

Supplementary materials A

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Outcome, exposure, and covariates

Our **outcome** of interest is sequences of routine healthcare uptake between the ages of 16 and 65. In the following, we present blood pressure as an example though the questions were identical for all mentioned healthcare services. Participants were asked, “Have you ever had your blood pressure checked regularly over the course of several years?”. If participants responded yes, they were asked, “In which year did you start having your blood pressure checked regularly?”, followed by, “Since then, have you always had your blood pressure checked regularly?”. If participants responded no, they were asked, “Please specify the periods in which you did not have your blood pressure checked regularly” with the possible answers being, “When I was between 0-15 years old”, “When I was between 16-25 years old”, “When I was between 26-40 years old”, “When I was between 41-55 years old”, “When I was between 56-65 years old”, “When I was between 66-75 years old”, and “When I was older than 75 years old”.

Our **exposure** of interest is a life-course socioeconomic disadvantage score. For childhood, we used four household indicators at the age of 10: occupational position of the main breadwinner, number of books in the household, household overcrowding, and housing quality. Each indicator was dichotomized into disadvantaged (1) and not disadvantaged (0), as follows: occupation of the main breadwinner was categorized into high (ISCO levels 3, 4) and low (ISCO levels 1, 2) skill. Number of books in the household was categorized as 11+ books and 10 books or less. Household overcrowding was categorized as minimum one room per household member and less than one room per household member. Finally, housing quality was judged by the availability of a fixed bath, cold running water supply, hot running water supply, indoor toilet, and central heating – if all were missing, housing quality was categorized as disadvantaged.

For midlife, we used participants’ highest educational attainment. This information was taken from SHARELIFE as well as all other SHARE waves to minimize missing data. A highest educational attainment of tertiary education (ISCED-1997 levels 5,6) received no disadvantage points, secondary education (ISCED-1997 levels 2-4) one point, and primary education (ISCED-1997 levels 0,1) received two points.

For later life, we used the occupational class of the main or last occupation and household financial strain. Information about occupational class was taken from SHARELIFE as well as all other SHARE waves to minimize missing data. Occupational class was categorized as high skill (ISCO 3,4; no disadvantage points), low skill (ISCO 1,2; one point), and never worked (two points). Information about household financial strain was taken from all available SHARE waves, using the data from the first wave in which it was available. It was assessed with the question, “Thinking of your household's total monthly income, would you say that your household is able to make ends meet ...”, with possible answers being, “With great difficulty”, “With some difficulty”, “Fairly easily”, and “Easily”. Participants responding with “fairly easily” or “easily” received no disadvantage

points, with “with some difficulty” received one disadvantage point, and with “with great difficulty” two points.

Sequence analysis and clustering details

Pairwise sequence dissimilarities were calculated separately for each healthcare service using optimal matching in the *TraMineR* package. In the main analysis, we used constant substitution costs of 2 between the two states, regular uptake and no regular uptake, and an insertion/deletion cost of 1, without distance normalization. Missing positions were retained in the distance calculation, mainly reflecting ages after interview among participants younger than 65. The resulting dissimilarity matrices were clustered using agglomerative hierarchical clustering with Ward linkage as implemented by *hclust(method = "ward.D")*. Cluster solutions were compared using *as.clustrange()* from the *WeightedCluster* package, and the three-cluster solution was selected based on average silhouette width and substantive interpretability. In the sensitivity analysis, we repeated the sequence analysis using transition-rate-based substitution costs while keeping the clustering algorithm unchanged; the resulting cluster profiles are summarized in **Table S11**.

Figure S1 *Histogram of life-course socioeconomic disadvantage score*

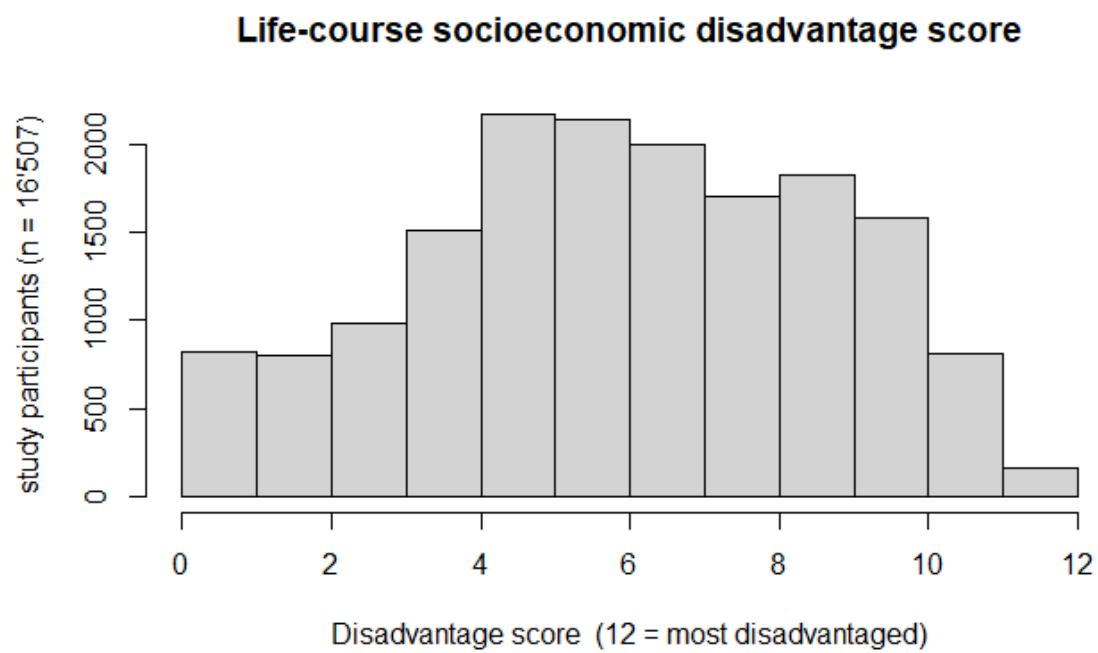
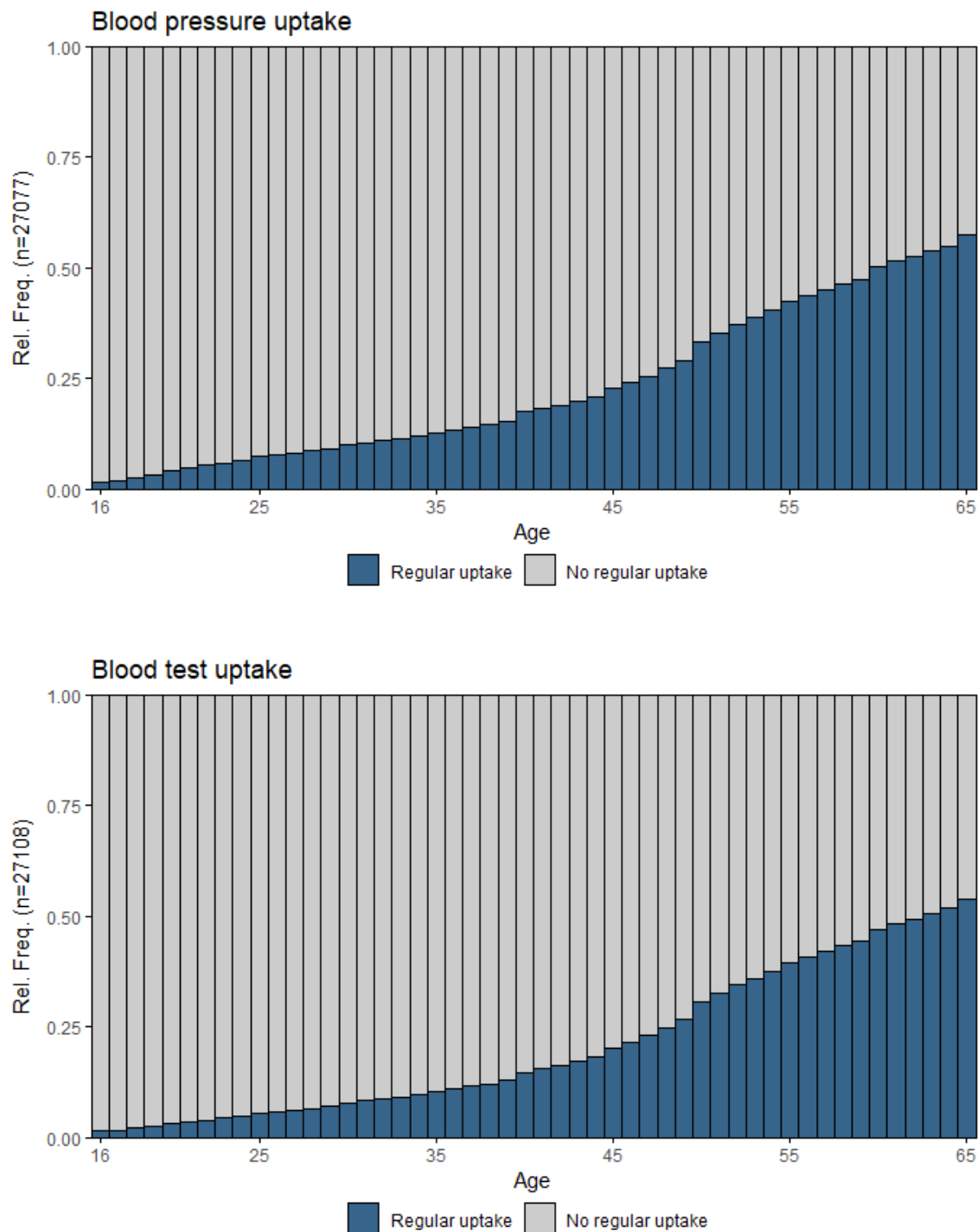
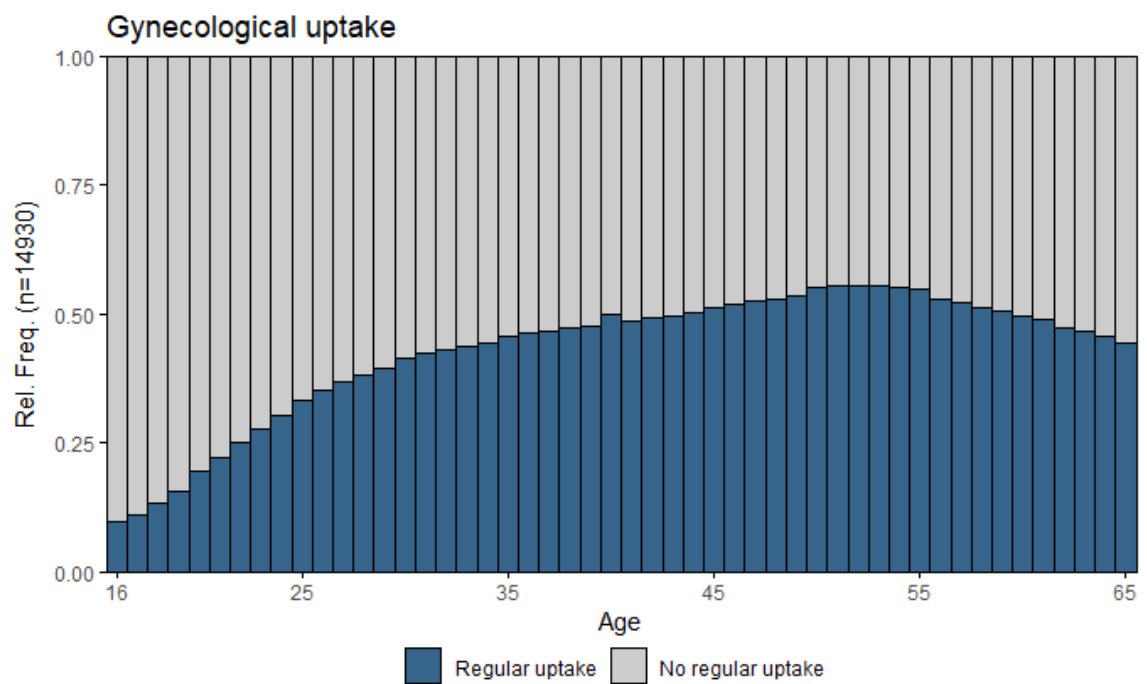
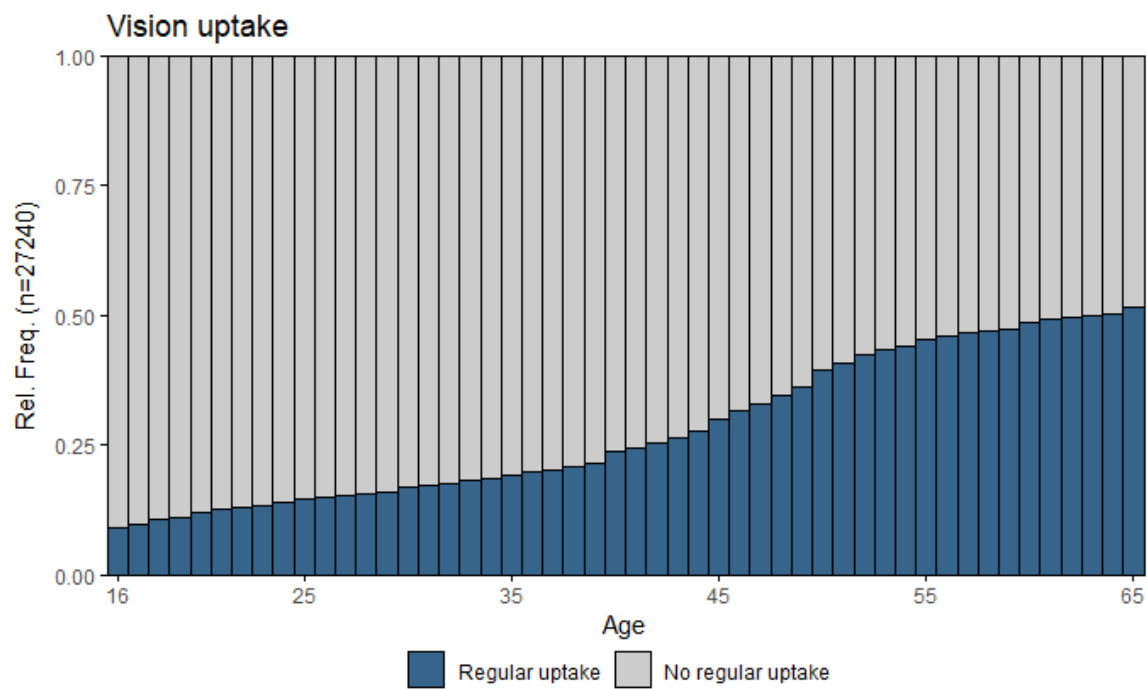


