 (20 interviews each)	240
		3 (30 interviews each)	90

**Block selection within AGEBS.** Once clusters in the sample were drawn, the next step was to select the starting block. This was done by using a Random Numbers Selection Chart, which allows to randomly select the starting block depending on the total number of blocks within the AGEBS.

**Household selection within blocks.** Once a starting block was identified, households per block were selected using a systematic random sampling method. Blocks were covered by walking clockwise and using Gallup’s random route procedure for selecting households.

**Respondent selection within households.** One person per household was selected using a random selection method – a Kish-grid method, which consisted of listing all eligible respondents in a household (starting from the oldest one) and then matching the number of eligible persons (row) with the last digit of the questionnaire number (column). The random number generated during this matching represents the selected respondent. In cases where the selected respondent was not available, two more attempts were made to interview her/him. If the third attempt failed as well, the interviewer moved on to the next household using the random route procedure.

**Fieldwork**

All interviewers went through rigorous training which covered topics such as interview protocol, screening, probing, remaining neutral, expressing appreciation, and handling refusals appropriately.

Fieldwork Stats	
Average total interviews/interviewer	79
Number of interviewers	38

Number of days in the field	25
Min interviews/day	7
Max interviews/day	298
One attempt	1798
Two attempts	693
Three or more attempts	509

Interviewers made at least three attempts to reach a person in each household, spread over different days and times of the day. When needed, interviewers made appointments for a return visit that fell within the survey data collection period. Fieldwork took place between November 24, 2016 and December 20, 2016.

*Completed interviews by date*

Date	Zacatecas	Aguascalientes	Total
11/24/2016	0	7	7
11/25/2016	12	4	16
11/26/2016	54	41	95
11/27/2016	54	69	123
11/28/2016	63	58	121
11/29/2016	49	67	116
11/30/2016	68	91	159
12/1/2016	41	108	149
12/2/2016	55	123	178
12/3/2016	71	143	214
12/4/2016	70	68	138
12/5/2016	99	47	146
12/6/2016	56	42	98
12/7/2016	118	93	211
12/8/2016	95	118	213
12/9/2016	134	164	298
12/10/2016	96	83	179
12/11/2016	62	0	62
12/12/2016	66	0	66
12/13/2016	89	0	89
12/14/2016	57	0	57
12/15/2016	58	107	165
12/16/2016	11	66	77
12/17/2016	8	0	8
12/20/2016	14	1	15
<b>Total</b>	1500	1500	3000

The average length of a completed interview was 9 minutes and 48 seconds in Zacatecas and 9 minutes and 50 seconds in Aguascalientes. Length of interview excludes the screening portion of the interview (respondent selection, obtaining respondent consent). Interview start time is recorded when an eligible respondent has been located and has consented to participate. Thus, the total length of the household visit may be slightly longer for each respondent.

*Interview lengths per city*

	Zacatecas	Aguascalientes
Mean	0:09:48	0:09:50
Median	0:09:30	0:09:28

**Occurrences during fieldwork and interviewer feedback**

On Dec. 4, 2016, there was an Extraordinary Municipal Government election held in the city of Zacatecas. Generally, Mexico prohibits alcohol sales during the weekend of an election.

Many respondents indicate that personal income questions, as well as questions about ages and genders of family members, are sensitive due to concerns about safety. Occasionally, interviewers say they had to explain the purpose of those questions.

On WP113 (do you feel safe walking alone at night) some respondents would say “yes, but ...” and mention things that happened to people they know or things they heard happened in the neighborhood. Interviewers indicate that personal safety was an issue of concern in Mexico, as well as in Bolivia and Brazil.

On A29/WP19428, interviewers report that some people tended to think in terms of how many drinks were acceptable if they were to drink every single day. Interviewers said that others tended to think in terms of how many drinks they could have in a weekend (two to four days).

Interviewers say A45/WP19450 is confusing for those who never drink alcohol. Those individuals tend to answer, “I don’t drink.”

