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YOUNG PEOPLE ARE ASIA'S KEY TO CURBING THE RISE OF NON-COMMUNICABLE DISEASES

DATA SHEET

MAY 2016

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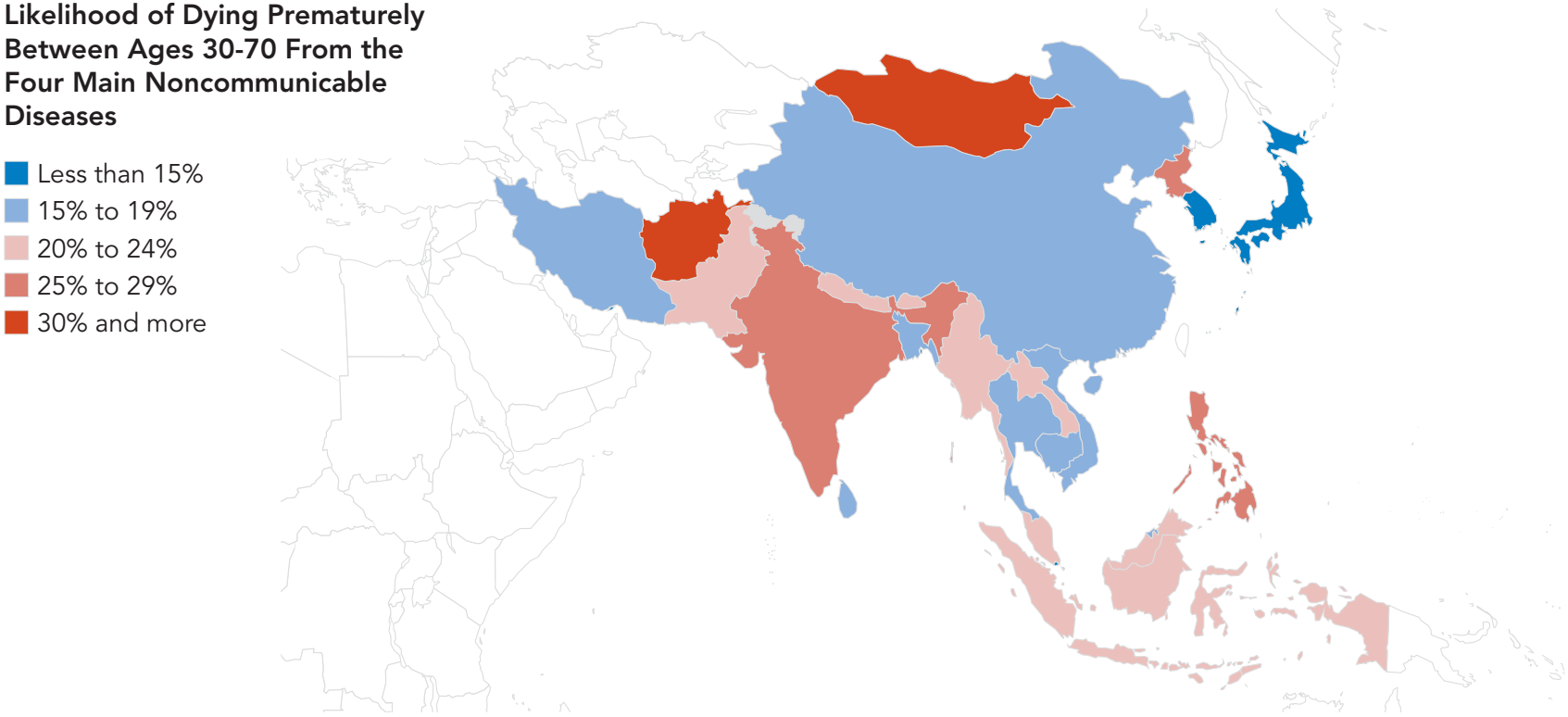
Premature Deaths From Noncommunicable Diseases Are More Common in Low- and Middle-Income Countries

The four main NCDs are defined by the World Health Organization (WHO) as cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases. Compared to high-income countries, NCDs in low- and middle-income countries (LMIC) generally claim lives at younger ages, often at the peak of individuals' economic productivity. In LMIC in Asia, the likelihood of dying prematurely (between ages 30 and 70) from the four main NCDs is 22 percent, compared to 9 percent in high-income countries in the region. Premature deaths from NCDs are projected to increase further in LMIC, where 95 percent of the region's population resides, underscoring the importance of prioritizing NCD prevention.

