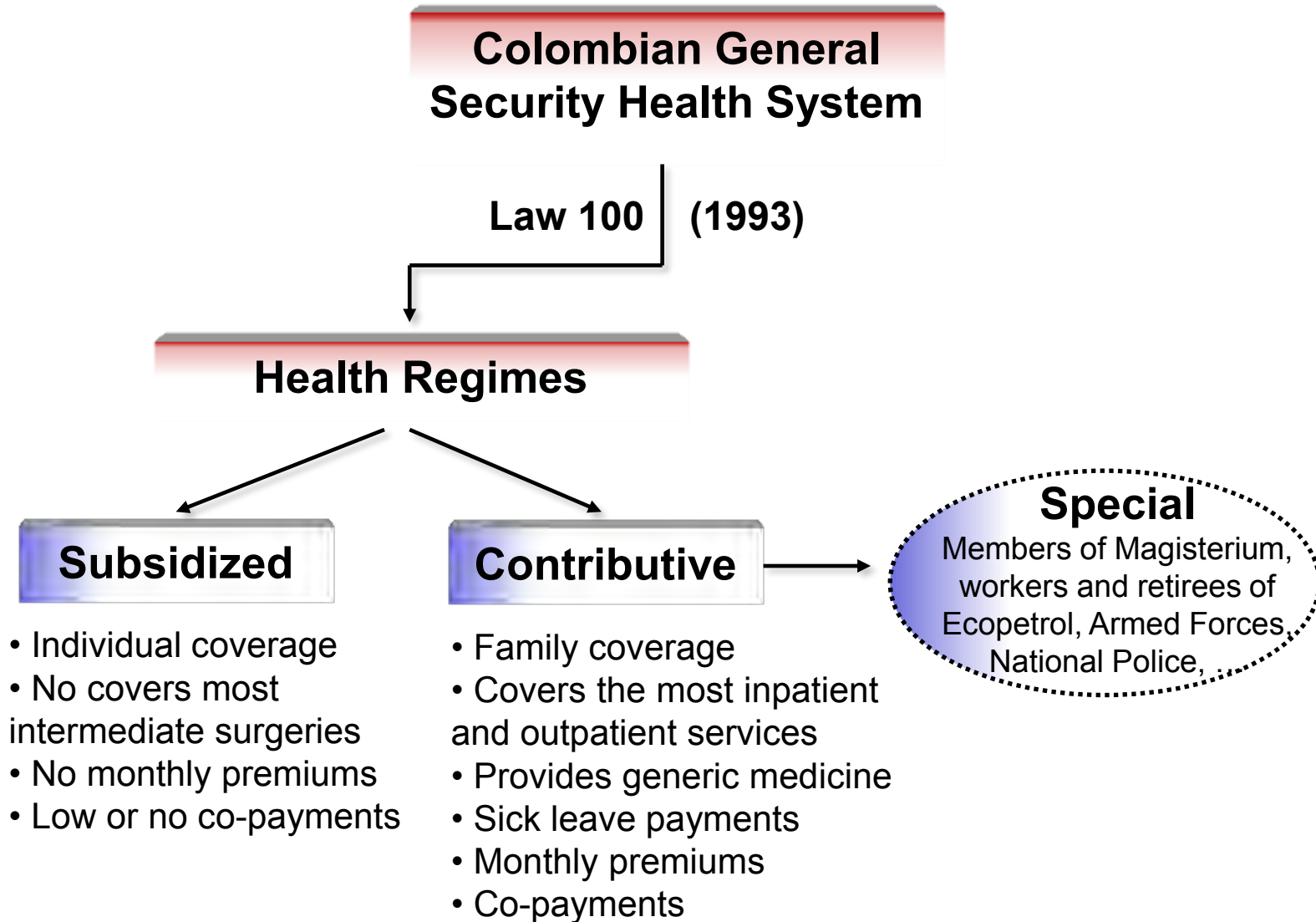


The distribution of household expenditure and catastrophic health spending in Colombia, 2011

