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Appendix

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Health insurance deductibles and health care-seeking behaviors in a
consumer-driven health care system with universal coverage

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eFigure. Type of Forgone Care and Income-Related Disparities in Forgoing Health Care

eTable 1. Missing Data Details

eTable 2. Association Between Deductible Level and Forgoing Health Care (Survey-Weighted)

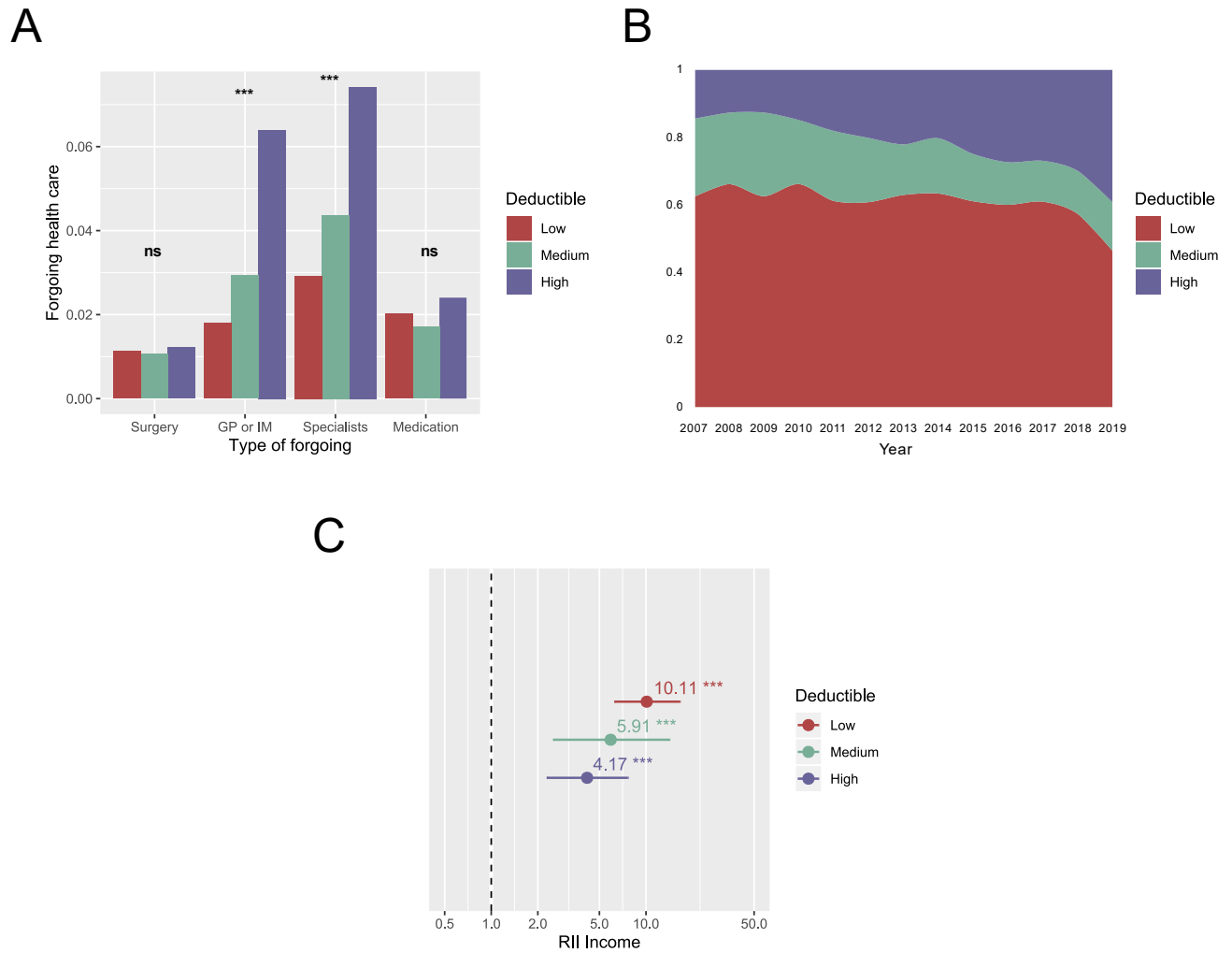
eTable 3. Association Between Deductible Level and Forgoing Dental Health Care (Survey-Weighted)

eTable 4. Association Between Deductible Level and Forgoing Health Care in Specific Groups (Survey-Weighted)

eTable 5. Association Between Deductible Level and Forgoing Dental Health Care

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure – Type of forgone care and income-related disparities in forgoing health care