Likelihood of Dying Prematurely Between Ages 30-70 From the Four Main Noncommunicable Diseases



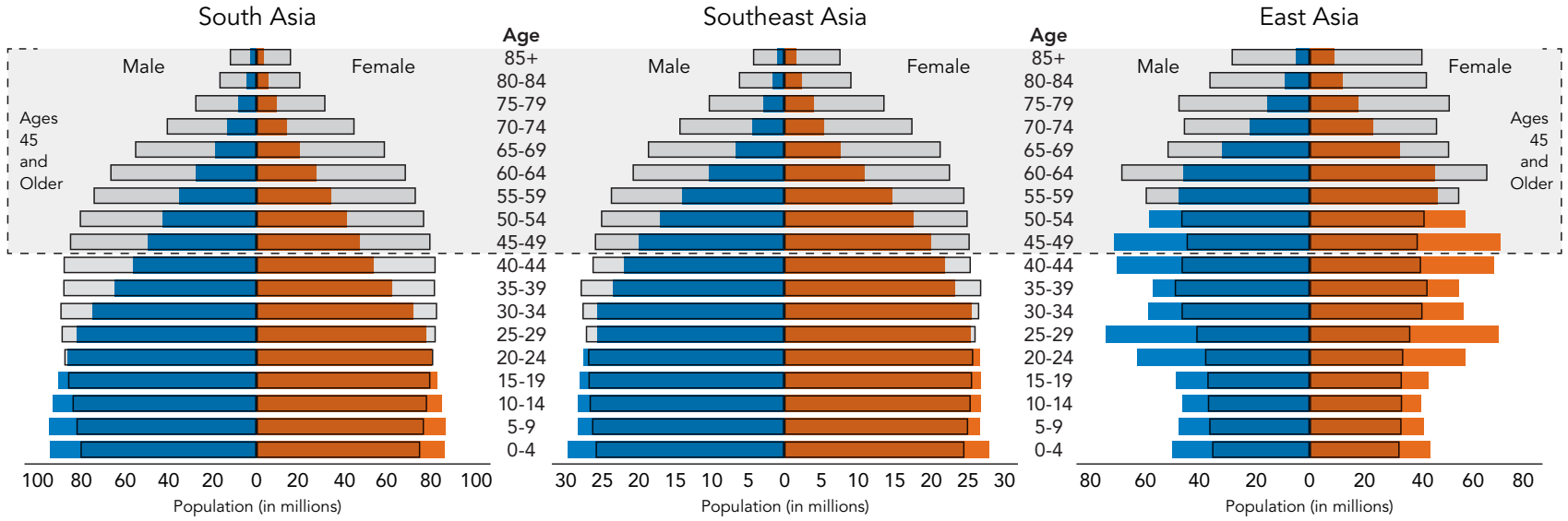
Note: Disputed areas in gray.
Sources: WHO, *Noncommunicable Diseases Country Profiles 2014* (Geneva, WHO, 2014); and PRB analysis of data from the report.

See Technical Notes on page 11

Addressing Risk Behaviors Among Young People Today Can Curb a Growing Noncommunicable Disease Epidemic

Adolescence and young adulthood are when the four main NCD risk factors—tobacco use, harmful use of alcohol, physical inactivity, and unhealthy diet—are typically initiated or established. These risk behaviors are increasing among young Asians, setting them up for poorer health in adulthood compared to today's adults. Given that this young cohort is also much larger than the older cohorts they will replace, a window of opportunity exists to curb their risk behaviors to shift the projected trajectory of NCDs in Asia. In 2050 when today's young people ages 10 to 24 have all reached ages 45 and older—the time when NCDs typically hit hardest—the over-45 population is projected to be 2.3 times the size it is today in South Asia, 2 times larger in Southeast Asia, and 1.4 times larger in East Asia.

Population Pyramids, South Asia, Southeast Asia, and East Asia: 2015 and 2050



South Asia	
Total	**Ages 45 and Older**
2015: 1.8 billion	2015: 403 million
2050: 2.4 billion	2050: 930 million

Southeast Asia	
Total	**Ages 45 and Older**
2015: 633 million	2015: 163 million
2050: 792 million	2050: 318 million

East Asia	
Total	**Ages 45 and Older**
2015: 1.6 billion	2015: 621 million
2050: 1.6 billion	2050: 867 million