**Response Rates**

The face-to-face response rate for this study is calculated according to the American Association of Public Opinion Research guidelines (AAPOR, 2000. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. Lenexa, Kansas: AAPOR). This represents the number of completed interviews divided by the total number of eligible households. Ineligible households are removed from the calculation. Ineligible households include the following categories:

- No eligible respondent lives there
- The house/dwelling is not occupied.

Response Rate:  $RR = \frac{I}{(I + P) + (R + NC + O) + (UH + UO)}$

Where:

I= Complete Interviews

P= Partial Interviews

R= Refusals

NC= Non-Contact

O= Other

UH= Unknown if household/occupied housing unit

UO= Unknown other

Final response rates per city, and the total response rate for Mexico were as follows:

<b>Mexico Total</b>	<b>61%</b>
Zacatecas	57%
Aguascalientes	66%

## Weighting

To ensure that the two samples were representative of the adult population of the two cities, Zacatecas and Aguascalientes, Gallup staff prepared weights separately for each city based on available population demographics. The weighting process of the two-city sample was as follows:

- Gallup staff constructed base sampling weights to take household size into account. They capped household size at three residents for Zacatecas respondents and four residents for Aguascalientes respondents aged 18 and older. They used this step to adjust for unequal probability of selection, as residents of relatively large households have a lower probability of selection for the survey.
- Gallup constructed post-stratification weights to correct for age, gender, education and SES (socio-economic status) of each city due to non-response.

Population sources used for constructing weights were as follows:

- Age, gender, education (Source: INEGI. Population and Housing Census 2010)
- SES (<http://nse.amai.org/data> Localities with 100,000+ inhabitants)

## Zacatecas

Age	Sample %	Population %	Weighted %
<b>18 to 24</b>	13	21	19
<b>25 to 34</b>	21	25	25
<b>35 to 44</b>	21	23	22
<b>45 to 54</b>	21	16	16



<b>55+</b>	23	16	17
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<b>Gender</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>Male</b>	40	47	46
<b>Female</b>	60	53	54

<b>Education</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>Primary or less</b>	20	27	25
<b>Secondary</b>	29	24	24
<b>High school and tech</b>	24	20	21
<b>University and up</b>	27	29	29

<b>SES</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>ABC+</b>	23	21	21
<b>C</b>	19	32	30
<b>DE</b>	59	47	48

### Aguascalientes

<b>Age</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>18 to 24</b>	19	21	21
<b>25 to 34</b>	26	25	25
<b>35 to 44</b>	21	22	22
<b>45 to 54</b>	16	15	15
<b>55+</b>	18	17	17

<b>Gender</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>Male</b>	48	47	48
<b>Female</b>	52	53	52

<b>Education</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>Primary or less</b>	20	30	29

<b>Secondary</b>	31	28	28
<b>High school and tech</b>	32	22	23
<b>University and higher</b>	16	20	20

<b>SES</b>	<b>Sample %</b>	<b>Population %</b>	<b>Weighted %</b>
<b>ABC+</b>	28	21	21
<b>C</b>	19	32	30
<b>DE</b>	53	47	48

### Margin of Error

The design effect calculation reflects the influence of data weighting and includes the effect of stratification and, in the face-to-face interviewing countries, the cluster selection methodology. In all face-to-face interviewing countries, the sampling design is a single-stage cluster sampling. Each Primary Sampling Unit (PSU) in the current face-to-face samples represents a cluster of individuals sampled at the first stage of selection<sup>2</sup> whose responses may be correlated with each other on some outcome variables. Taking the clustered sampling design into account when calculating variance estimates, researchers used intraclass correlation coefficients (ICC).

The margins of error (MOEs) presented in this report are calculated based on reported proportions for each program/control area, assuming a 95% confidence level. The MOE also includes the approximate design effect (DEFF) due to weighting for the total program/control sample. The DEFF is a measure that compares the ratios of sampling variance from the actual survey sample to a simple random sample of the same overall sample size. For example, a DEFF of two (2) indicates that the survey estimate has twice as much sampling variance as a simple random sample (SRS) of the same size. Since MOEs and design effects are different for different variables and depend on the level of clustering (ICC) exhibited by each variable, the MOEs and DEFFs for key demographic variables by area appear below.