A) proportion of participants forgoing different types of insured care according to deductible level. B) proportion of participants with low, medium or high deductible over time. C) Quantification of income-related health care forgoing according to deductible level. Bars represent 95% CI. RII: relative index of inequality. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

eTable 1 – Missing data details

Variable	Missing data, n (%)			
	Overall	Low deductibles	Medium deductibles	High deductibles
Insurance deductibles	702 (5.91%)	-	-	-
Sex	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Age	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Adjusted household income	2977 (25.08%)	1455 (21.27%)	508 (27.09%)	702 (28.61%)
Educational attainment	146 (1.23%)	83 (1.21%)	21 (1.12%)	35 (1.43%)
Swiss Nationality	22 (0.19%)	11 (0.16%)	4 (0.21%)	3 (0.12%)
Known comorbidities	10 (0.08%)	4 (0.06%)	0 (0%)	3 (0.12%)
Known cardiovascular risk factors	4 (0.03%)	0 (0%)	0 (0%)	0 (0%)
Additional non-mandatory insurance plans	561 (4.73%)	237 (3.46%)	69 (3.68%)	101 (4.12%)
Subsidized insurance premiums	390 (3.29%)	152 (2.22%)	31 (1.65%)	51 (2.08%)
Forgoing health care (non-dental)	31 (0.26%)	13 (0.19%)	4 (0.21%)	5 (0.2%)
Forgoing dental care	3 (0.03%)	0 (0%)	0 (0%)	0 (0%)

eTable 2 – Association between deductible level and forgoing health care (survey-weighted)

	Unadjusted		Adjusted (n=7946)	
	Estimate [95% CI]	p-value	Estimate ^a [95% CI]	p-value
RII deductible (lowest to highest deductible level)	2.4 [1.5;3.9]	0.006	2.5 [1.3;4.6]	0.014
Household adjusted income	0.8 [0.8;0.9]	<0.001	0.9 [0.8;0.9]	0.001
RII of educational attainment (lowest to highest)	0.8 [0.6;1.1]	0.17	1.2 [0.8;1.8]	0.31
Swiss nationality (vs foreigners)	0.8 [0.7;0.9]	0.011	1 [0.9;1.1]	0.86
Sex (vs male)	1.2 [0.7;2.1]	0.37	1.3 [1.1;1.5]	0.011
Age (per 10 years)	0.9 [0.8;0.9]	0.002	0.9 [0.8;0.9]	<0.001
Known comorbidities (vs without)	1.1 [0.9;1.2]	0.40	1.2 [0.8;1.6]	0.32
Cardiovascular risk factors (vs without)	0.9 [0.8;1.1]	0.30	1.1 [0.9;1.3]	0.2
Additional non-mandatory insurance plans (vs without)	0.5 [0.4;0.5]	<0.001	0.6 [0.5;0.8]	0.002
Subsidized insurance premiums (vs without)	2.0 [1.9;2.1]	<0.001	1.5 [1.4;1.6]	<0.001
Year of survey (per 5 years)	1.2 [1.0;1.4]	0.048	1.1 [0.9;1.3]	0.21
Interactions	Estimate^b [95% CI]	p-value		
Known comorbidities (vs without)	2.6 [0.9;7.1]	0.07		
Cardiovascular risk factors (vs without)	0.8 [0.4;1.3]	0.23		
Sex (vs male)	0.6 [0.2;2.6]	0.43		
Household adjusted income	1.3 [1.1;1.6]	0.013		
Age (per 10 years)	0.7 [0.6;0.9]	0.016		
Deductibles RII according to age categories	Estimate [95% CI]	p-value	Estimate^c [95% CI]	p-value
<40 years	2.9 [0.7;12.8]	0.09	2.8 [0.4;18.2]	0.14
40-64 years	1.3 [0.7;2.2]	0.34	1.9 [1.0;3.6]	0.04
>65 years	1.4 [0.1;30.5]	0.41	2.9 [0.1;99.7]	0.16

^a results from multivariable Poisson regression determining the association between insurance plan deductibles and forgoing health care. RII- relative index of inequality, CI – confidence interval

^b results from interaction tests between insurance deductibles and the variable of interest in predicting forgoing health care

^c results from multivariable Poisson regression determining the association between insurance plan deductibles and forgoing health care, by age category and including the same covariates as in ^a.

eTable 3 – Association between deductible level and forgoing dental health care (survey-weighted)