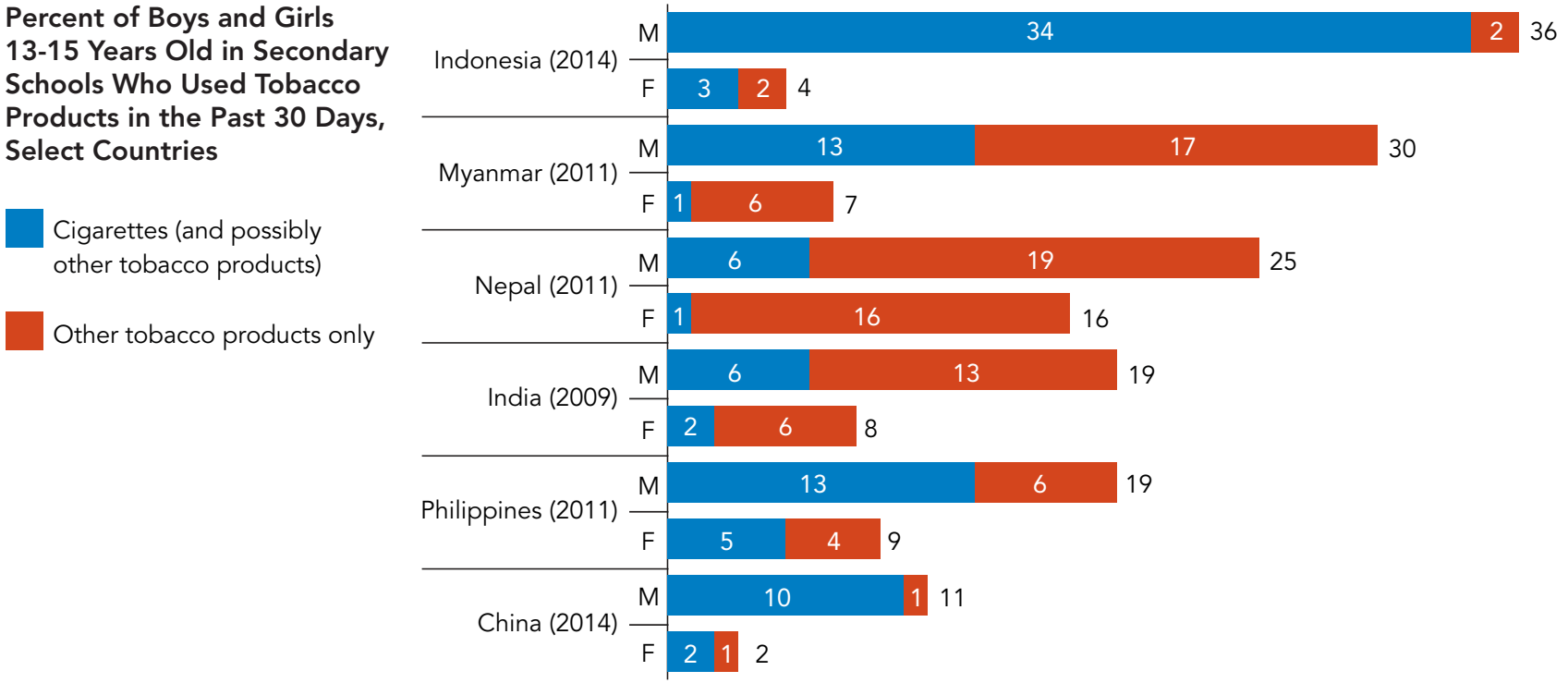
Sources: Toshiko Kaneda and Kristin Bietsch, *2015 World Population Data Sheet* (Washington, DC: Population Reference Bureau, 2015); and United Nations (UN) Population Division, *World Population Prospects: The 2015 Revision* (New York: UN, 2015).

See Technical Notes on page 11

Tobacco Use is High Among Boys in Much of Asia

Tobacco use is the leading cause of preventable deaths around the world, due to illness such as cancers, chronic respiratory diseases, and heart diseases. Although tobacco use in Asia has typically been most common among older males, the tobacco industry has begun to target women and youth more actively, and at the same time, income growth has made tobacco products more affordable. Consequently, sizeable proportions of boys in many countries are now smoking. Among 13-to-15-year-old boys in secondary school, 36 percent in Indonesia, 30 percent in Myanmar, and 25 percent in Nepal currently use tobacco (defined as any use in the last 30 days). In general, the rates among girls are substantially lower, though they are increasing in some countries. Although cigarettes are predominant in East Asia and certain countries in Southeast Asia, other tobacco products are more popular throughout much of South Asia and in other parts of Southeast Asia.

Percent of Boys and Girls 13-15 Years Old in Secondary Schools Who Used Tobacco Products in the Past 30 Days, Select Countries



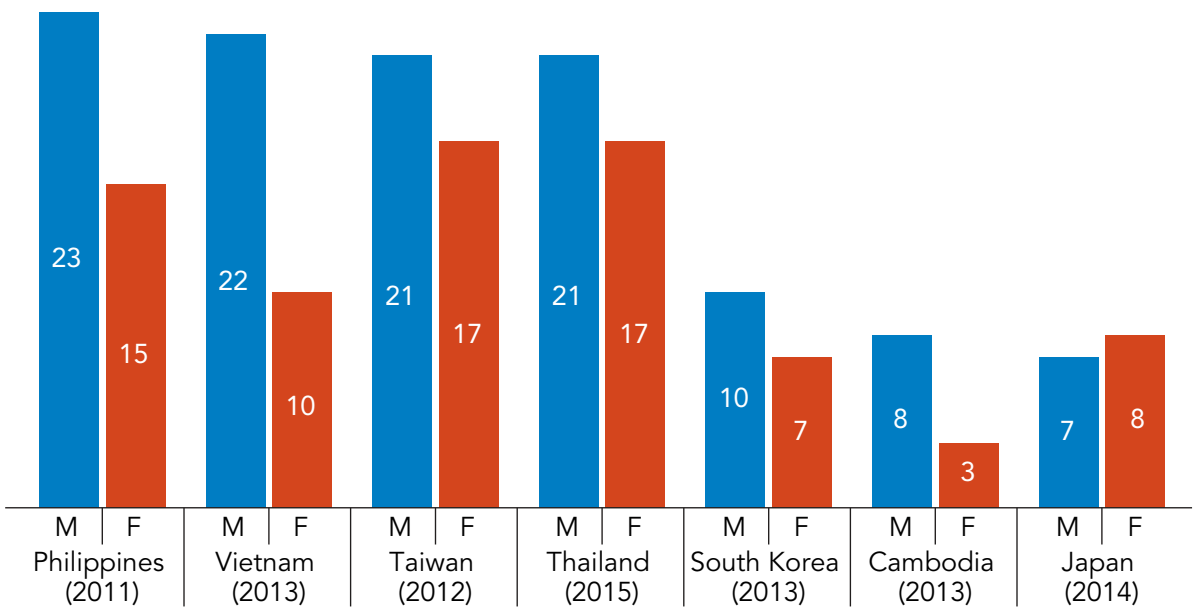
Note: Totals may not add up due to rounding.
Sources: WHO and CDC, Global Youth Tobacco Survey.