The first table shows the weighted percentage estimates for each demographic variable by area, along with the design-adjusted 95% confidence interval for the estimate. The MOE shows the range around which the estimate can be expected to vary from the true value in the population, taking into account the standard error. Researchers compute the MOE by adding and subtracting twice the standard error (for 95% level of confidence) to the indicator estimate.

		Zacatecas	Aguascalientes	
<b>Gender</b>	Male	Estimate	46.0%	47.7%
		Lower	42.6%	44.0%
		Upper	49.5%	51.4%

<sup>2</sup> In all six countries, this was also the only stage of selection.

		Zacatecas	Aguascalientes		
<b>Age</b>	18 to 29	Estimate	31.0%	32.7%	
		Lower	27.9%	29.3%	
		Upper	34.4%	36.4%	
	30 to 49	Estimate	42.8%	41.5%	
		Lower	38.5%	38.0%	
		Upper	47.2%	45.1%	
	50 to 64	Estimate	18.2%	18.6%	
		Lower	15.5%	16.0%	
		Upper	21.3%	21.5%	
	65+	Estimate	8.0%	7.1%	
		Lower	6.4%	5.4%	
		Upper	10.0%	9.4%	
<b>Years of Education</b>	0 to 8 years	Estimate	25.1%	28.8%	
		Lower	21.4%	25.5%	
		Upper	29.2%	32.3%	
	9 to 15 years	Estimate	45.3%	51.3%	
		Lower	41.3%	48.0%	
		Upper	49.3%	54.6%	
	16+ years	Estimate	29.4%	19.9%	
		Lower	25.3%	16.6%	
		Upper	33.9%	23.6%	
	<b>Wealth Quintiles</b>	Poorest 20%	Estimate	23.0%	16.8%
			Lower	19.2%	13.5%
			Upper	27.4%	20.8%
Second 20%		Estimate	18.1%	22.0%	
		Lower	15.4%	18.5%	
		Upper	21.1%	25.9%	
Middle 20%		Estimate	22.1%	17.9%	
		Lower	18.7%	15.6%	
		Upper	25.8%	20.4%	
Fourth 20%		Estimate	20.2%	19.8%	
		Lower	17.5%	17.3%	
		Upper	23.3%	22.5%	
Richest 20%		Estimate	16.6%	23.5%	
		Lower	14.1%	19.9%	
		Upper	19.5%	27.4%	

			Zacatecas	Aguascalientes
<b>Marital Status</b>	Single/Never married	Estimate	29.8%	24.9%
		Lower	26.4%	22.0%
		Upper	33.5%	28.0%
	Married/Domestic partner	Estimate	55.9%	54.7%
		Lower	52.1%	50.9%
		Upper	59.7%	58.4%
	Separated/Divorced/Widowed	Estimate	14.2%	20.4%
		Lower	12.2%	17.4%
		Upper	16.5%	23.7%

The second table shows the DEFFs for each variable by area, along with the average. Researchers calculate the average DEFF over the 16 values presented for each area.

		Zacatecas	Aguascalientes
<b>Gender</b>	Male	1.89	2.20
<b>Age</b>	18 to 29	1.92	2.27
	30 to 49	3.06	2.06
	50 to 64	2.19	1.94
	65+	1.74	2.23
<b>Years of Education</b>	0 to 8 years	3.17	2.21
	9 to 15 years	2.56	1.71
	16+ years	3.52	2.97
<b>Income Quintile</b>	Poorest 20%	3.73	3.72
	Second 20%	2.15	3.13
	Middle 20%	2.80	1.54
	Fourth 20%	2.03	1.63
	Richest 20%	2.01	3.00
<b>Marital Status</b>	Single/Never married	2.34	1.86
	Married/Domestic partner	2.25	2.22
	Separated/Divorced/Widowed	1.46	2.35
<b>Average DEFF</b>		2.43	2.31