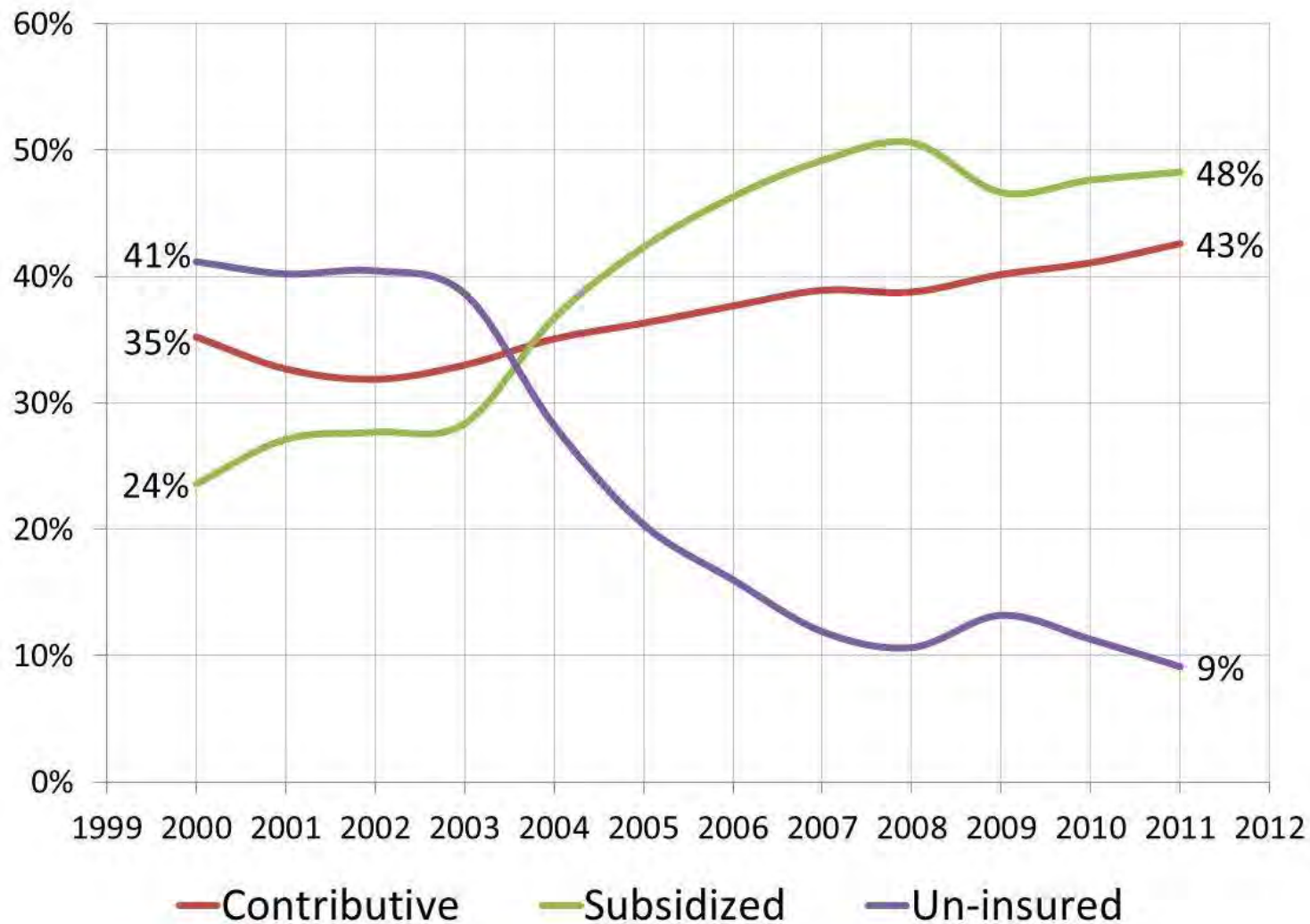
Jeannette Liliana Amaya

De Gustibus Disputandum Non Est!
Health Economics and Nutrition
iHEA Congress – Milan, Italy (July 2015)