See Technical Notes on page 11

Alcohol Use Is Problematic Among Youth

Although alcohol use in many parts of Asia is relatively low compared to Europe and the Americas, it is increasing as social trends shift and marketing efforts target countries with rising economies and sizeable populations of young people with disposable income. Among 13-to-15-year-old-secondary-school students, over 20 percent of boys in the Philippines, Thailand, Vietnam, and Taiwan are current alcohol users (defined as any use in the last 30 days). The difference between genders is generally smaller than for tobacco use. Binge and heavy drinking are more common among youth than adults. Heavy drinking increases many other health risks, including road traffic accidents, unprotected sex, violence, and poor mental health. Studies also show that people who begin drinking in early adolescence are much more likely to become dependent on alcohol than those who begin drinking in their late adolescence or early 20s, even after considering family history of alcohol abuse.

Percent of Boys and Girls 13-15 Years Old in Secondary Schools Who Had at Least One Drink With Alcohol in the Past 30 Days, Select Countries



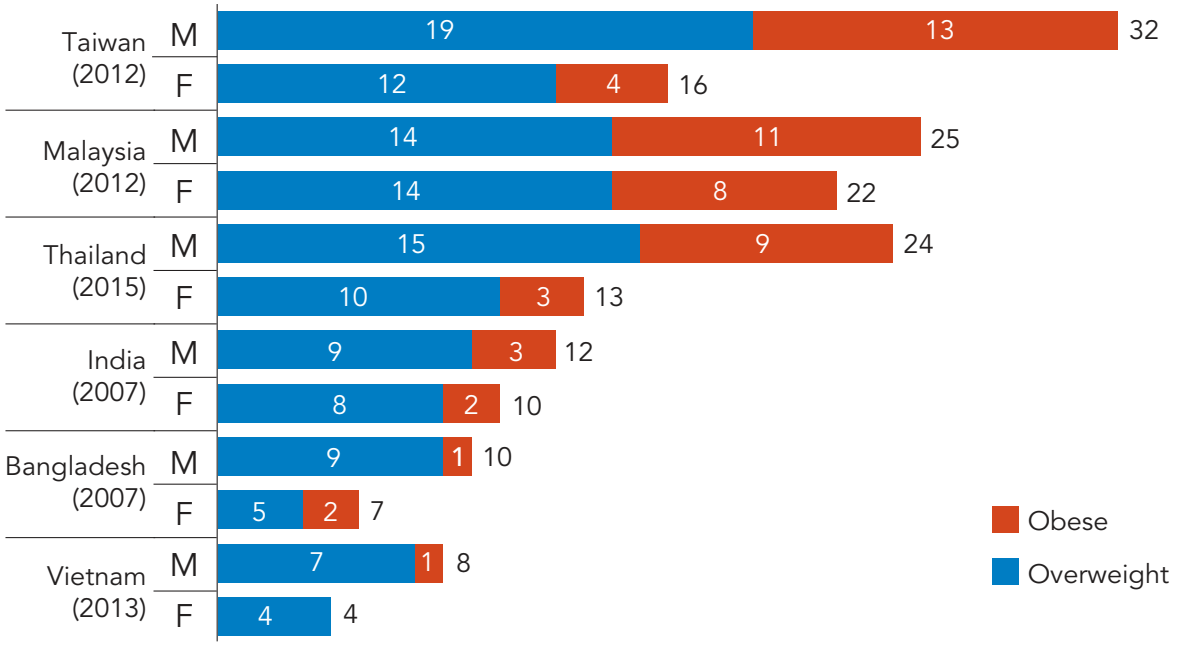
Sources: WHO and CDC, Global School-Based Student Health Survey; Bridget F. Grant and Deborah A. Dawson, "Age at Onset of Alcohol Use and Its Association With DSM-IV Alcohol Abuse and Dependence: Results From the National Longitudinal Alcohol Epidemiologic Survey," Journal of Substance Abuse 9 (1997): 103-110; and Bridget F. Grant, "The Impact of a Family History of Alcoholism on the Relationship Between Age at Onset of Alcohol Use and DSM-IV Alcohol Dependence," *Alcohol Health and Research World* 22, no. 2 (1998): 144-48.