Figure S2 Routine healthcare uptake trajectories





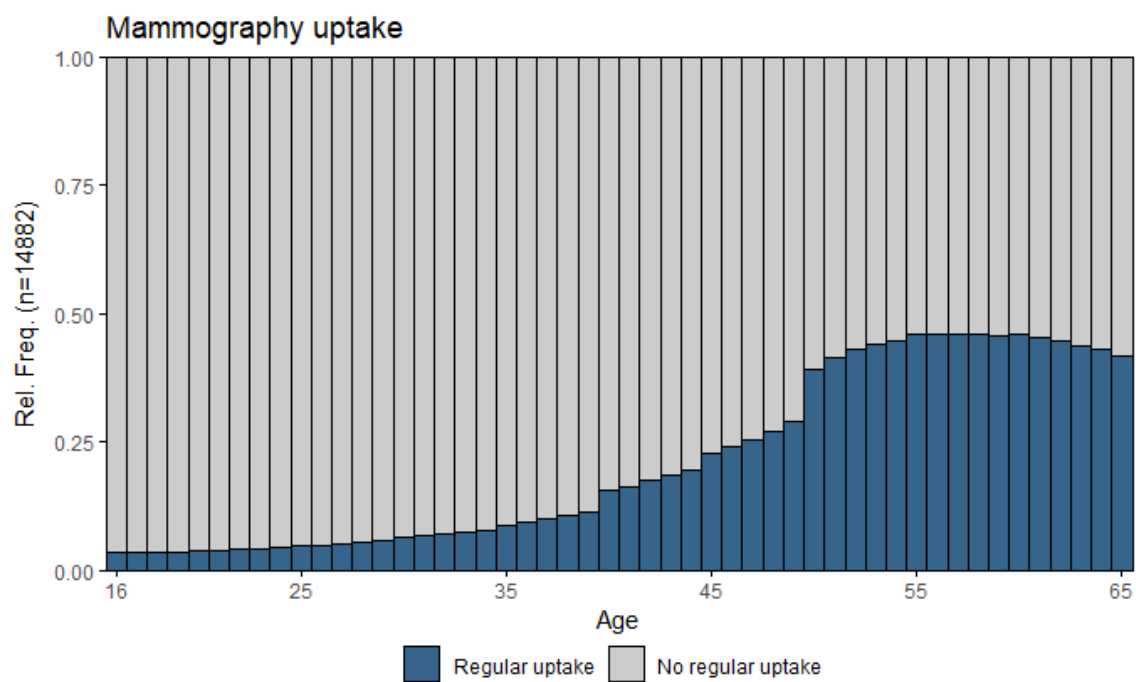
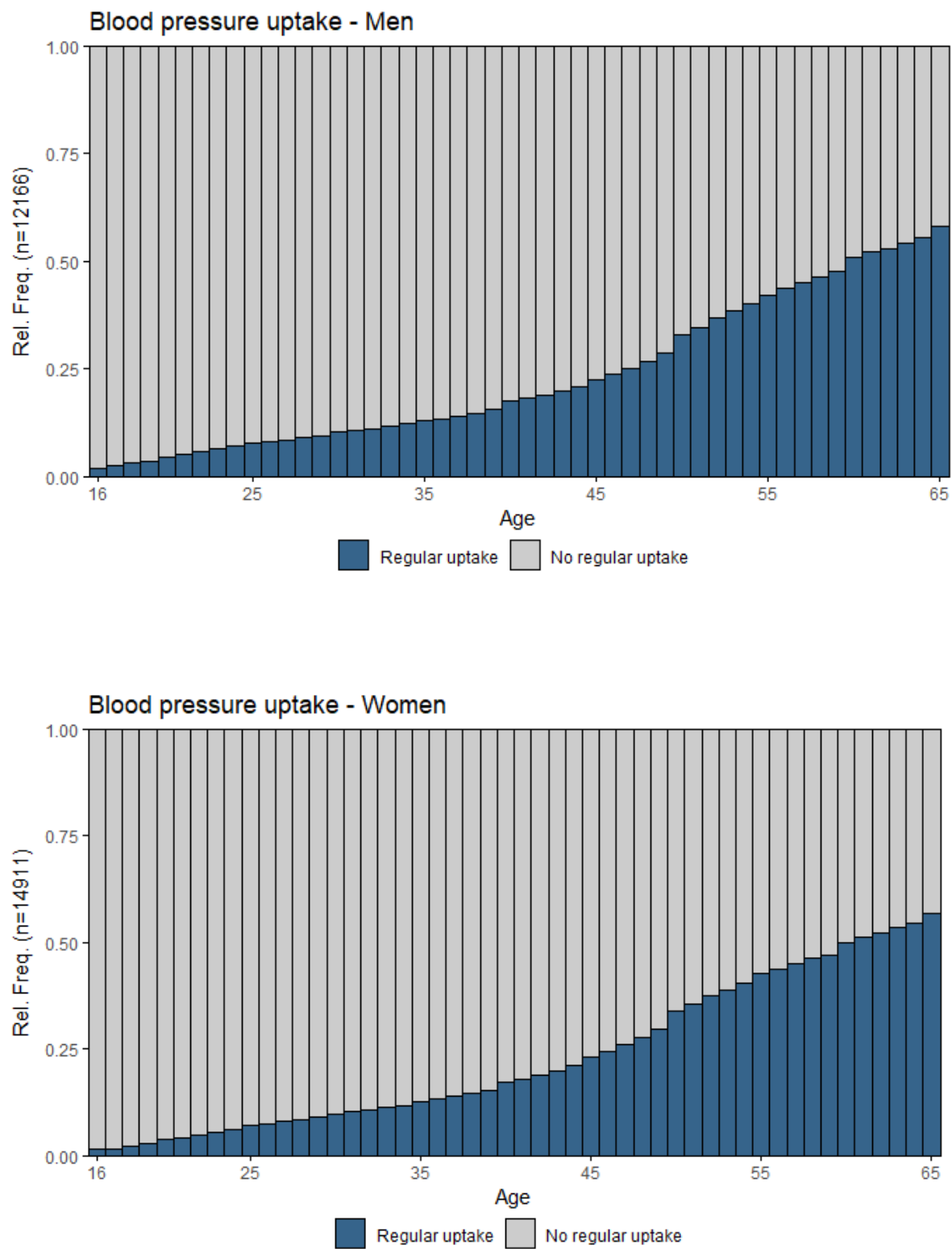
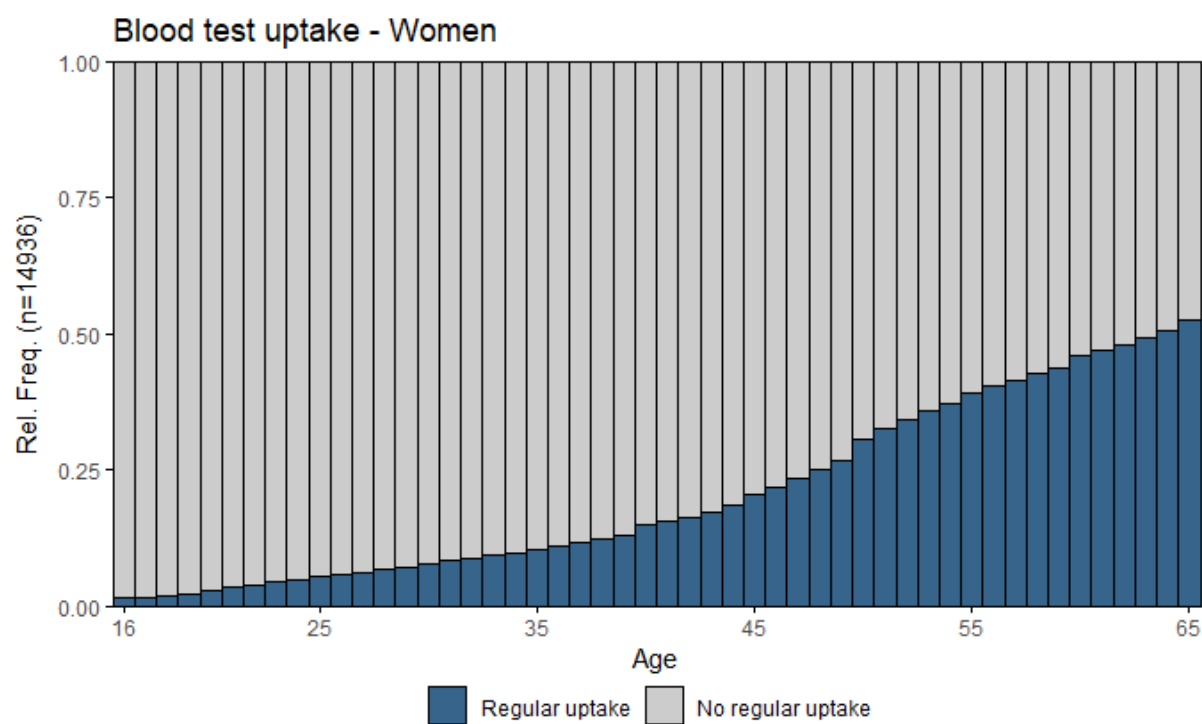
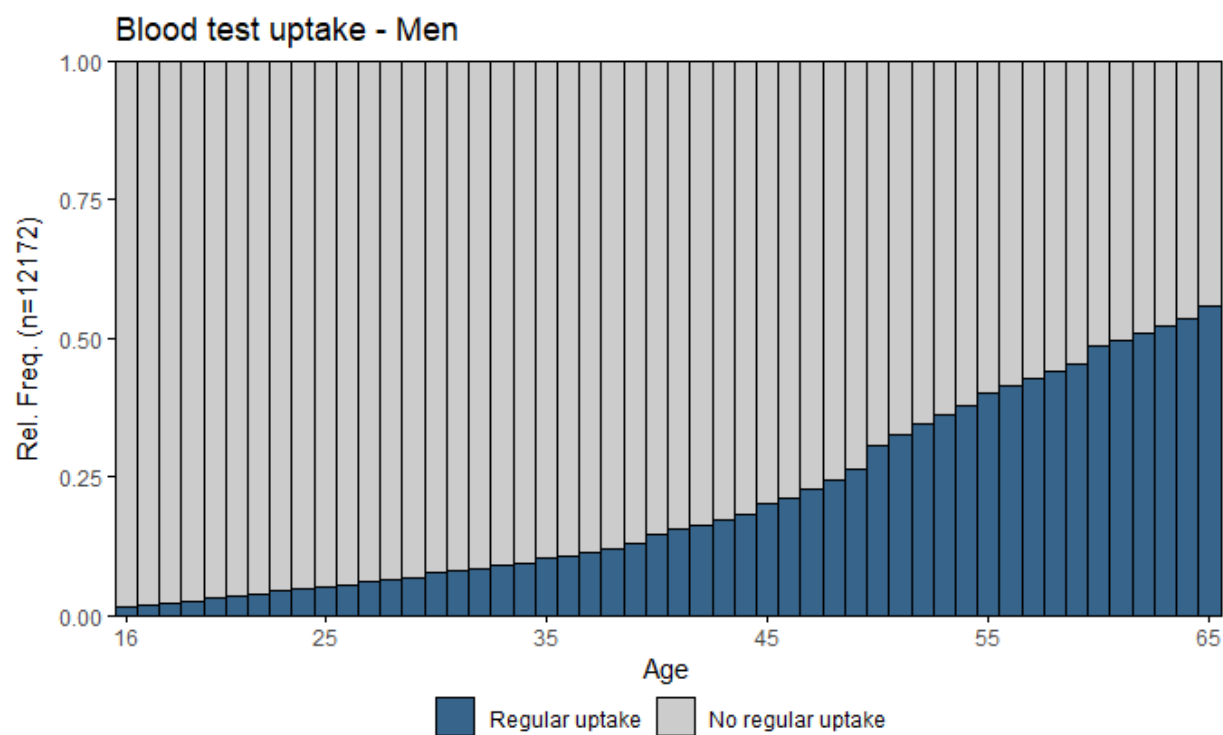