Colombian Health System Reform



Health insurance (1999-2011)



Catastrophic Spending in Colombia

Order	Country	% households
1	Vietnam	10,5
2	Brazil	10,3
3	Azerbaijan	7,2
4	Colombia	6,3
5	Argentina	5,8
6	Lebanon	5,2
7	Cambodia	5,0
8	Ukraine	3,9
9	Paraguay	3,5
10	Peru	3,2
11	Egypt	2,8
12	Latvia	2,8
13	Portugal	2,7
14	Panama	2,4
15	Zambia	2,3
16	Greece	2,2
17	Nicaragua	2,1
18	Bulgaria	2,0
19	Jamaica	1,9
20	Rep Korea	1,7

Order	Country	% households
21	Yemen	1,7
22	Mexico	1,5
23	Lithuania	1,3
24	Ghana	1,3
25	Mauritius	1,3
26	Indonesia	1,3
27	Sri Lanka	1,3
28	Bangladesh	1,2
29	Thailand	0,8
30	Philippines	0,8
31	Kyrgyz	0,6
32	Guyana	0,6
33	Switzerland	0,6
34	Senegal	0,6
35	USA	0,6
36	Spain	0,5
37	Finland	0,4
38	Israel	0,4
39	Djibouti	0,3
40	Estonia	0,3

Order	Country	% households
41	Iceland	0,3
42	Norway	0,3
43	Croatia	0,2
44	Hungary	0,2
45	Sweden	0,2
46	Morocco	0,2
47	Costa Rica	0,1
48	Namibia	0,1
49	Belgium	0,1
50	Canada	0,1
51	Romania	0,1
52	Denmark	0,1
53	Slovenia	0,1
54	UK	0,0
55	Germany	0,0
56	South Africa	0,0
57	France	0,0
58	Czech	0,0
59	Slovakia	0,0

Xu K, Evans DB, Kawabata K, Zeramdini R, Klavus J, Murray JLC (2003a). Household Catastrophic Health Expenditure: A Multicountry Analysis. Lancet 362: 111–117.

Catastrophic Spending in Colombia

- **Castro CE. 2012.** Salud y seguridad social: un breve comparativo de cinco países de América Latina. *Fescol - Friedrich Ebert Stiftungen Colombia.*

(Colombia, Brazil, Mexico, Chile, Costa Rica)

- **Perticara M. 2008.** Incidencia de los gastos de bolsillo en salud en siete países latinoamericanos. CEPAL, *Serie Políticas Sociales*, No.141, Santiago de Chile.

(Colombia, Brazil, Mexico, Chile, Argentina, Ecuador, Uruguay)



Catastrophic Spending in Colombia

- **Knaul FM, Wong R, Arreola-Ornelas H. 2012.** Household Spending and Impoverishment. Volume 1 of Financing Health in Latin America Series. Cambridge, MA: Harvard Global Equity Initiative, in collaboration with Mexican Health Foundation and International Development Research Centre; distributed by Harvard University Press.

(Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Mexico, Nicaragua, Peru)



Catastrophic Spending in Colombia

- **Alvis L, Alvis N, de la Hoz F. 2004.** Gasto privado en salud de los hogares de *Cartagena de Indias*. *Revista de Salud Pública*, 9(1): 11-15.
- **Amaya JL, Ruiz F. 2011.** Determining factors of catastrophic health spending in *Bogota, Colombia*. *International Journal of Health Care Finance & Economics*, 11: 83–100.
- **Gil A, Martínez H, Gutiérrez J, Díaz RD. 2011.** Determinantes del gasto de bolsillo y gasto catastrófico en la *Región Central de Colombia* (2008). *Gestión y Región*, N°.11, pp.39-62.