See Technical Notes on page 11

Shifts in Diet and Exercise Have Contributed to Overweight and Obesity Among Young People Across Asia

Asia is shifting away from healthier traditional diets to those high in empty calories, sugar, salt, and saturated fat. Physical activity levels are also declining as the amount of activity needed for work or transportation decreases, and worsening traffic and air quality, among other factors, make it difficult to be active outside. Together, these changes in diet and exercise contribute to overweight and obesity, and consequently, to NCDs such as type 2 diabetes, cardiovascular diseases, and strokes. Among 13-to-15-year-old boys in secondary schools, 32 percent in Taiwan, 25 percent in Malaysia, and 24 percent in Thailand are either overweight or obese. The rates are lower for girls in most Asian countries, though they are increasing. Many low- and middle-income Asian countries are also facing the double burden of an emerging epidemic of overweight and obesity added to persistent undernutrition, which can occur in the same communities or even households.

Percent of Boys and Girls 13-15 Years Old in Secondary Schools Who Are Overweight or Obese, Select Countries



Note: Totals may not add up due to rounding.
Source: WHO and CDC, Global School-Based Student Health Survey.

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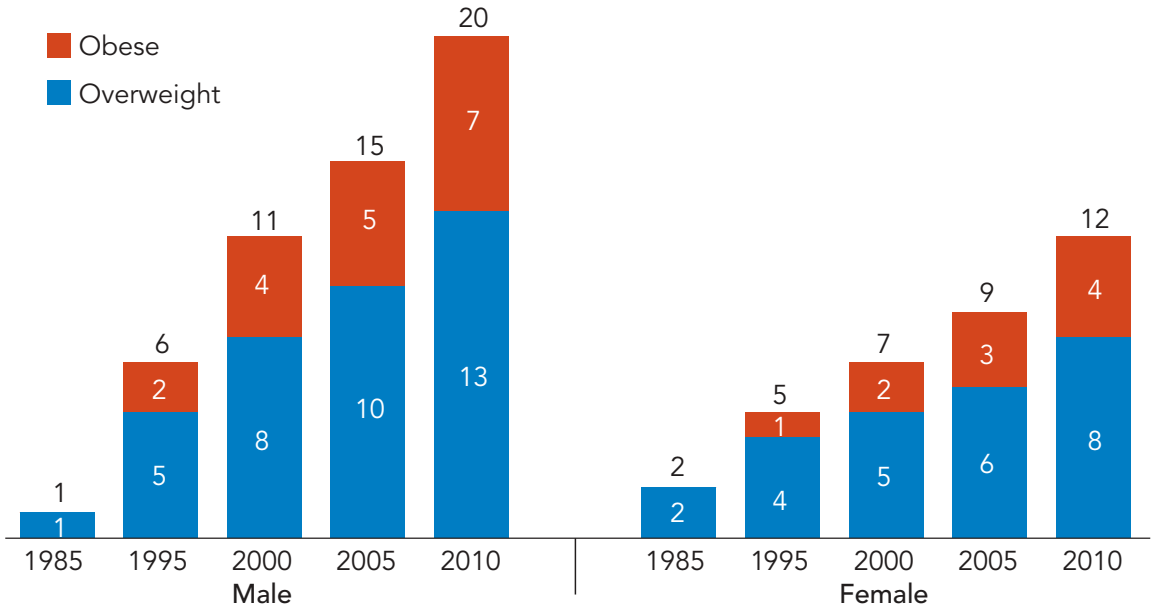
Country in Focus: China Has Seen a Dramatic Increase in Overweight and Obesity Among Young People

A large national survey in China among 7-to-18-year-old students showed a dramatic increase in the prevalence of overweight and obesity between 1985 and 2010. In 1985, the prevalence of overweight was only 1 percent among boys and 2 percent among girls, with virtually no obesity. By 2010, 20 percent of boys and 12 percent of girls were overweight or obese; one-third of these boys and girls were obese. At nearly 12 percent, China already has the world's highest rate of type 2 diabetes among adults. And a 2012 study estimated the prediabetes rate among 7-to-17-year-olds to be as high as 15 percent, which is alarming given that this condition increases the likelihood of type 2 diabetes later in life.

Trends in Percent of 7-to-18-Year-Old Students Who Are Overweight or Obese in China, 1985-2010



Note: Totals may not add up due to rounding; data excludes Tibet; the Working Group on Obesity in China (WGOC) criteria was used to assess overweight/obesity statu
Sources: Cheng Ye Ji, Tian Jiao Chen, and WGOC, "Empirical Changes in the Prevalence of Overweight and Obesity Among Chinese Students From 1985 to 2010 and Corresponding Preventive Strategies," *Biomedical and Environmental Sciences* 26, no. 1 (2013): 1-12; Shengkai Yan et al., "The Expanding Burden of Cardiometabolic Risk in China: The China Health and Nutrition Survey," *Obesity Reviews* 13, no. 9 (2012): 810-821; and Yu Xu et al., "Prevalence and Control of Diabetes in Chinese Adults." *Journal of American Medical Association* 310, no. 9 (2013): 948-59.