Figure S3 Routine healthcare uptake trajectories, split by gender





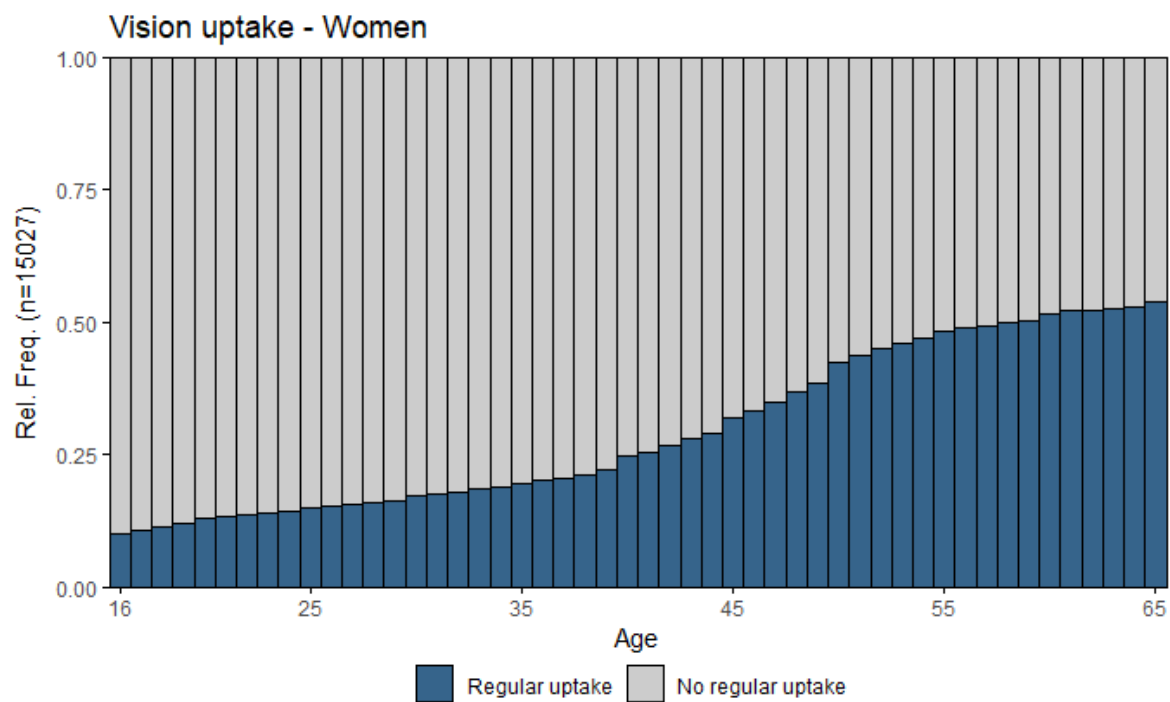
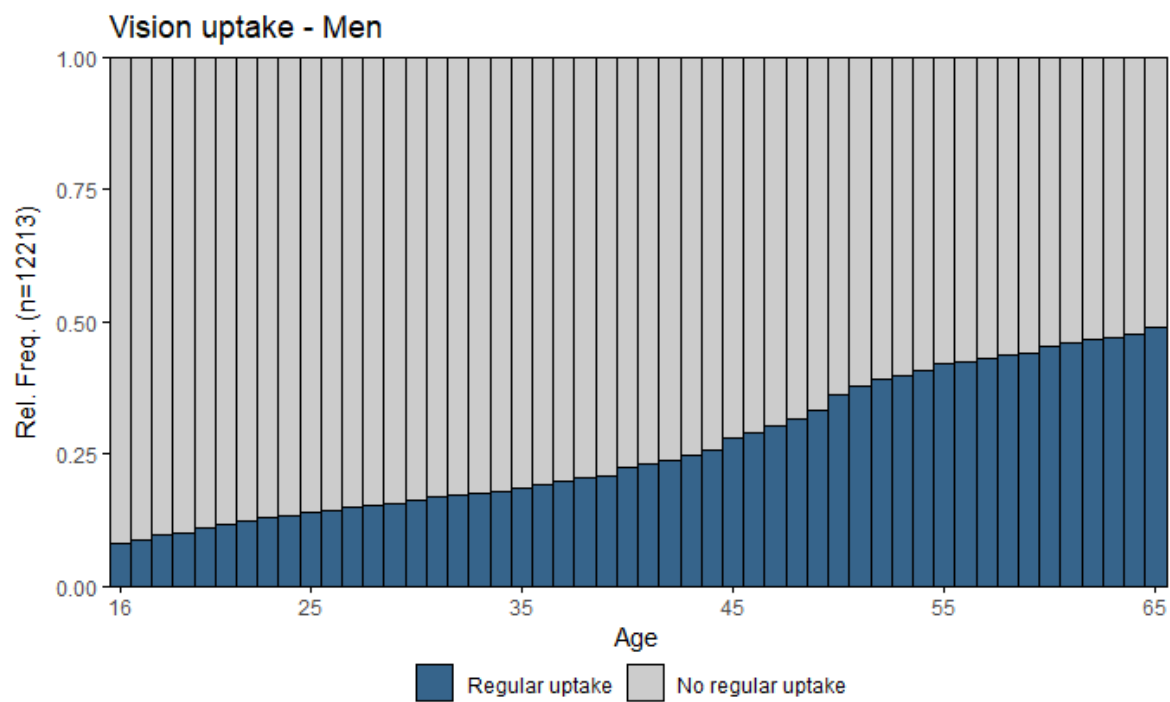


Table S1 *Baseline characteristics including life-course socioeconomic score*

Characteristics	Regression analysis n (% or SD)
Number of participants	16'507
Gender	
Female	9'687 (58.7%)
Male	6'820 (41.3%)
Age at baseline (years), mean and SD	69.2 ($\pm$ 9.1)
Birth cohorts	
1908 – 1938	7'451 (45.1%)
1939 – 1945	4'583 (27.8%)
1946 – 1959	4'473 (27.1%)
Countries	
Austria	692 (4.2%)
Belgium	1'803 (10.9%)
Czech Republic	1'030 (6.2%)
Denmark	1'063 (6.4%)
France	1'449 (8.8%)
Germany	1'076 (6.5%)
Greece	1'690 (10.2%)
Ireland	335 (2.0%)
Italy	1'781 (10.8%)
Netherlands	1'212 (7.3%)
Poland	1'230 (7.4%)
Spain	1'433 (8.7%)
Sweden	1'022 (6.2%)
Switzerland	691 (4.2%)
Childhood	
Occupational position of main breadwinner	
High	1'852 (11.2%)
Low	14'655 (88.8%)
Number of books in household	
11 or more	8'349 (50.6%)
10 or fewer	8'158 (49.4%)
Household overcrowding	
1 room per person or more	3'901 (23.6%)
Fewer than 1 room per person	12'606 (76.5%)
Housing quality	
Advantaged	10'863 (65.8%)
Disadvantaged	5'644 (34.2%)
Midlife	
Education	
Tertiary or more	2'555 (15.5%)
Secondary	7'771 (47.1%)
Primary or less	6'181 (37.4%)
Adulthood	