Catastrophic Health Spending

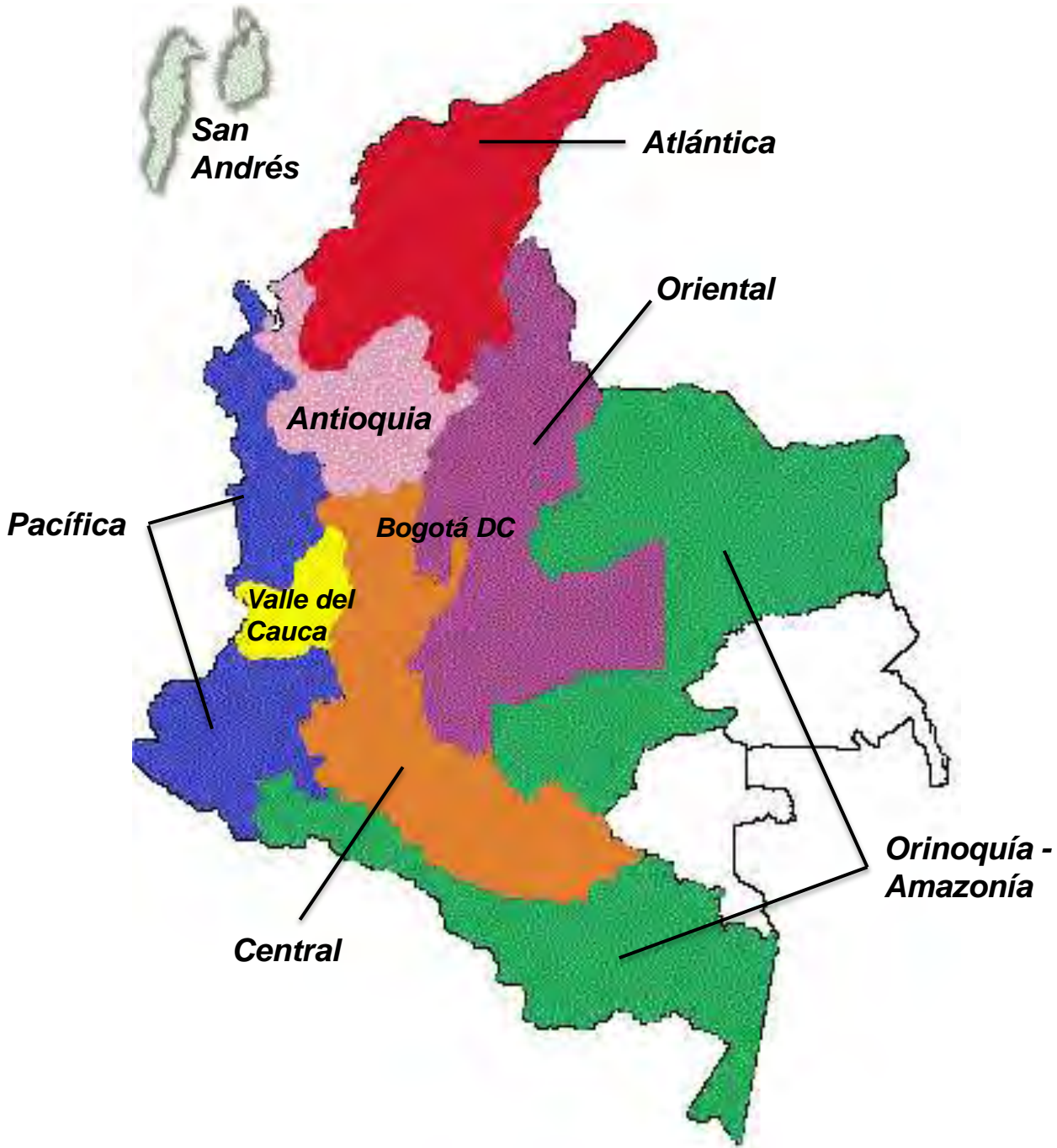
Methodology of WHO (2005)

Out-of-pocket health payments equal to or greater than a threshold of the household's capacity to pay