See Technical Notes on page 11

	Population and Youth							NCD Mortality		
	Mid-Year Population (millions)		Youth Ages 10-24, Percent of Population, 2015	Percent Enrolled in Secondary School (Gross Enrollment Ratio), 2005/2014		Percent of Total Population Living in Urban Areas, 2014	GNI per Capita, PPP (Current International $), 2014[2]	Age-Standardized Death Rate for All NCDs (per 100,000), 2012	Percent of Total Deaths due to NCDs, 2012	Probability of Premature Deaths From NCDs Between Ages 30-70, 2012[3]
	2015	2050		Male	Female					
EAST ASIA										
China	1371.9	1365.7	19	95	97	55	13,170	576	87	19
China, Hong Kong SAR[1]	7.3	8.6	15	103	99	100	56,570	-	-	-
China, Macau SAR[1]	0.7	0.8	16	97	95	100	120,140	-	-	-
Japan	126.9	96.9	14	102	102	93	38,120	244	79	9
Korea, North	25.0	27.0	23	-	-	61	-	751	79	27
Korea, South	50.7	48.1	18	98	97	82	33,650	302	79	9
Mongolia	3.0	4.4	24	90	92	68	11,120	966	79	32
Taiwan	23.5	20.4	19	-	-	73	-	-	-	-
SOUTHEAST ASIA										
Brunei	0.4	0.5	25	99	99	77	*72,190*	475	80	17
Cambodia	15.4	21.3	30	48	41	21	3,080	394	52	18
Indonesia	255.7	366.5	26	84	81	54	10,190	680	71	23
Laos	6.9	10.6	33	60	55	38	5,060	680	48	24
Malaysia	30.8	42.3	27	-	-	74	24,770	563	73	20
Myanmar	52.1	56.5	28	51	52	34	-	709	59	24
Philippines	103.0	157.1	30	84	93	44	8,450	720	67	28
Singapore	5.5	7.0	19	-	-	100	80,270	264	76	10
Thailand	65.1	66.1	19	83	89	49	14,870	449	71	16
Timor-Leste	1.2	2.8	32	70	76	32	5,080	671	44	24
Vietnam	91.7	108.2	24	-	-	33	5,350	435	73	17

(-) Indicates data unavailable or inapplicable.
A date range indicates the most recent data point during that time period.

1 Special Administrative Region.
2 Data prior to 2014 are shown in italics.
3 The estimated probability of dying between ages 30 and 70 years from the four main NCDs—cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases.

See Technical Notes on page 11

	Population and Youth							NCD Mortality		
	Mid-Year Population (millions)		Youth Ages 10-24, Percent of Population, 2015	Percent Enrolled in Secondary School (Gross Enrollment Ratio), 2005/2014		Percent of Total Population Living in Urban Areas, 2014	GNI per Capita, PPP (Current International $), 2014[2]	Age-Standardized Death Rate for All NCDs (per 100,000), 2012	Percent of Total Deaths due to NCDs, 2012	Probability of Premature Deaths From NCDs Between Ages 30-70, 2012[3]
	2015	2050		Male	Female					
SOUTH ASIA										
Afghanistan	32.2	64.3	35	71	40	25	2,000	846	37	31
Bangladesh	160.4	201.9	30	56	61	23	3,330	549	59	18
Bhutan	0.8	1.1	29	81	87	38	7,280	573	56	21
India	1314.1	1660.1	28	69	69	32	5,630	682	60	26
Iran	78.5	99.3	23	89	88	71	*16,590*	569	76	17
Maldives	0.3	0.6	28	-	-	45	10,920	487	81	16
Nepal	28.0	36.0	33	65	70	18	2,410	678	60	22
Pakistan	199.0	344.0	30	46	37	38	5,090	669	50	21
Sri Lanka	20.9	23.0	23	97	102	18	10,300	501	75	18

(-) Indicates data unavailable or inapplicable.
A date range indicates the most recent data point during that time period.

1 Special Administrative Region.
2 Data prior to 2014 are shown in italics.
3 The estimated probability of dying between ages 30 and 70 years from the four main NCDs—cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases.