Characteristics		Regression analysis n (% or SD)
Occupation		
High		3'329 (20.2%)
Low		11'396 (69.0%)
Never worked		1'782 (10.8%)
Financial stress		
No difficulty		9'410 (57.0%)
Some difficulty		4'940 (29.9%)
Great difficulty		2'157 (13.1%)
Life-course disadvantage , median		6 ($\pm$ 2.8)

Table S2 *Baseline characteristics of two sub-samples, split by gender*

Characteristics	Sequence analysis n (% or SD)		Regression analysis n (% or SD)	
	Men	Women	Men	Women
Number of participants	12'475	15'485	6'820	9'687
Age at baseline (years), mean and SD	66.5 (± 9.3)	66.3 (± 10.1)	69.8 (± 8.4)	68.8 (± 9.6)
Birth cohorts				
1908 – 1938	4'367 (35.0%)	5'346 (34.5%)	3'254 (47.7%)	4'197 (43.3%)
1939 – 1945	3'017 (24.2%)	3'437 (22.2%)	2'056 (30.1%)	2'527 (26.1%)
1946 – 1959	5'091 (40.8%)	6'702 (43.3%)	1'510 (22.1%)	2'963 (30.6%)
Countries				
Austria	400 (3.2%)	584 (3.8%)	274 (4.0%)	418 (4.3%)
Belgium	1'270 (10.2%)	1'544 (10.0%)	783 (11.5%)	1'020 (10.5%)
Czech Republic	761 (6.1%)	1'032 (6.7%)	344 (5.0%)	686 (7.1%)
Denmark	953 (7.6%)	1'141 (7.4%)	462 (6.8%)	601 (6.2%)
France	1'063 (8.5%)	1'387 (9.0%)	620 (9.1%)	829 (8.6%)
Germany	884 (7.1%)	1'008 (6.5%)	503 (7.4%)	573 (5.9%)
Greece	1'320 (10.6%)	1'660 (10.7%)	648 (9.5%)	1'042 (10.8%)
Ireland	370 (3.0%)	476 (3.1%)	134 (2.0%)	201 (2.1%)
Italy	1'142 (9.2%)	1'351 (8.7%)	768 (11.3%)	1'013 (10.5%)
Netherlands	1'022 (8.2%)	1'208 (7.8%)	523 (7.7%)	689 (7.1%)
Poland	858 (6.9%)	1'056 (6.8%)	474 (7.0%)	756 (7.8%)
Spain	996 (8.0%)	1'235 (8.0%)	569 (8.3%)	864 (8.9%)
Sweden	873 (7.0%)	1'075 (6.9%)	435 (6.4%)	587 (6.1%)
Switzerland	563 (4.5%)	728 (4.7%)	283 (4.1%)	408 (4.2%)
Childhood				
Occupational position of main breadwinner				
High	..	..	796 (11.7%)	1'056 (10.9%)
Low	..	..	6'024 (88.3%)	8'631 (89.1%)
Number of books in household				
11 or more	..	..	3'378 (49.5%)	4'971 (51.3%)
10 or fewer	..	..	3'442 (50.5%)	4'716 (48.7%)
Household overcrowding				
1 room per person or more	..	..	1'688 (24.8%)	2'213 (22.8%)
Fewer than 1 room per person	..	..	5'132 (75.2%)	7'474 (77.2%)
Housing quality				
Advantaged	..	..	4'462 (65.4%)	6'401 (66.1%)
Disadvantaged	..	..	2'358 (34.6%)	3'286 (33.9%)
Midlife				
Education				
Tertiary or more	..	..	1'382 (20.3%)	1'173 (12.1%)
Secondary	..	..	3'231 (47.4%)	4'540 (46.9%)

Characteristics	Sequence analysis n (% or SD)		Regression analysis n (% or SD)	
	Men	Women	Men	Women
Primary or less	..	..	2'207 (32.4%)	3'974 (41.0%)
Adulthood				
Occupation				
High	..	..	2'035 (29.8%)	1'294 (13.4%)
Low	..	..	4'710 (69.1%)	6'686 (69.0%)
Never worked	..	..	75 (1.1%)	1'707 (17.6%)
Financial stress				
No difficulty	..	..	4'210 (61.7%)	5'200 (53.7%)
Some difficulty	..	..	1'830 (26.8%)	3'110 (32.1%)
Great difficulty	..	..	780 (11.4%)	1'377 (14.2%)
Life-course disadvantage, median	..	..	5 ($\pm$ 2.6)	6 ($\pm$ 2.5)

.. = not applicable

Health variables for Table S3 – S6

- **Self-rated health in childhood:** Would you say that your health during your childhood was in general excellent, very good, good, fair, or poor?
 - **Poor:** fair, poor; **Good:** excellent, very good, good
- **Self-rated health in adulthood:** Would you say your health now is excellent, very good, good, fair, or poor?
 - **Poor:** fair, poor; **Good:** excellent, very good, good
- **Home min. 1 month in childhood:** (During your childhood, because of a health condition,) were you ever confined to bed or home for one month or more?
 - **Yes; No**
- **Hospitalized min. 1 month in childhood:** (During your childhood, because of a health condition,) were you ever in hospital for one month or more?
 - **Yes; No**

Specific illnesses – childhood:

- Did you have any of the diseases on this card during your childhood (that is, from when you were born up to and including age 15)?
 - **Eye issues despite wearing eyeglasses**

Specific illnesses – adulthood:

- "(Apart from any injuries you've already told us about today,) as an adult, how many periods of ill health or disability have you had that lasted for more than a year? This includes serious illnesses that lasted less than one year, but influenced the respondent's daily life for more than a year (like cancer or diabetes)."
 - Which conditions on this card, if any, accounted for [this period of/the first period of/this periods of/this time of/the second period of/the third period of] ill health or disability (that you had as an adult)?
 - **Angina or heart attack (including myocardial infarction or coronary thrombosis)**
 - **Other heart disease**
 - **Diabetes or high blood sugar**
 - **Cancer or malignant tumor (excluding minor skin cancers)**
 - **Gynecological (women's) problem**
 - **Eyesight problems**

Table S3 Self-rated health in childhood (age 0-15) and adulthood (wave 3) and routine healthcare uptake trajectories

	Self-rated health in childhood				Self-rated health in adulthood			
	Poor	Good	NAs	p	Poor	Good	NAs	p
Blood pressure				***				***
Low uptake	1'160 (7.4%)	14'523 (92.1%)	86 (0.5%)		6'156 (39.0%)	9'604 (60.9%)	9 (0.1%)	
Medium uptake	548 (6.9%)	7'306 (92.5%)	42 (0.5%)		3'372 (42.7%)	4'519 (57.2%)	5 (0.1%)	
High uptake	371 (10.9%)	3'026 (88.7%)	15 (0.4%)		1'234 (36.2%)	2'176 (63.8%)	2 (0.1%)	
Blood test				***				0.05
Low uptake	1'223 (7.6%)	14'840 (91.9%)	83 (0.5%)		6'453 (40.0%)	9'684 (60.0%)	9 (0.1%)	
Medium uptake	579 (7.1%)	7'576 (92.4%)	42 (0.5%)		3'270 (39.9%)	4'922 (60.0%)	5 (0.1%)	
High uptake	280 (10.1%)	2'468 (89.3%)	17 (0.6%)		1'038 (37.5%)	1'725 (62.4%)	2 (0.1%)	
Vision				***				***
Low uptake	1'173 (7.0%)	15'448 (92.5%)	84 (0.5%)		6'973 (41.7%)	9'725 (58.2%)	7 (0.04%)	
Medium uptake	402 (10.4%)	3'459 (89.1%)	23 (0.6%)		1'324 (34.1%)	2'557 (65.8%)	3 (0.1%)	
High uptake	525 (7.9%)	6'090 (91.6%)	36 (0.5%)		2'514 (37.8%)	4'132 (62.1%)	5 (0.1%)	
Gynecology				0.15				***
Low uptake	511 (8.3%)	5'641 (91.3%)	29 (0.5%)		3'026 (49.0%)	3'152 (51.0%)	3 (0.1%)	
Medium uptake	140 (7.5%)	1'712 (91.9%)	11 (0.6%)		696 (37.4%)	1'167 (62.6%)	0	
High uptake	609 (8.8%)	6'241 (90.6%)	36 (0.5%)		2'531 (36.8%)	4'351 (63.2%)	4 (0.1%)	
Mammography				**				***
Low uptake	579 (7.9%)	6'686 (91.6%)	31 (0.4%)		3'485 (47.8%)	3'808 (52.2%)	3 (0.04%)	
Medium uptake	380 (7.9%)	4'390 (91.6%)	24 (0.5%)		1'656 (34.5%)	3'138 (65.5%)	0	
High uptake	281 (10.1%)	2'492 (89.3%)	19 (0.7%)		1'073 (38.4%)	1'715 (61.4%)	4 (0.1%)	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Poor = Fair, or poor self-reported health. Good = Excellent, very good, or good self-reported health. NAs = missing data or "health varied a great deal" in childhood.

Table S4 *Being bed-bound or hospitalized due to illness in childhood (age 0-15) and routine healthcare uptake trajectories*

	Home min. 1 month in childhood				Hospitalized min. 1 month in childhood			
	Yes	No	NAs	p	Yes	No	NAs	p
Blood pressure				***				***
Low uptake	1'410 (8.9%)	14'312 (90.8%)	47 (0.3%)		901 (5.7%)	14'836 (94.1%)	32 (0.2%)	
Medium uptake	783 (9.9%)	7'097 (89.9%)	16 (0.2%)		433 (5.5%)	7'454 (94.4%)	9 (0.1%)	
High uptake	470 (13.8%)	2'935 (86.0%)	7 (0.2%)		252 (7.4%)	3'153 (92.4%)	7 (0.2%)	
Blood test				***				**
Low uptake	1'466 (9.1%)	14'631 (90.6%)	49 (0.3%)		914 (5.7%)	15'194 (94.1%)	38 (0.2%)	
Medium uptake	860 (10.5%)	7'321 (89.3%)	16 (0.2%)		474 (5.8%)	7'717 (94.1%)	6 (0.1%)	
High uptake	349 (12.6%)	2'406 (87.0%)	10 (0.4%)		198 (7.2%)	2'560 (92.6%)	7 (0.3%)	
Vision				***				***
Low uptake	1'389 (8.3%)	15'269 (91.4%)	47 (0.3%)		892 (5.3%)	15'778 (94.5%)	35 (0.2%)	
Medium uptake	534 (13.7%)	3'339 (86.0%)	11 (0.3%)		298 (7.7%)	3'580 (92.2%)	6 (0.2%)	
High uptake	766 (11.5%)	5'873 (88.3%)	12 (0.2%)		414 (6.2%)	6'230 (93.7%)	7 (0.1%)	
Gynecology				***				***
Low uptake	526 (8.5%)	5'636 (91.2%)	19 (0.3%)		304 (4.9%)	5'864 (94.9%)	13 (0.2%)	
Medium uptake	182 (9.8%)	1'679 (90.1%)	2 (0.1%)		110 (5.9%)	1'753 (94.1%)	0	
High uptake	846 (12.3%)	6'025 (87.5%)	15 (0.2%)		446 (6.5%)	6'432 (93.4%)	8 (0.1%)	
Mammography				***				**
Low uptake	616 (8.4%)	6'651 (91.2%)	29 (0.4%)		367 (5.0%)	6'914 (94.8%)	15 (0.2%)	
Medium uptake	561 (11.7%)	4'225 (88.1%)	8 (0.2%)		298 (6.2%)	4'492 (93.7%)	4 (0.1%)	
High uptake	357 (12.8%)	2'430 (87.0%)	5 (0.2%)		187 (6.7%)	2'600 (93.1%)	5 (0.2%)	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