THRESHOLD = 20%



Colombian Regions Quality of Life Survey, 2011



Methodology of WHO (2005)

$$\text{Catastrophic Health Spending} = \begin{cases} 1 & \text{if } oopcp \geq 0,2 \\ 0 & \text{if } oopcp < 0,2 \end{cases}$$

$$oopcp = \frac{oop}{cp} = \frac{\text{out of pocket health expenditure}}{\text{capacity to pay}}$$

$$cp = \begin{cases} exp - se & \text{if } se \leq food \\ exp - food & \text{if } se > food \end{cases}$$

$$se = pl * eqsize$$

$$eqsize = hhsiz^{0,56}$$

$$pl = \frac{\sum w * eqfood}{\sum w}$$

$$eqfood = \frac{food}{eqsize}$$

where $food45 < foodexp < food55$

$$foodexp = \frac{food}{exp}$$



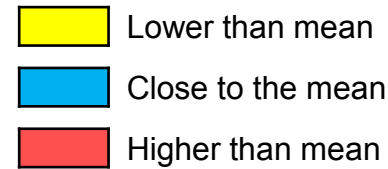
Explanatory factors

Explanatory variables	Categories
Region	Central, Antioquia, Bogotá, Atlántica, San Andrés, Valle, Pacífica, Oriental, Orinoquía-Amazonía
Area	Urban, Rural
Household size	Number of persons living in the household
Type of family	One person, Nuclear, Extended, Composite
Vulnerable population	Children, Elderly adults
Age of hhh	Age of head of household
Gender of hhh	Gender of head of household
Perception of health	Good or very good, Bad or poor, Different perceptions
Regime	Contributive, Subsidized, Especial, Uninsured, Combined
Type of healthcare service	Medicine, Out-patient, Any inpatient event
Income quintile	Quintiles I, II, III, IV, V
Ratio of household members who work	Proportion of people working in the household



Catastrophic Expenditure (%)

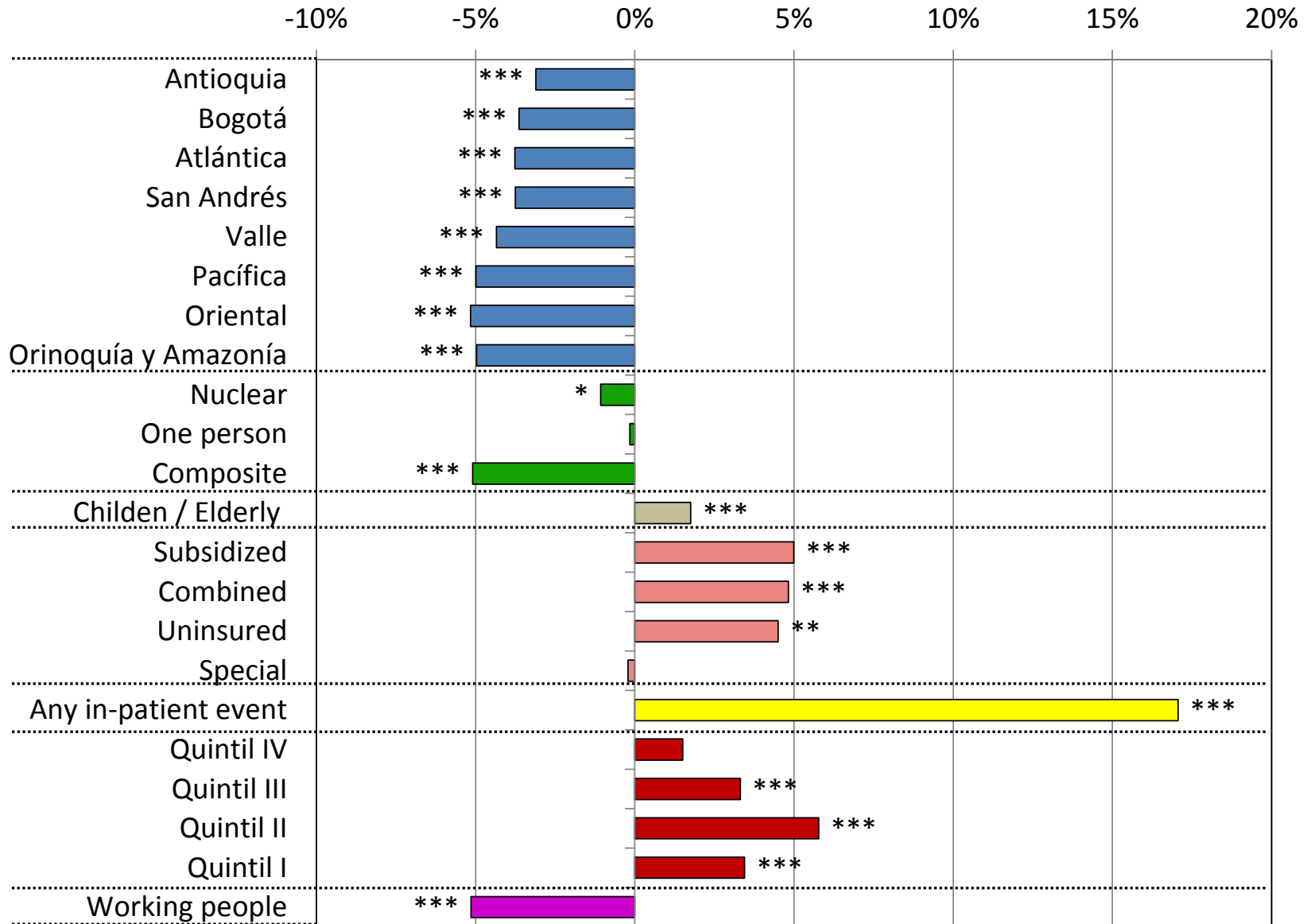
Variables		Percentage
COLOMBIA		9,6%
Region	Orinoquía-Amazonía	5,7%
	Oriental	6,1%
	Pacífica	7,8%
	Valle	8,9%
	San Andrés	9,0%
	Atlántica	9,8%
	Bogotá	9,9%
	Antioquia	11,3%
	Central	16,9%
Zone	Urban	8,0%
	Rural	15,2%
Type of family	Composite	4,2%
	One person	7,5%
	Nuclear	8,8%
	Extended	12,1%
Children / Elderly adults	Neither	7,6%
	<=5 years old	9,9%
	>=65 years old	14,2%
	<=5 & >=65 years old	16,2%
Age of hh	<65 years old	8,6%
	>=65 years old	14,8%
Gender of hh	Male	9,3%
	Female	10,2%