NCD Risk Factors Among Youth

	Current Tobacco Use							Current Alcohol Use				Physical Inactivity				Overweight or Obese[11]		
	Cigarettes		Other Products		Any Products													
	Male	Female	Male	Female	Male	Female	Year	Male	Female	Year		Male	Female	Year		Male	Female	Year
EAST ASIA																		
China	10	2	-	-	11	2	2014	18	14	2013	[6]	77	82	2010	[9]			2010
China, Hong Kong SAR[1]	8	8	3	2	10	9	2009	18		2014/15	[7]			2011/12				2011/12
China, Macau SAR[1]	4	7	4	4	-	-	2010	-	-			-	-			-	-	
Japan	2	1	-	-	-	-	2012	7	8	2012				2014	[9]			2014
Korea, North	-	-	-	-	-	-		-	-			-	-			-	-	
Korea, South	7	2	-	-	-	-	2014	10	7	2014		78	90	2014	[9]			2014
Mongolia	8	4	-	-	-	-	2013	5	4	2013		59	66	2013		11	12	2013
Taiwan	11	5	-	-	-	-	2012	21	17	2012		63	80	2012		32	16	2012
SOUTHEAST ASIA																		
Brunei	14	4	-	-	15	5	2014	4	3	2014		81	95	2014	[9]	37	35	2014
Cambodia	0	0	8	5	8	5	2010	8	3	2013		89	92	2013		3	4	2013
Indonesia	34	3	-	-	36	4	2014	4	1	2007		84	83	2007	[9]	14	6	2007
Laos	14	1	8	5	19	6	2011	19	21	2015		76	91	2015	[9]	11	12	2015
Malaysia	31	5	13	6	35	9	2009	9	6	2012		72	85	2012		25	22	2012
Myanmar	13	1	28	7	30	7	2011	1	1	2007		81	87	2007	[9]	4	6	2007
Philippines	13	5	10	5	19	9	2011	23	15	2011		85	87	2011		11	9	2011
Singapore	9	4	10	8	-	-	2012			2010		80	88	2012				2010
Thailand	15	5	-	-	20	8	2015	21	17	2015		82	93	2015	[9]	24	13	2015
Timor-Leste	54	11	-	-	66	24	2013	-	-			-	-			-		2009/10
Vietnam	4	1	-	-	-	-	2013	22	10	2013		76	87	2013		8	4	2013
SOUTH ASIA																		
Afghanistan	7	4	-	-	10	6	2014	-	-			91	90	2014	[9]	18	13	2014
Bangladesh	3	0	7	3	9	3	2013	2	0	2014		58	59	2014	[9]	10	7	2014
Bhutan	23	7	29	20	39	23	2013			2011	[7, 8]	-	-			-	-	
India	6	2	16	7	19	8	2009			2005/06		69	71	2007	[9]	12	10	2007
Iran	5	1	32	20	33	20	2007	-	-					(2013)	[9, 10]			2011/12
Maldives	6	2	13	6	15	7	2011	-	-			-	-	2014		19	16	2014
Nepal	6	1	22	16	25	16	2011			2012/13				2012/13				2012/13
Pakistan	10	1	-	-	-	-	2009	-	-			83	87	2009		5	9	2009
Sri Lanka	3	0	15	5	16	5	2011	-	-			83	89	2008	[9]	5	4	2008

Notes: Data points for the risk factors appear for countries with comparable data available from the following surveys: Global Youth Tobacco Survey and Global School-Based Student Health Survey (GSHS) for tobacco use, and GSHS for alcohol use, physical inactivity, and overweight status. For the countries without data from these surveys, data from other sources were used whenever possible to assess risk levels.

Data points from these other surveys appear only when they are comparable with the data from the above sources. Only the colors representing risk levels are displayed for the countries without comparable data.

Technical notes, data points underlying all risk levels, and data sources are provided in the accompanying data sheet and the data appendix at www.prb.org/Publications/Datasheets/2016/ncd-risk-youth-asia.aspx.

Definition of Risk Levels

High Risk | Medium Risk | Low Risk

Current Tobacco Use

Percent using cigarettes/other tobacco products/any products in the past 30 days among 13-15-year-old secondary school students[2]

- 16% or Above
- 7% to 15%
- Below 7%

Current Alcohol Use

Percent having any drinks with alcohol in the past 30 days among 13-15-year-old secondary school students[3]

- 40% or Above
- 20% to 39%
- Below 20%

Physical Inactivity

Percent not engaging in physical activity for at least 60 min/day on five out of the last seven days among 13-15-year-old secondary school students[3]

- 70% or Above
- 50% to 69%
- Below 50%

Overweight or Obese

Percent who are overweight or obese among 13-15-year-old secondary school students[3]

- 20% or Above
- 10% to 19%
- Below 10%

(-) Indicates data unavailable or inapplicable.
A date range indicates the most recent data point during that time period.

1 Special Administrative Region.
4 Based on the Global Youth Tobacco Survey and the Global School-Based Student Health Survey.
5 Based on the Global School-Based Student Health Survey.
6 Data are from Beijing, Shanghai, and Guangzhou.
7 Data are not disaggregated by sex when the columns are not divided.
8 Data are from Thimphu.
9 Underlying measure pertains to physical inactivity level in seven (not five) out of the last seven days in this country.
10 Data are from Khoramabad, and year in brackets is publication year for the survey results (data year unknown).
11 Proxy for unhealthy diet.

This data sheet accompanies the policy report entitled *Addressing Noncommunicable Disease Risk Factors Among Young People: Asia's Window of Opportunity to Curb a Growing Epidemic.* The data sheet is accompanied by a data appendix that provides the latest available country-specific data and data sources on four key noncommunicable disease risk factors among young people in Asia since 2005. All are available at www.prb.org/Publications/Datasheets/2016/ncd-risk-youth-asia.aspx.