NAs = missing data

Table S5 Eye issues in childhood (age 0-15) and vision uptake trajectories

Eye issues in childhood despite wearing eyeglasses				
	Yes	No	NAs	p
Vision				***
Low uptake	103 (0.6%)	16'405 (98.2%)	197 (1.2%)	
Medium uptake	324 (8.3%)	3'544 (91.2%)	16 (0.4%)	
High uptake	48 (0.7%)	6'561 (98.6%)	42 (0.6%)	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

NAs = missing data

Table S6 Specific health issues in adulthood and routine healthcare uptake trajectories

Ever experienced angina or heart attack or other heart disease				
	Yes	No	NAs	p
Blood pressure				***
Low uptake	544 (3.4%)	15'203 (96.4%)	22 (0.1%)	
Medium uptake	520 (6.6%)	7'370 (93.3%)	6 (0.1%)	
High uptake	112 (3.3%)	3'299 (96.7%)	1 (0.03%)	
Ever experienced diabetes or high blood sugar				
	Yes	No	NAs	p
Blood test				***
Low uptake	298 (1.8%)	15'827 (98.0%)	21 (0.1%)	
Medium uptake	328 (4.0%)	7'863 (95.9%)	6 (0.1%)	
High uptake	76 (2.7%)	2'688 (97.2%)	1 (0.03%)	
Ever experienced eyesight problems				
	Yes	No	NAs	p
Vision				**
Low uptake	289 (1.7%)	16'394 (98.1%)	22 (0.1%)	
Medium uptake	84 (2.2%)	3'799 (97.8%)	1 (0.03%)	
High uptake	158 (2.4%)	6'488 (97.5%)	5 (0.1%)	
Ever experienced gynecological (women's) problems				
	Yes	No	NAs	p
Gynecology				***
Low uptake	101 (1.6%)	6'068 (98.2%)	12 (0.2%)	
Medium uptake	65 (3.5%)	1'798 (96.5%)	0	
High uptake	184 (2.7%)	6'695 (97.2%)	7 (0.1%)	
Ever experienced cancer or malignant tumor				
	Yes	No	NAs	p
Mammography				***
Low uptake	175 (2.4%)	7'107 (97.4%)	14 (0.2%)	
Medium uptake	171 (3.6%)	4'620 (96.4%)	3 (0.1%)	
High uptake	130 (4.7%)	2'658 (95.2%)	4 (0.1%)	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

NAs = missing data

Table S7 Associations of life-course disadvantage (LCD) and birth cohorts with routine healthcare uptake clusters including interaction term (X)

	Medium vs. low uptake OR (95% CrI)	High vs. low uptake OR (95% CrI)
Blood pressure		
Life-course disadvantage	0.99 (0.97 – 1.02)	0.93 (0.90 – 0.96)
Cohort 1939-1945	1.97 (1.59 – 2.44)	1.74 (1.31 – 2.32)
Cohort 1946-1959	2.10 (1.66 – 2.65)	2.38 (1.77 – 3.22)
LCD X Cohort 1939-1945	1.01 (0.98 – 1.04)	1.03 (0.99 – 1.08)
LCD X Cohort 1946-1959	0.98 (0.95 – 1.02)	1.00 (0.95 – 1.04)
Blood test		
Life-course disadvantage	0.99 (0.96 – 1.01)	0.92 (0.89 – 0.95)
Cohort 1939-1945	2.43 (1.94 – 3.05)	2.14 (1.55 – 2.92)
Cohort 1946-1959	3.87 (3.09 – 4.93)	2.61 (1.89 – 3.64)
LCD X Cohort 1939-1945	1.01 (0.98 – 1.04)	1.00 (0.96 – 1.05)
LCD X Cohort 1946-1959	0.99 (0.96 – 1.02)	1.03 (0.98 – 1.08)
Vision		
Life-course disadvantage	0.91 (0.89 – 0.93)	0.84 (0.82 – 0.87)
Cohort 1939-1945	1.26 (1.01 – 1.57)	1.64 (1.26 – 2.13)
Cohort 1946-1959	1.19 (0.94 – 1.51)	2.05 (1.57 – 2.69)
LCD X Cohort 1939-1945	1.03 (0.99 – 1.06)	1.00 (0.96 – 1.04)
LCD X Cohort 1946-1959	1.02 (0.99 – 1.06)	0.98 (0.94 – 1.02)
Gynecology		
Life-course disadvantage	0.86 (0.83 – 0.90)	0.85 (0.82 – 0.87)
Cohort 1939-1945	1.68 (1.07 – 2.65)	2.13 (1.55 – 2.89)
Cohort 1946-1959	2.38 (1.53 – 3.81)	3.31 (2.40 – 4.55)
LCD X Cohort 1939-1945	1.05 (0.99 – 1.12)	1.01 (0.97 – 1.06)
LCD X Cohort 1946-1959	1.06 (0.99 – 1.12)	1.01 (0.96 – 1.05)
Mammography		
Life-course disadvantage	0.86 (0.83 – 0.89)	0.88 (0.85 – 0.92)
Cohort 1939-1945	3.46 (2.39 – 4.99)	4.05 (2.83 – 5.86)
Cohort 1946-1959	7.95 (5.53 – 11.53)	5.30 (3.60 – 7.93)
LCD X Cohort 1939-1945	1.05 (1.00 – 1.10)	0.95 (0.90 – 1.00)
LCD X Cohort 1946-1959	1.06 (1.01 – 1.12)	0.96 (0.91 – 1.02)

OR = odds ratio; CrI = credible interval. Models included life-course socioeconomic disadvantage, birth cohort, interaction terms between life-course disadvantage and birth cohort, and country-level random intercepts. Cohorts are compared to 1908–1938. Gynecology and mammography are assessed in women only.

Table S8 *Country-level variation in healthcare uptake across five services, expressed as Median Odds Ratio (MOR)*

	SD (Medium uptake)	MOR (Medium)	SD (High uptake)	MOR (High)
Blood pressure	0.51	1.63	0.64	1.84
Blood test	0.62	1.80	0.65	1.85
Vision	0.44	1.52	0.45	1.54
Gynecology	0.48	1.58	0.74	2.03
Mammography	0.92	2.41	1.08	2.81

Table S9 Associations of life-course disadvantage and birth cohorts with routine healthcare uptake clusters, split by gender

		Medium vs. low uptake OR (95% CrI)	High vs. low uptake OR (95% CrI)
Blood pressure			
Life-course disadvantage	Men	0.97 (0.95 – 1.00)	0.94 (0.91 – 0.97)
	Women	1.00 (0.98 – 1.02)	0.95 (0.92 – 0.98)
Cohort 1939-1945	Men	2.17 (1.90 – 2.48)	1.95 (1.63 – 2.33)
	Women	1.94 (1.73 – 2.18)	2.30 (1.92 – 2.74)
Cohort 1946-1959	Men	2.12 (1.84 – 2.47)	2.05 (1.69 – 2.49)
	Women	1.74 (1.55 – 1.95)	2.63 (2.22 – 3.10)
Blood test			
Life-course disadvantage	Men	0.96 (0.94 – 0.99)	0.92 (0.88 – 0.95)
	Women	1.00 (0.98 – 1.02)	0.93 (0.91 – 0.96)
Cohort 1939-1945	Men	2.58 (2.25 – 2.96)	2.21 (1.82 – 2.69)
	Women	2.56 (2.26 – 2.90)	2.20 (1.81 – 2.67)
Cohort 1946-1959	Men	3.61 (3.12 – 4.19)	2.48 (1.99 – 3.09)
	Women	3.73 (3.32 – 4.20)	3.60 (3.02 – 4.30)
Vision			
Life-course disadvantage	Men	0.89 (0.86 – 0.91)	0.81 (0.78 – 0.83)
	Women	0.93 (0.91 – 0.95)	0.84 (0.82 – 0.86)
Cohort 1939-1945	Men	1.48 (1.29 – 1.70)	1.84 (1.54 – 2.20)
	Women	1.48 (1.31 – 1.66)	1.52 (1.29 – 1.79)
Cohort 1946-1959	Men	1.27 (1.08 – 1.50)	1.95 (1.61 – 2.36)
	Women	1.36 (1.21 – 1.53)	1.72 (1.47 – 2.01)

OR = odds ratios. CrI = credible intervals. Models included birth cohort and country-level random intercepts. Cohorts are compared to 1908–1938.

Table S10 Routine healthcare uptake patterns after collapsing annual sequences into SHARELIFE age intervals

	Low / mainly late uptake	Later-life uptake	Sustained / earlier uptake	Other / interrupted pattern
Blood pressure	17'964 (64.2%)	5'976 (21.4%)	3'861 (13.8%)	159 (0.6%)
Blood test	18'675 (66.8%)	5'914 (21.2%)	3'199 (11.4%)	172 (0.6%)
Vision	16'227 (58.0%)	6'010 (21.5%)	5'484 (19.6%)	239 (0.9%)
Gynecology	5'990 (38.7%)	2'181 (14.1%)	6'405 (41.4%)	909 (5.9%)
Mammography	9'750 (63.0%)	3'991 (25.8%)	1'555 (10.0%)	189 (1.2%)

Annual sequences were collapsed into four SHARELIFE age intervals: 16–25, 26–40, 41–55, and 56–65 years. Each interval was coded as regular uptake if regular uptake was present in at least half of the observed annual states. Pattern labels summarize interval-level sequences, where 0 = no regular uptake and 1 = regular uptake: low / mainly late uptake includes 0000 and 0001; later-life uptake includes 0011; sustained / earlier uptake includes 0111 and 1111; other / interrupted patterns include all remaining interval-level sequences.

Table S11 Cluster profiles after using transition-rate-based substitution costs

	ASW	Low uptake	Medium uptake	High uptake
Blood pressure	0.578	14'378 (53.1%)	7'572 (28.0%)	5'127 (18.9%)
Blood test	0.479	9'628 (35.5%)	13'771 (50.8%)	3'709 (13.7%)
Vision	0.656	16'552 (60.8%)	6'804 (25.0%)	3'884 (14.3%)
Gynecology	0.599	6'951 (46.6%)	2'590 (17.3%)	5'389 (36.1%)
Mammography	0.531	5'256 (35.3%)	6'834 (45.9%)	2'792 (18.8%)

ASW = average silhouette width. Pairwise sequence dissimilarities were calculated using optimal matching with transition-rate-based substitution costs. The clustering procedure was otherwise unchanged from the main analysis. Cluster labels were assigned based on inspection of the full cluster profiles.

