



Trends and transitions in noncommunicable disease risk factors: data, analytics and implications. (Latin America)

Adrian Soto-Mota



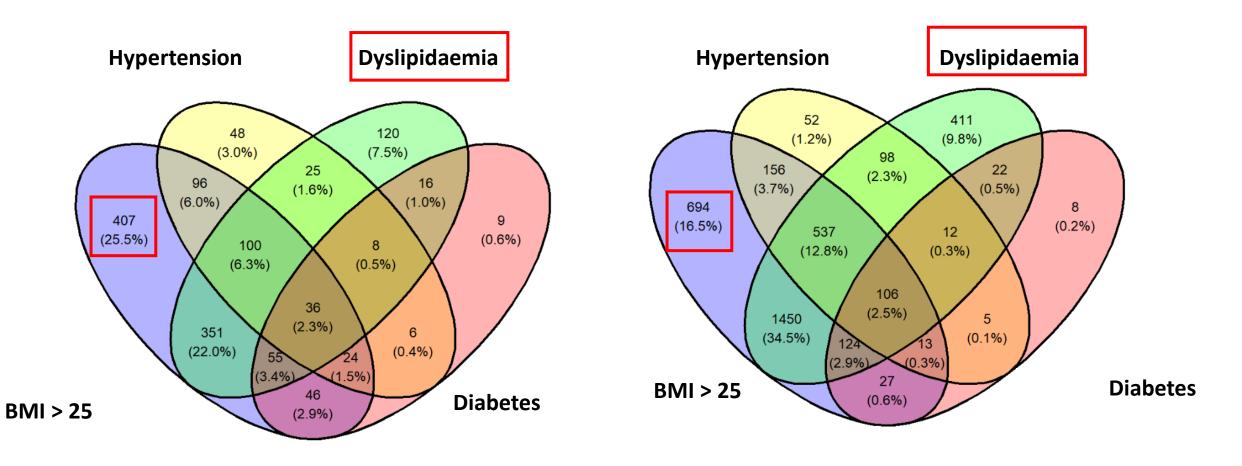
• There is available data from national health surveys in 19 Latin American countries over the last two decades. However, there is only a handful of countries with more than one survey.

• There are 4 national-representative surveys from Mexico spanning over 18 years.

• We characterized obesity-phenotypes using the Edmonton Obesity Staging System which considers Medical, Mental, and Functional dimensions.