Variables		Percentage
COLOMBIA		9,6%
Perception of health	Good or very good	4,8%
	Diferent perceptions	14,2%
	Bad or poor	19,8%
Regime	Special	4,8%
	Contributory	5,4%
	Uninsured	9,9%
	Combinations	11,8%
Type of healthcare services	Subsidized	12,3%
	Medicine	11,9%
	Outpatient	12,7%
	Outpatient and medicine	21,5%
Income quintiles	Any in-patient event	25,2%
	Quintile V	5,4%
	Quintile IV	7,7%
	Quintile III	10,3%
	Quintile II	13,1%
	Quintile I	11,4%



Estimations from probit model



Conclusions

- ✓ 9.6% of the households incurred in catastrophic healthcare spending due to out-of-pocket healthcare expenditure. That percentage represented 1.200.000 households in 2011.
- ✓ The financial protection problem is more evident in the Central region, in the Antioquia region and in Bogotá, so it would be convenient to consider intervention mechanisms specifically focused on those regions.



Conclusions

- ✓ It is essential to take into account the particular conditions of households in rural areas regarding access to healthcare services, and to propose healthcare campaigns to benefit households in remote locations and the low-income population.
- ✓ The presence of children and elderly adults in the household increases the probability of incurring in catastrophic healthcare spending, so it is relevant to focus efforts in improving healthcare services and financial protection offers for these groups.



Conclusions

- ✓ It is possible to find catastrophic health spending among households because of payments for medicine and out-patient events. Then, financial protection must consider expenses associated with these health services, and not only with inpatient events.
- ✓ Colombia is currently in the process of unification of benefit plans. With these changes, we expect the affiliation in the contributive regime increases and the provision of health services is equitable for the entire population.





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