Table S12 Associations of childhood socioeconomic disadvantage with routine healthcare uptake clusters

	Medium vs. low uptake OR (95% CrI)	High vs. low uptake OR (95% CrI)
Blood pressure	0.99 (0.95 – 1.03)	0.92 (0.88 – 0.96)
Blood test	0.99 (0.96 – 1.03)	0.88 (0.84 – 0.93)
Vision	0.87 (0.84 – 0.90)	0.73 (0.69 – 0.76)
Gynecology	0.83 (0.77 – 0.88)	0.75 (0.72 – 0.79)
Mammography	0.93 (0.88 – 0.98)	0.83 (0.78 – 0.88)

OR = odds ratio; CrI = credible interval. Estimates are from multilevel multinomial logistic regression models using childhood socioeconomic disadvantage instead of the full life-course disadvantage score. Models included birth cohort and country-level random intercepts. Cohorts are compared to 1908–1938. Gynecology and mammography are assessed in women only.

Table S13 Associations of life-course disadvantage and childhood self-rated health with routine healthcare uptake clusters

	Medium vs. low uptake OR (95% CrI)	High vs. low uptake OR (95% CrI)
Blood pressure		
Life-course disadvantage	0.99 (0.97 – 1.00)	0.94 (0.92 – 0.96)
Poor childhood health	1.05 (0.91 – 1.21)	1.63 (1.39 – 1.91)
Cohort 1939–1945	2.04 (1.87 – 2.23)	2.10 (1.85 – 2.39)
Cohort 1946–1959	1.87 (1.71 – 2.05)	2.31 (2.03 – 2.61)
Blood test		
Life-course disadvantage	0.98 (0.97 – 1.00)	0.92 (0.90 – 0.95)
Poor childhood health	1.08 (0.94 – 1.24)	1.59 (1.32 – 1.90)
Cohort 1939–1945	2.57 (2.35 – 2.82)	2.19 (1.91 – 2.51)
Cohort 1946–1959	3.63 (3.31 – 3.99)	3.06 (2.67 – 3.50)
Vision		
Life-course disadvantage	0.92 (0.91 – 0.94)	0.83 (0.82 – 0.85)
Poor childhood health	1.22 (1.06 – 1.40)	1.65 (1.41 – 1.93)
Cohort 1939–1945	1.48 (1.34 – 1.62)	1.66 (1.47 – 1.87)
Cohort 1946–1959	1.38 (1.25 – 1.51)	1.82 (1.61 – 2.06)
Gynecology		
Life-course disadvantage	0.89 (0.87 – 0.92)	0.85 (0.83 – 0.87)
Poor childhood health	1.07 (0.84 – 1.35)	1.19 (1.01 – 1.41)
Cohort 1939–1945	2.35 (1.98 – 2.79)	2.34 (2.08 – 2.63)
Cohort 1946–1959	3.50 (2.97 – 4.12)	3.50 (3.11 – 3.92)
Mammography		
Life-course disadvantage	0.90 (0.87 – 0.92)	0.86 (0.84 – 0.88)
Poor childhood health	0.94 (0.77 – 1.14)	1.25 (1.03 – 1.52)
Cohort 1939–1945	4.74 (4.09 – 5.49)	3.02 (2.61 – 3.51)
Cohort 1946–1959	11.72 (10.16 – 13.57)	4.16 (3.59 – 4.86)

OR = odds ratio; CrI = credible interval. Models included life-course socioeconomic disadvantage, self-rated childhood health, birth cohort, and country-level random intercepts. “Poor childhood health” is compared with good childhood health. Cohorts are compared to 1908–1938. Gynecology and mammography are assessed in women only.

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Figure S4 Routine healthcare uptake trajectories by country – Blood pressure