	Unadjusted		Adjusted (n=7962)	
	Estimate [95% CI]	p-value	Estimate ^a [95% CI]	p-value
RII deductible (lowest to highest deductible category)	1.2 [0.8;1.7]	0.24	1.2 [0.9;1.7]	0.13
Household adjusted income	0.8 [0.8;0.9]	<0.001	0.9 [0.8;0.9]	<0.001
RII of educational attainment (lowest to highest)	0.6 [0.5;0.8]	0.001	1.1 [0.9;1.3]	0.47
Swiss nationality (vs foreigners)	0.8 [0.8;1.0]	0.05	1 [0.9;1.2]	0.83
Sex (vs male)	1.1 [0.7;1.7]	0.64	1.1 [0.8;1.4]	0.50
Age (per 10 years)	0.9 [0.8;0.9]	0.002	0.9 [0.9;0.9]	0.001
Known comorbidities (vs without)	1.1 [0.7;1.6]	0.55	1.2 [0.7;2]	0.41
Cardiovascular risk factors (vs without)	1.0 [0.9;1.1]	0.44	1 [0.9;1.1]	0.99
Additional non-mandatory insurance plans (vs without)	0.4 [0.3;0.5]	<0.001	0.6 [0.4;0.7]	0.003
Subsidized insurance premiums (vs without)	1.9 [1.7;2.2]	<0.001	1.3 [1.1;1.5]	0.011
Year of survey (per 5 years)	1.2 [1.0;1.4]	0.063	1.1 [1;1.3]	0.12

^a results from multivariable Poisson regression determining the association between insurance plan deductibles and forgoing dental health care. RII- relative index of inequality, CI – confidence interval

eTable 4 – Association between deductible level and forgoing health care in specific groups (survey-weighted)

	Estimate^a [95% CI]	p-value
RII_{Deductibles} in 1st tertile of income	2.10 [1.1;4.2]	0.04
RII_{Deductibles} in 2nd tertile of income	2.0 [1.3;3.1]	0.008
RII_{Deductibles} in 3rd tertile of income	4.7 [1.0;21.5]	0.051
RII_{income} low deductibles	4.7 [1.6;14.0]	0.015
RII_{income} medium deductibles	3.0 [0.9;9.7]	0.061
RII_{income} high deductibles	2.3 [0.8;6.7]	0.10
RII_{Deductibles} in participants with subsidized premiums	2.5 [1.4;4.8]	0.013
RII_{Deductibles} in participants without subsidized premiums	2.3 [1.0;5.4]	0.057
RII_{Deductibles} in participants with subsidized premiums and low income	2.5 [0.9;6.8]	0.061
RII_{Deductibles} in participants without subsidized premiums and low income	1.9 [0.9;3.9]	0.08

^a results from multivariable Poisson regression determining the association between insurance plan deductibles and forgoing health care. RII- relative index of inequality, CI – confidence interval

eTable 5 – Association between deductible level and forgoing dental health care

	Unadjusted		Adjusted (n=7962)	
	Estimate [95% CI]	p-value	Estimate ^a [95% CI]	p-value
RII deductible (lowest to highest deductible category)	1.1 [0.9;1.3]	0.60	1.1 [0.8;1.4]	0.50
Household adjusted income	0.8 [0.8;0.8]	<0.001	0.8 [0.8;0.9]	<0.001
RII of educational attainment (lowest to highest)	0.6 [0.5;0.7]	<0.001	1.1 [0.9;1.4]	0.49
Swiss nationality (vs foreigners)	0.8 [0.8;0.9]	0.001	1.0 [0.9;1.2]	0.57
Sex (vs male)	1.1 [1.0;1.3]	0.03	1.1 [1.0;1.2]	0.22
Age (per 10 years)	0.9 [0.8;0.9]	<0.001	0.9 [0.8;0.9]	<0.001
Known comorbidities (vs without)	1.1 [0.9;1.4]	0.27	1.2 [1.0;1.6]	0.11
Cardiovascular risk factors (vs without)	0.9 [0.8;1.0]	0.19	1.0 [0.9;1.1]	0.96
Additional non-mandatory insurance plans (vs without)	0.4 [0.4;0.5]	<0.001	0.6 [0.5;0.7]	<0.001
Subsidized insurance premiums (vs without)	2.1 [1.8;2.3]	<0.001	1.3 [1.1;1.5]	<0.001
Year of survey (per 5 years)	1.2 [1.1;1.3]	<0.001	1.1 [1.0;1.2]	0.008

^a results from multivariable Poisson regression determining the association between insurance plan deductibles and forgoing dental health care. RII- relative index of inequality, CI – confidence interval