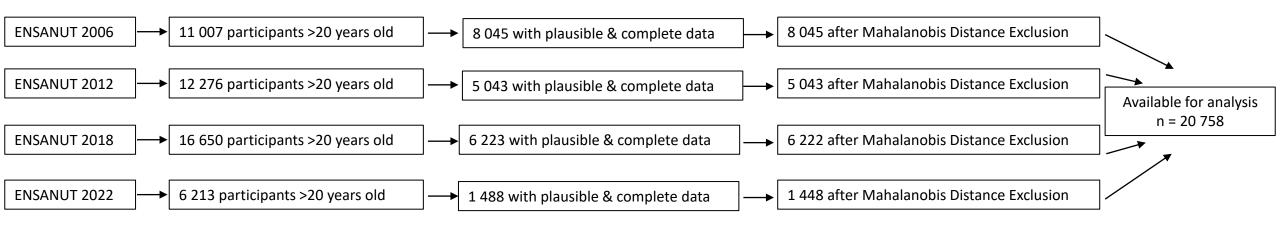




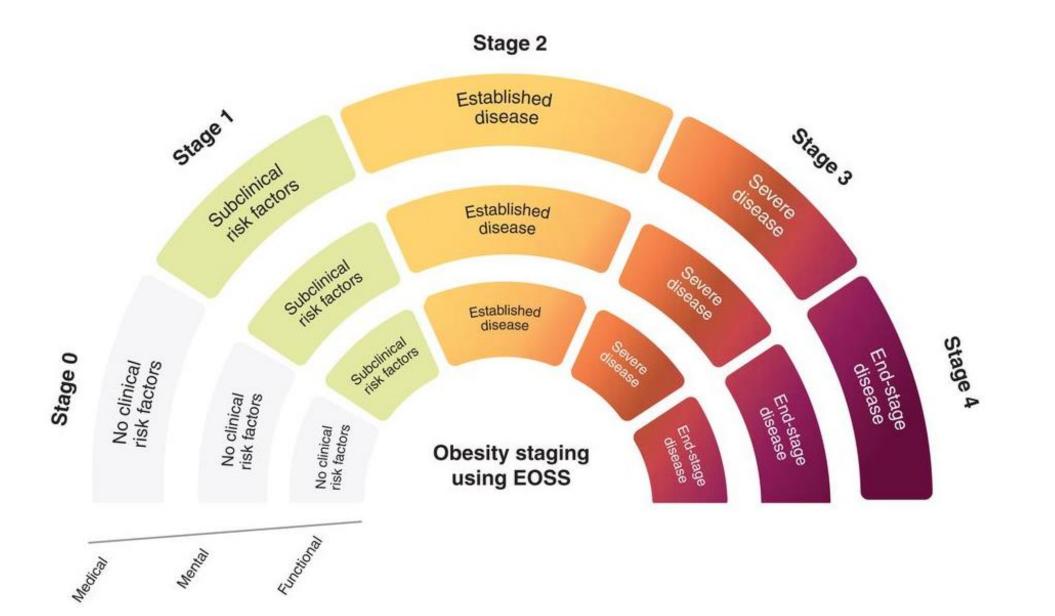


Additional insights from having multiple national-representative surveys





Participants with a BMI above 30 = 6 854 (33.0%) Participants with a BMI between 25 and 29.9 = 7 990 (38.5%) Participants with a normal BMI = 5 914 (28.4%)



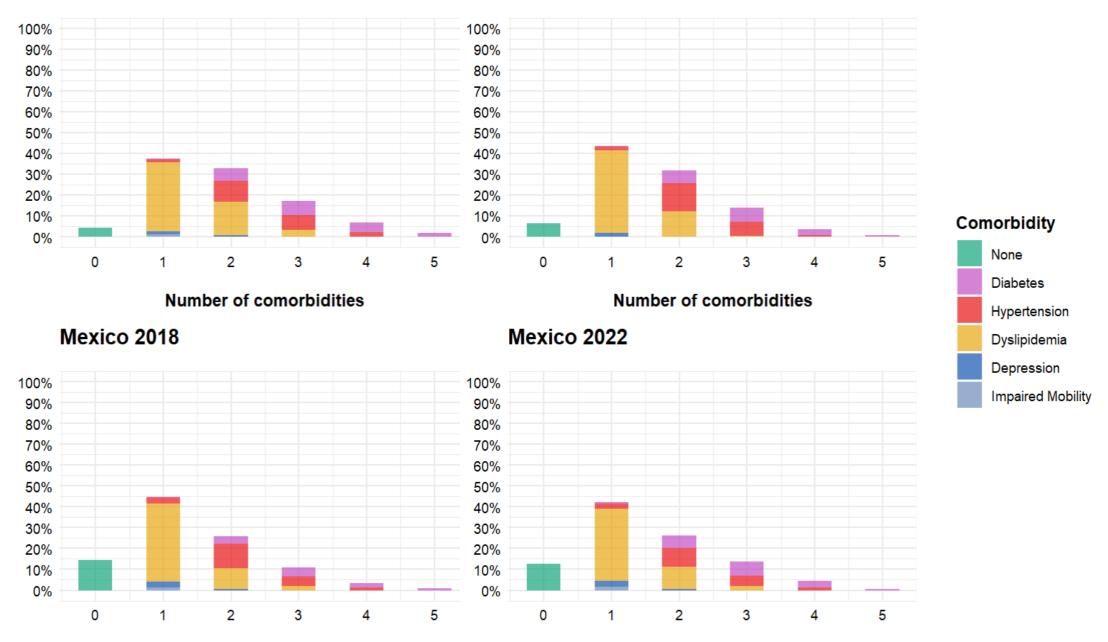
	Stage 0	Stage 1	Stage 2	Stage ≥ 3
Medical	4.7%	4.5%	90.1%	32.7%
Mental	27.6%	62.9%	25.1%	NA
Functional	38.3%	75.1%	17.5%	NA