Technical Notes

This data sheet lists all 28 geopolitical entities in East, Southeast, and South Asia with populations of 150,000.

Noncommunicable Disease (NCD) Risk Factors. The data sheet focuses on four specific behaviors—tobacco use, harmful use of alcohol, physical inactivity, and unhealthy diet—identified by the World Health Organization to be key risk factors for the four main NCDs. Data availability on these risk factors among young people varies across countries in Asia, and are sometimes not directly comparable. They may measure the levels of risk using different indicators, at different geographic levels (national, regional), for different age groups, or from different settings (all youth, youth in schools). To facilitate the cross-country comparison of risk factor levels and to focus attention on the broader picture, the risk factor levels are presented here as high (red), medium (yellow), or low (green).

Risk factor levels are assessed by first identifying the core indicator for each risk factor that is suitable and for which data are consistently available for the largest number of countries. For countries with data on the core indicators, both risk factor levels and data points are presented, separately by sex whenever possible. For countries without data on the core indicators, only the color coding for risk factor levels are presented. These levels are based on alternative indicators or data that are otherwise not directly comparable (such as different age groups, indicator definitions) but that still enable assessment of risk factor levels using similar standards. All data points underlying risk factor levels and the data sources are available for each risk factor per country in the data appendix accessible at www.prb.org/Publications/Datasheets/2016/ncd-risk-youth-asia/aspx.

The risk factor levels are assessed using the standards described below. Due to the lack of preexisting standards to assess population-level risks for these behaviors, cut-offs were developed for each risk factor based on a review of previous literature. The standards were adjusted up or down to determine the risk factor levels when the indicator differed from the ones described below. Data on any age groups between ages 10 and 24 from 2005 or later are considered in the coding. Data points rounded to their nearest whole numbers are used for coding risk factor levels.

Tobacco Use. The core indicators are the percent reporting use in the past 30 days of each of the following: cigarettes, other tobacco products, and any tobacco products among 13-to-15-year-old students, available in Global Youth Tobacco Survey (GYTS) (World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC)) and Global School-Based Student Health Survey (GSHS) (WHO and CDC). The standard used for coding is high ≥ 16%; medium = 7%-15%; and low < 7%.

Alcohol Use. The core indicator is the percent reporting any alcohol use in the past 30 days among 13-to-15-year-old students available in GSHS (WHO and CDC). The standard used for coding is high ≥ 40%; medium = 20%-39%; and low < 20%. We examine any amount of alcohol use instead of harmful use, since any amount of drinking presents risk among youth both because of the greater health impact of alcohol on young people and the link between the age of onset and likelihood of lifetime alcohol dependency.

Physical Inactivity. The core indicator is the percent reporting not engaging in any type of physical activity for at least 60 minutes a day for five days in the past seven days among 13-to-15-year-old students available in GSHS (WHO and CDC). The standard used for coding is high ≥ 70%; medium = 50%-69%; and low < 50%. Surveys usually report physical activity levels rather than inactivity levels, so data presented here are 100 percent minus the percent reported to be physically active. In some countries, the measure pertains to the activity level in seven out of the past seven days. For those countries, the standards used to code risk factor levels were adjusted. For example, while the percent physically inactive is displayed as 77 among boys in China, it is coded as medium risk as the measure pertains to the activity level over the past seven days.

Overweight/Obesity (Unhealthy Diet). The core indicator is the percent reporting overweight or obese among 13-to-15-year-olds available in GSHS (WHO and CDC). The standard used for coding is high ≥ 20%; medium = 10%-19%; and low < 10%. The overweight/obesity measure is used as a proxy for unhealthy diet due to the scarcity of comparable data on dietary intake to assess nutrition levels across countries. Overweight/obesity is a physiological change resulting from high caloric consumption and physical inactivity and is assessed using the Body Mass Index (BMI), a measure of weight relative to height. The BMI levels used to classify overweight/obese status vary across surveys and are specified in the data appendix.

Data Sources

Population and Youth

Toshiko Kaneda and Kristin Bietsch, *2015 World Population Data Sheet* (Washington, DC: Population Reference Bureau, 2015).

United Nations (UN) Population Division, *World Population Prospects: The 2015 Revision* (New York: UN, 2015).

UNESCO Institute for Statistics, online database, accessed at www.uis.unesco.org/Pages/default.aspx.

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NCD Mortality

World Health Organization (WHO), *World Health Statistics 2014* (Geneva: WHO, 2014).

WHO, *Noncommunicable Diseases Country Profiles 2014* (Geneva: WHO, 2014).

NCD Risk Factors Among Youth

WHO and the Centers for Disease Control and Prevention (CDC), Global School-Based Student Health Surveys, accessed at www.who.int/chp/gshs/en/.

WHO and CDC, Global Youth Tobacco Surveys, accessed at http://nccd.cdc.gov/GTSSData/Ancillary/DataReports.aspx?CAID=1.

Various other country-specific surveys (see the data appendix for all data points and a full list of citations).

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www.younghealthprogrammeyhp.com

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