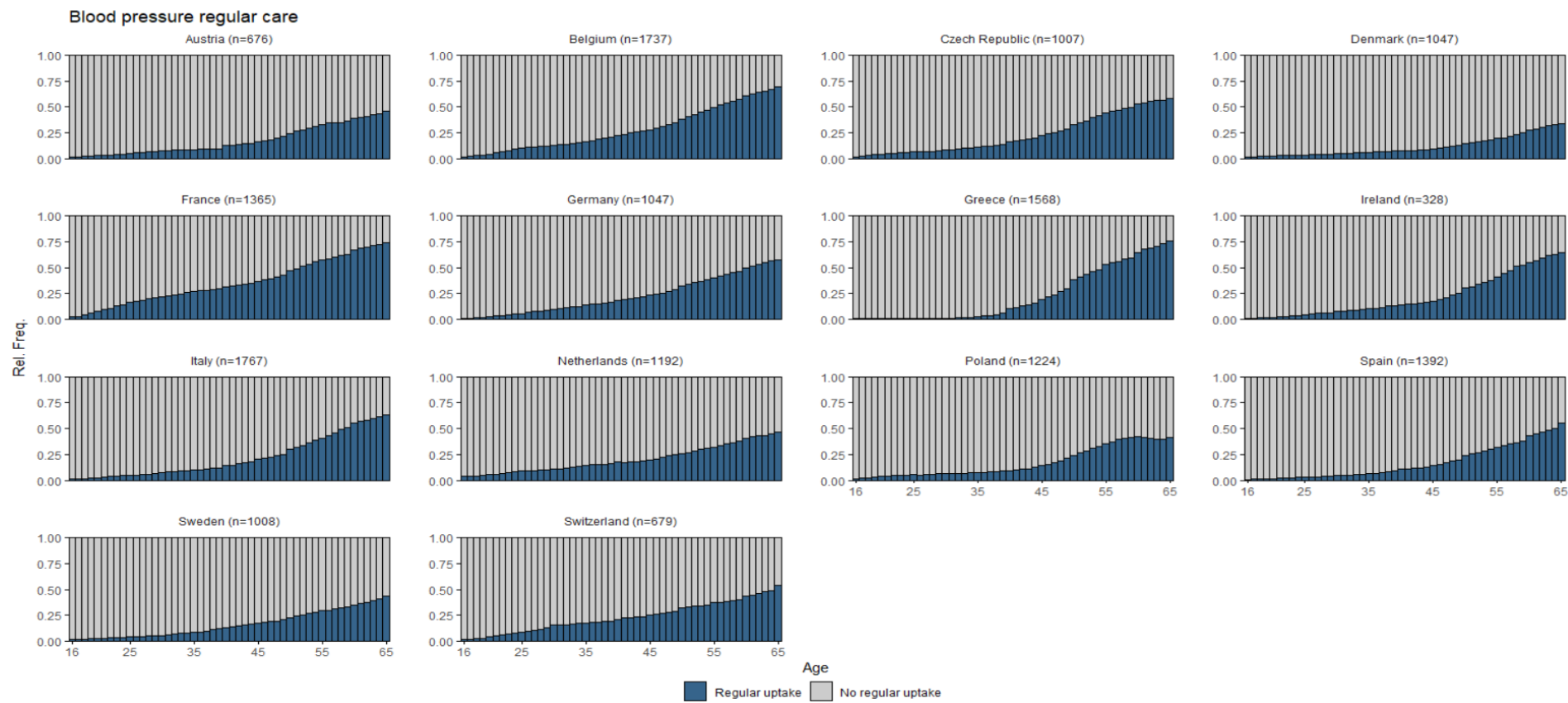


Figure S5 Routine healthcare uptake trajectories by country – Blood test

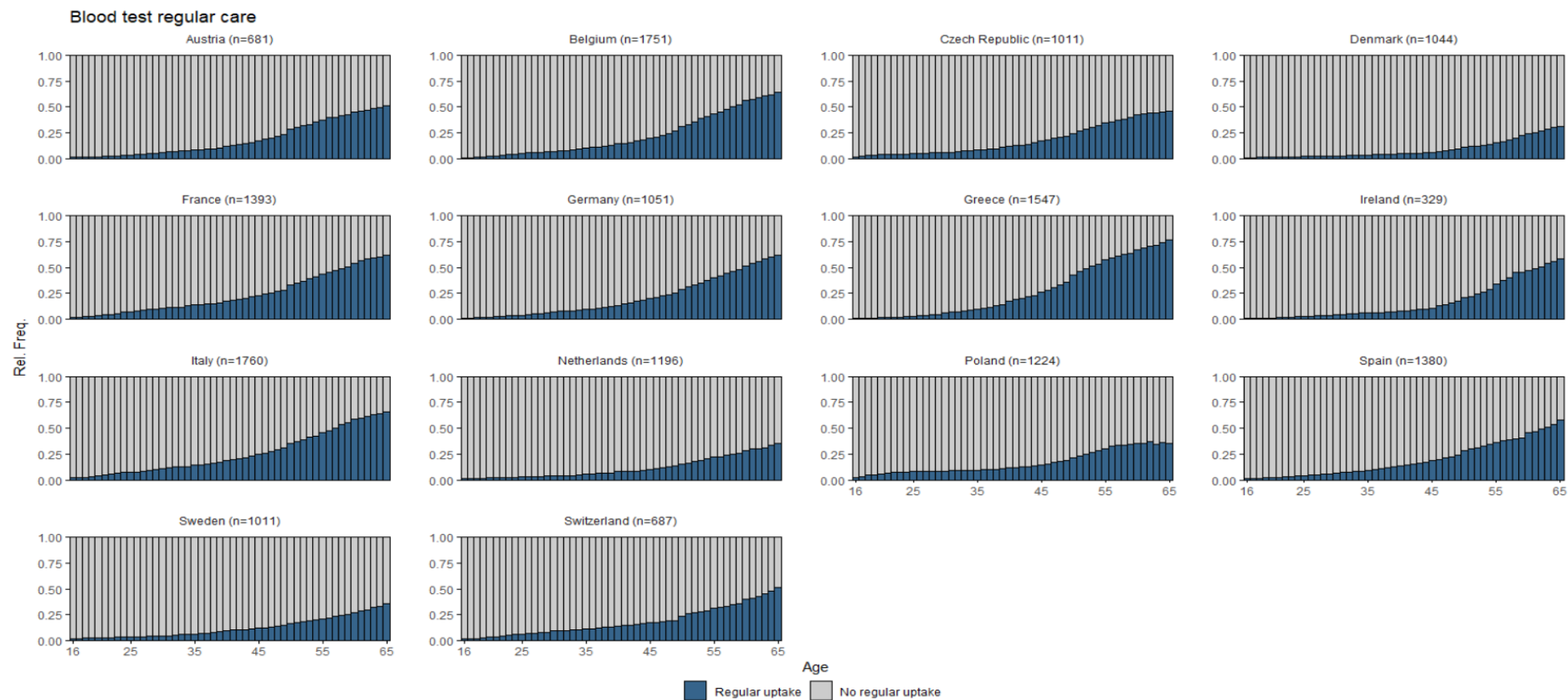


Figure S6 Routine healthcare uptake trajectories by country – Vision

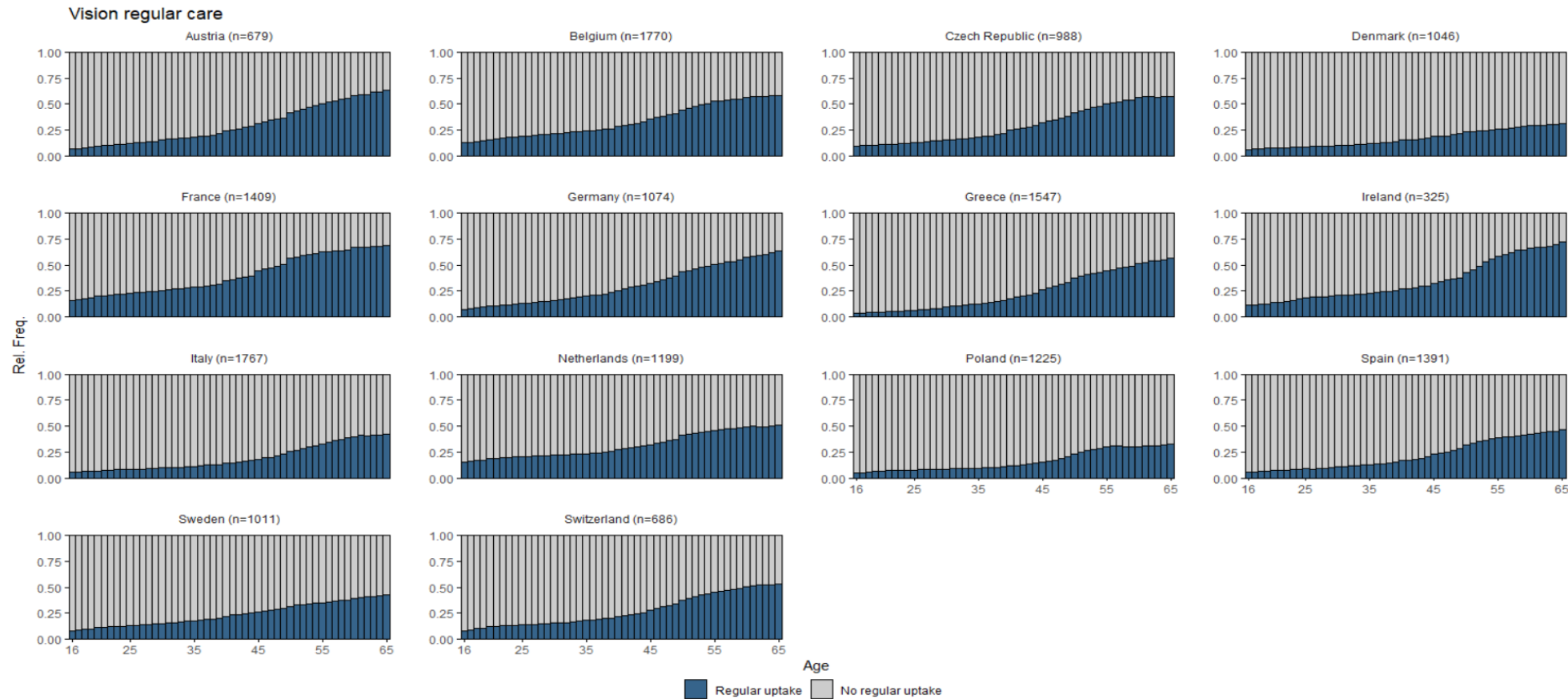


Figure S7 Routine healthcare uptake trajectories by country – Gynecology

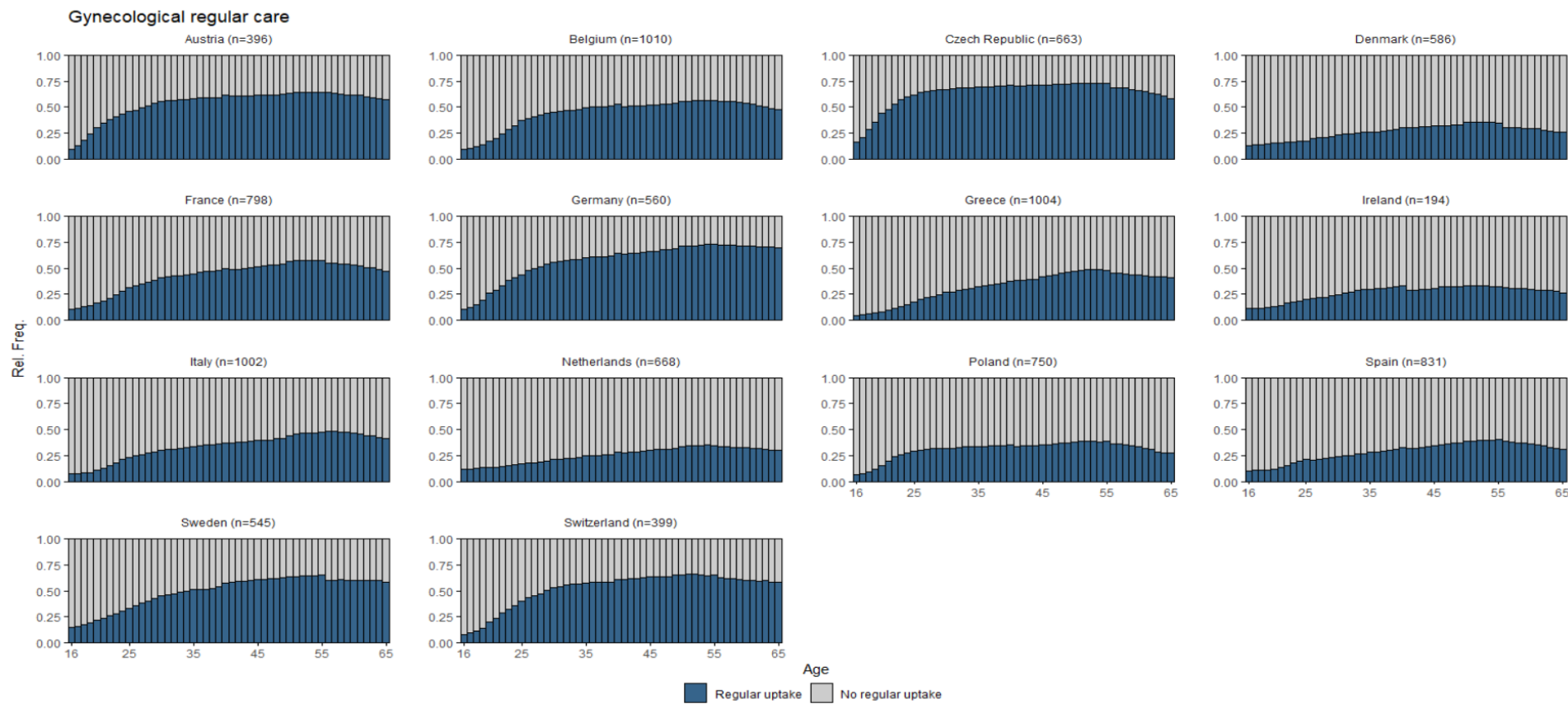


Figure S8 Routine healthcare uptake trajectories by country – Mammography