Women				Men					
	Stage 0	Stage 1	Stage 2	Stage ≥ 3		Stage 0	Stage 1	Stage 2	Stage ≥ 3
Medical	5.4%	4.2%	90.4%	29.4%	Medical	3.0%	5.2%	91.8%	40.6%
Mental	26.8%	61.9%	29.6%	NA	Mental	29.7%	65.1%	14.4%	NA
Functional	38.2%	75.3%	18.5%	NA	Functional	38.5%	74.8%	15.1%	NA

Percentages do not add up to 100% as there can be overlap between definitions. n=14844.

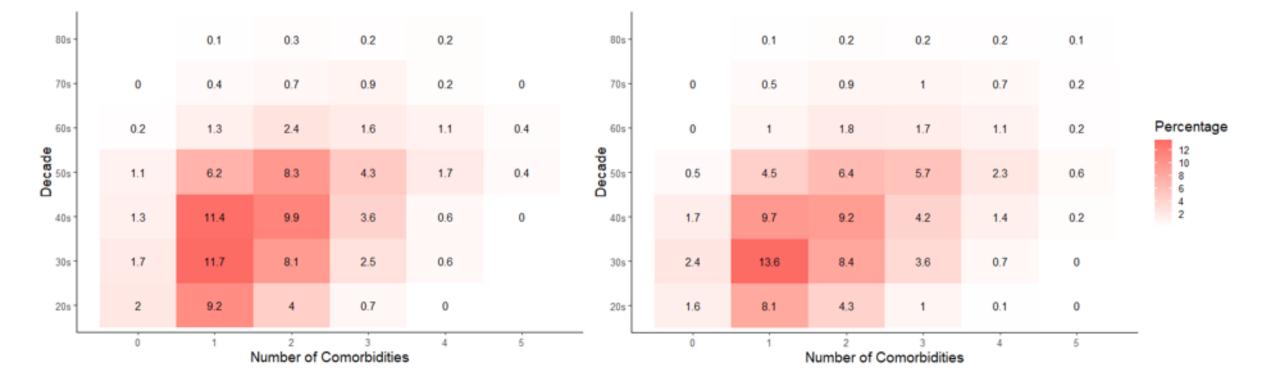
Mexico 2006

Mexico 2012

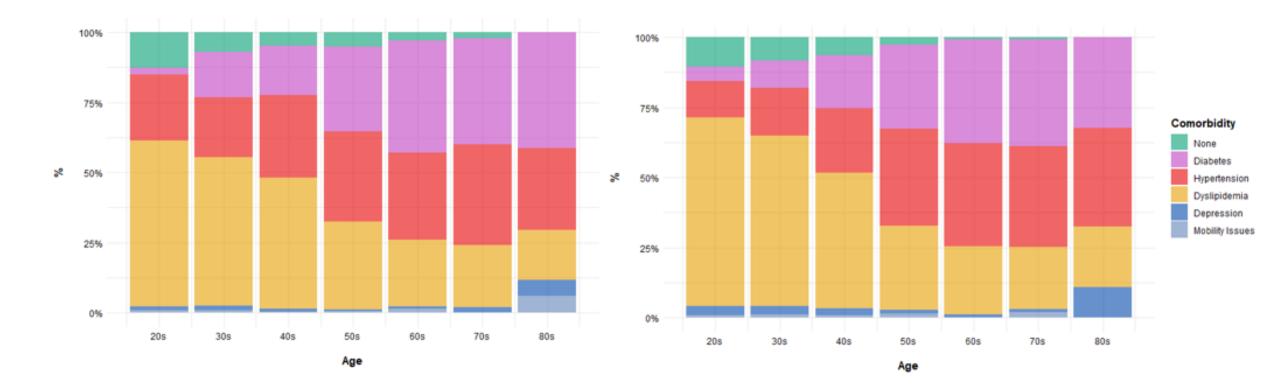


Number of comorbidities

Number of comorbidities



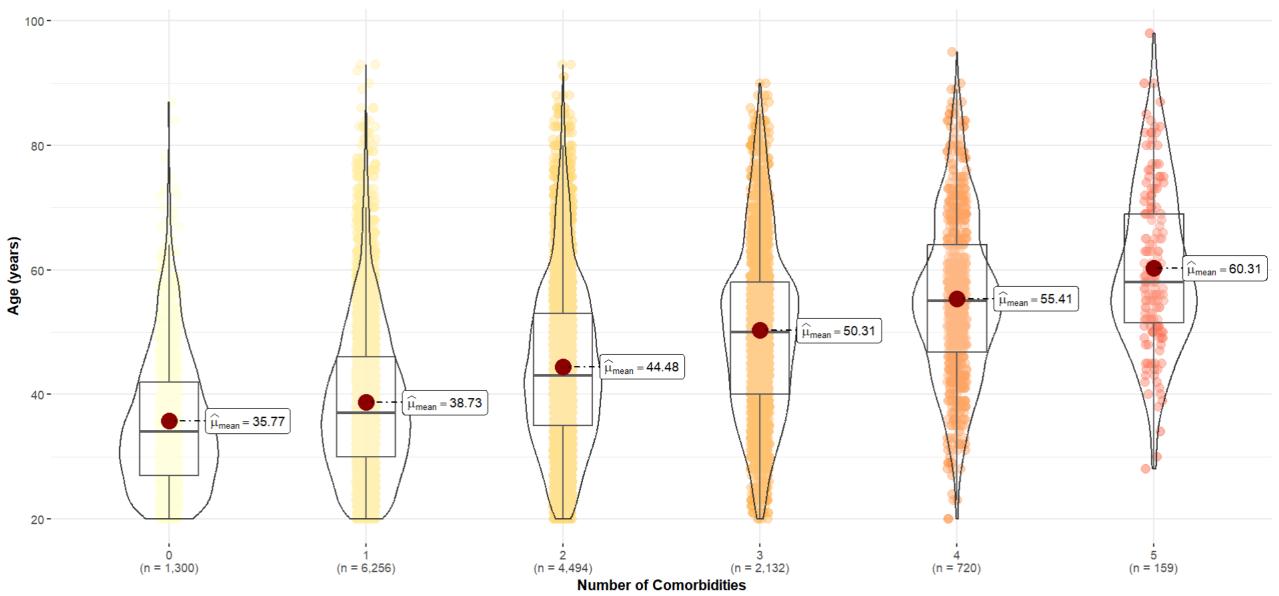
Left in Men (n = 2029), right in Women (n = 4876).



Left in Men (n = 2029), right in Women (n = 4876).

Age by Number of Comorbidities



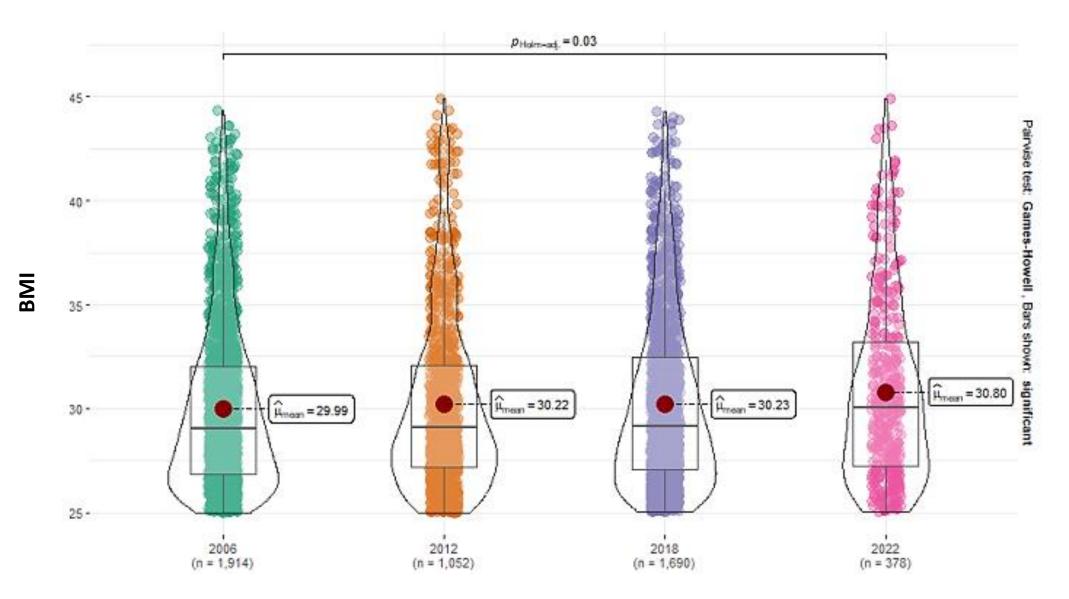


Model	RMSE	\mathbb{R}^2
Number of comorbidities ~ Age	0.95	16%
Number of comorbidities ~ Age + Sex	0.95	17%
Number of comorbidities ~ Age + Sex + BMI	0.94	19%

Explained variability in the number of obesity-associated comorbidities by different multivariable

linear models. RMSE = Root Mean Square Error.

Mexico			Mexico			Mexico	•	
2006		Population: 106,886,789	2012		Population: 115,755,909	2022		Population: 127,504,125
100+	Male 0.0%	0.0% Female	100+	Male 0.0%	0.0% Female	100+	Male 0.0%	0.0% Female
95-99	0.0%	0.0%	95-99	0.0%	0.0%	95-99	0.0%	0.0%
90-94	0.1%	0.1%	90-94	0.1%	0.1%	90-94	0.1%	0.1%
85-89	0.2%	0.2%	85-89	0.2%	0.2%	85-89	0.2%	0.3%
80-84	0.3%	0.4%	80-84	0.3%	0.4%	80-84	0.4%	
75-79	0.5%	0.6%	75-79	0.5%	0.6%	75-79	0.7%	0.8%
70-74	0.7%	0.8%	70-74	0.8%	0.9%	70-74	1.0%	1.2%
65-69	0.9%	1.0%	65-69	1.0%	1.1%	65-69	1.4%	1.6%
60-64	1.2%	1.3%	60-64	1.4%	1.5%	60-64	1.8%	2.1%
55-59	1.5%	1.6%	55-59	1.8%	2.0%	55-59	2.2%	2.5%
50-54	1.9%	2.1%	50-54	2.2%	2.4%	50-54	2.7%	3.0%
45-49	2.4%	2.6%	45-49	2.7%	2.9%	45-49	3.0%	3.3%
40-44	2.9%	3.1%	40-44	3.1%	3.4%	40-44	3.3%	3.5%
35-39	3.3%	3.6%	35-39	3.4%	3.7%	35-39	3.5%	3.7%
30-34	3.7%	4.0%	30-34	3.6%	4.0%	30-34	3.7%	3.9%
25-29	4.0%	4.3%	25-29	4.0%	4.2%	25-29 20-24	4.0% 4.2%	4.1%
20-24	4.4%	4.7%	20-24	4.4%	4.5%	15-19	4.2%	4.2%
15-19	5.0%	5.0%	15-19	4.7%	4.7%	10-14	4.3%	4.2%
10-14	5.3%	5.2%	10-14	4.9%	4.8%	5-9	4.2%	4.1%
5-9 0-4	5.3% 5.4%	5.2%	5-9 0-4	4.9% 4.9%	4.8%	0-4	3.9%	3.7%
10% 8%	<u> </u>		10% 8%			10% 8%	6% 4% 2% 0%	
			1070 070	575 176 270 07				



Year

Conclusions

- As in the rest of the world, obesity is a highly prevalent disease in Latin America.
- "Well-being comorbidities" are highly prevalent among metabolically healthy obese individuals.
- The number of comorbidities has a strong association with age. Therefore, developing the first or additional comorbidities may simply be a matter of time.
- The proportion of people with obesity but without comorbidities has decreased over time. This is likely a result of an ageing population, and declining age-specific morbidity.