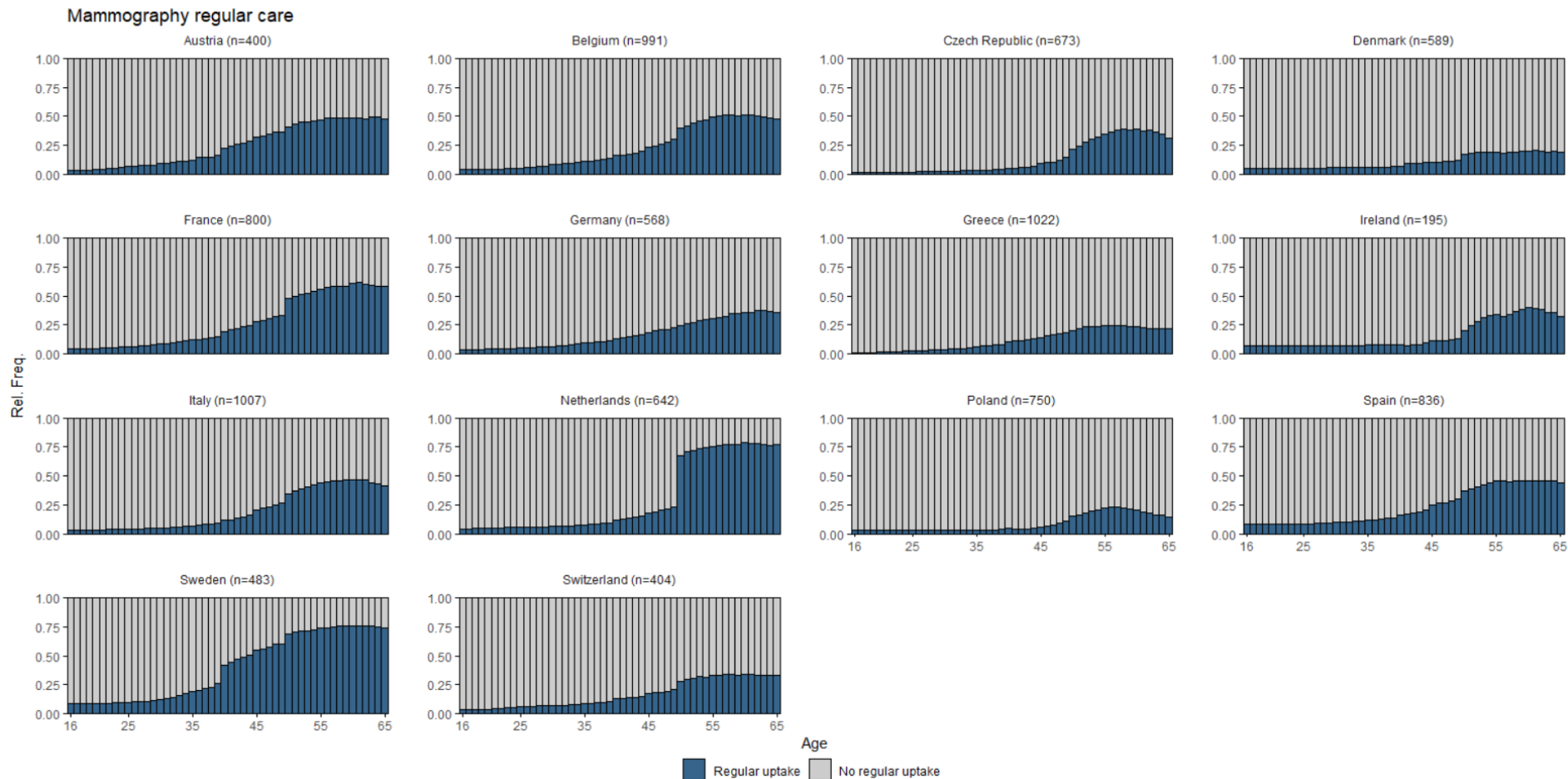


Figure S9 Routine healthcare uptake clusters – Austria – Blood pressure

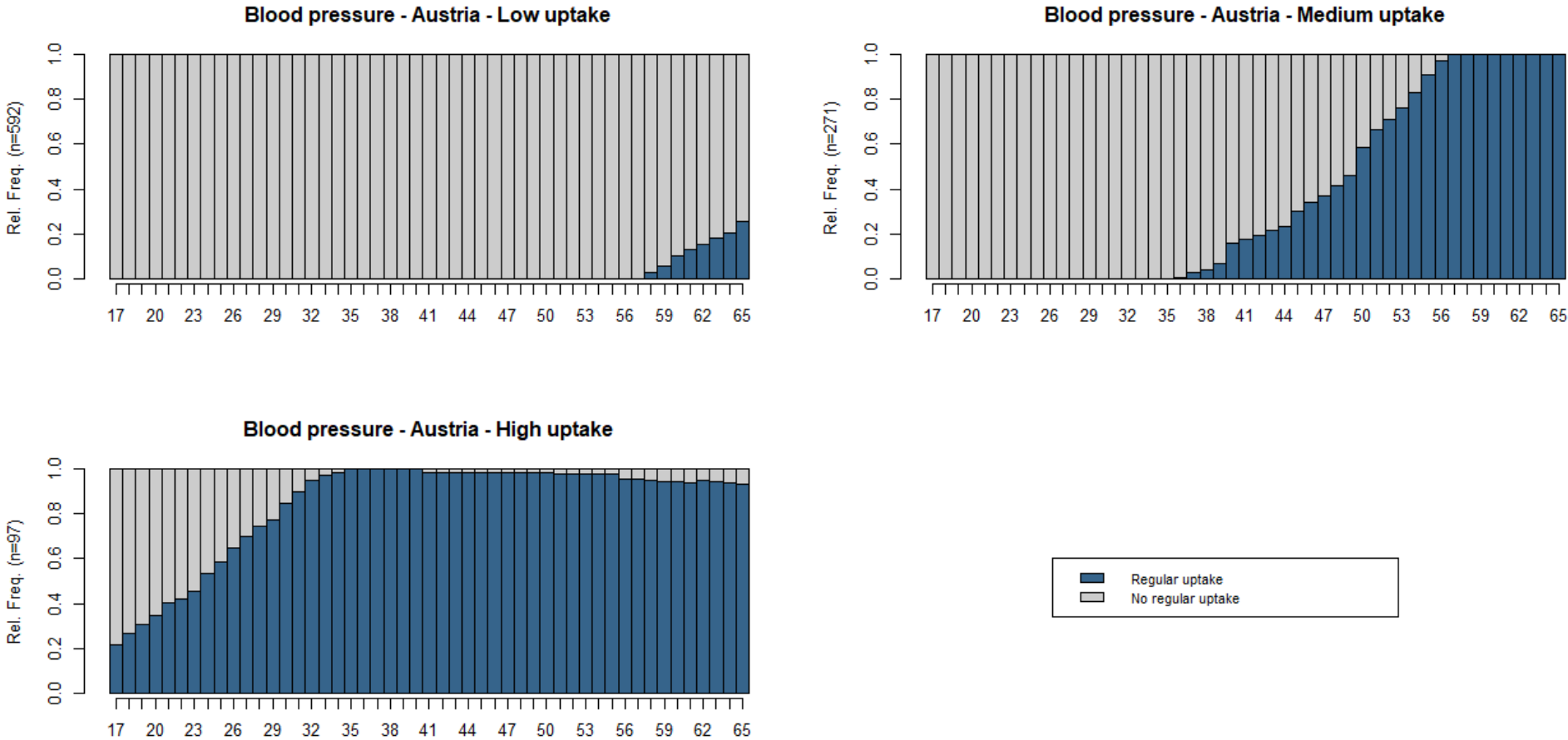


Figure S10 Routine healthcare uptake clusters – Austria – Blood test

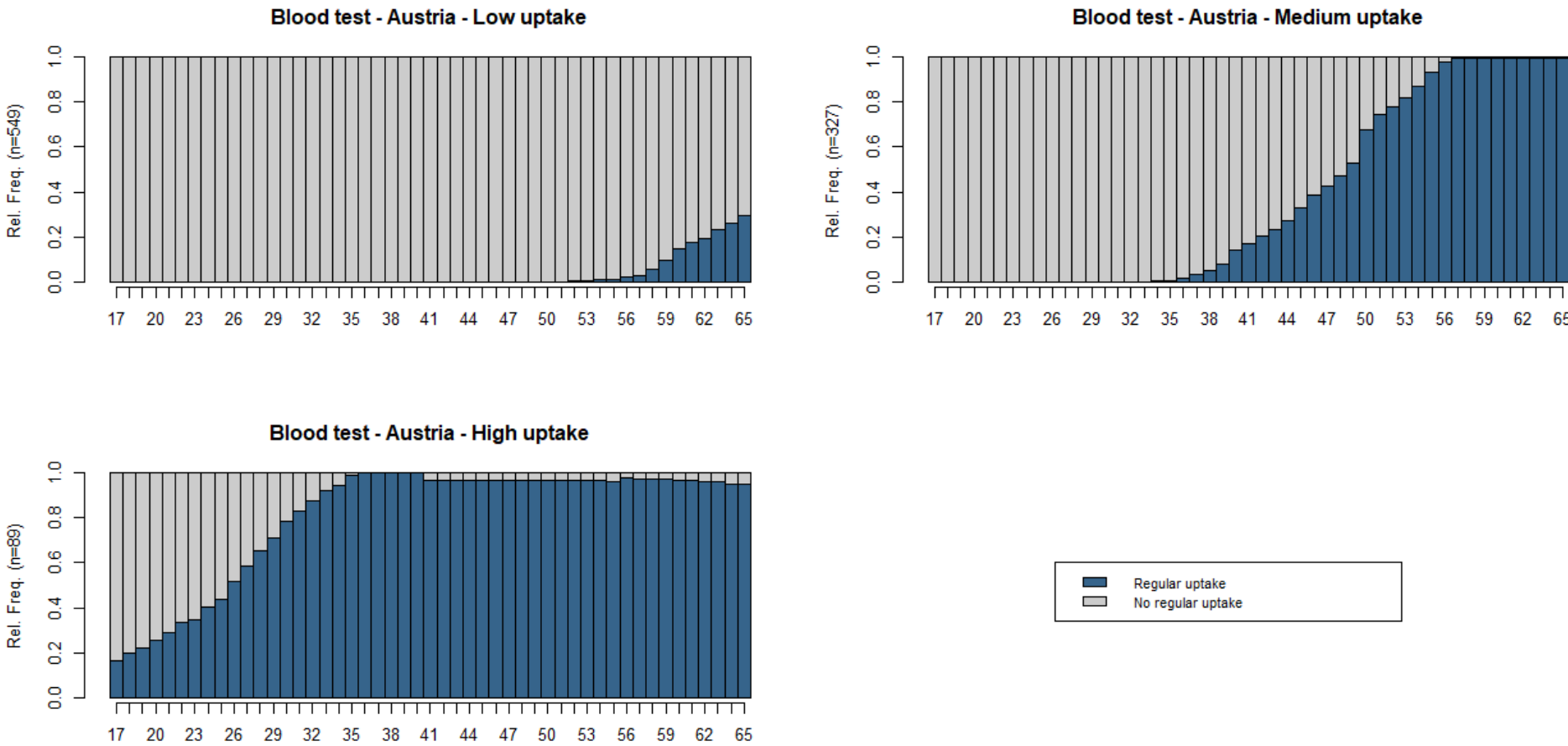


Figure S11 Routine healthcare uptake trajectories and clusters – Austria – Vision

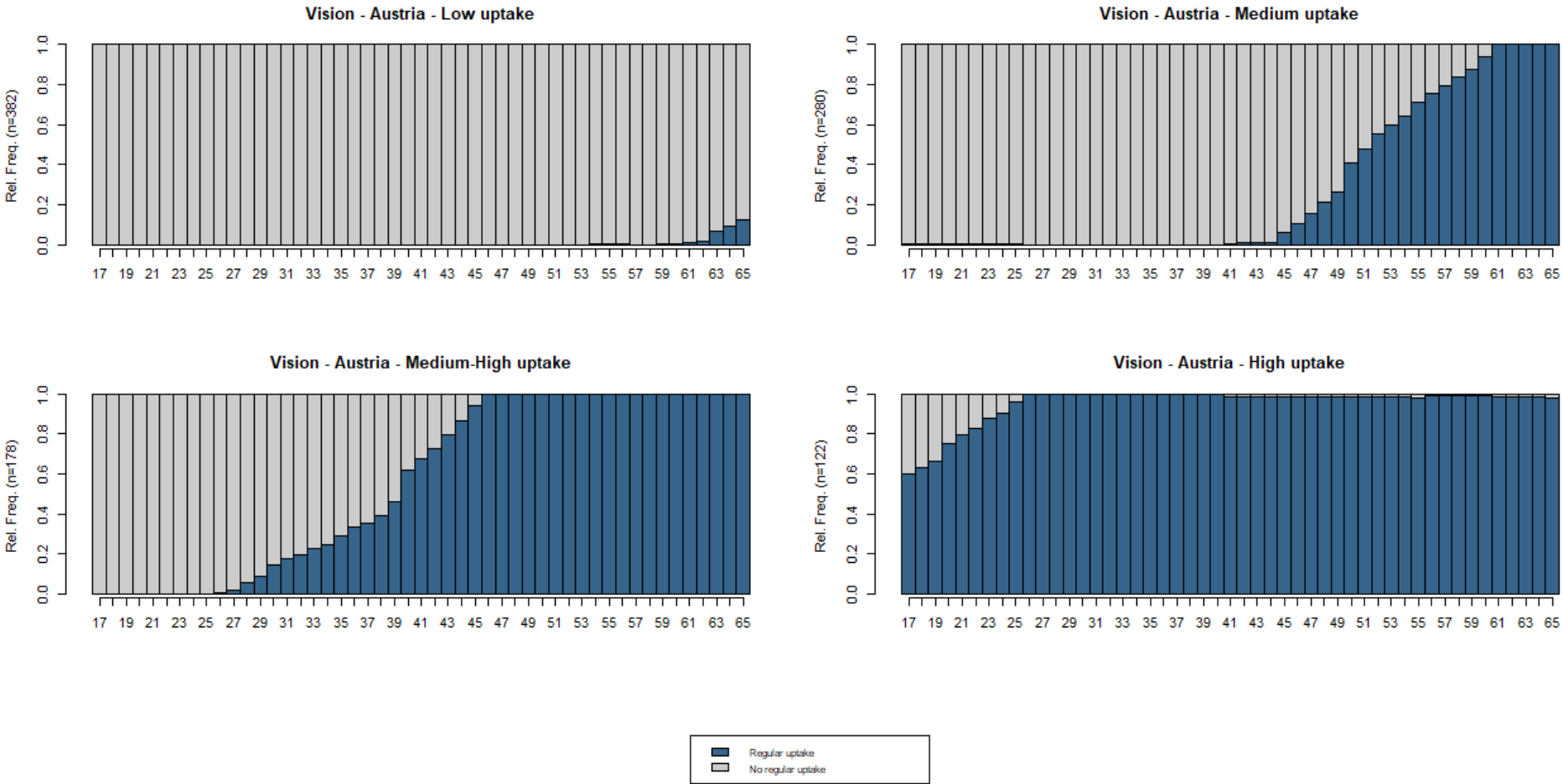


Figure S12 Routine healthcare uptake clusters – Austria – Gynecology

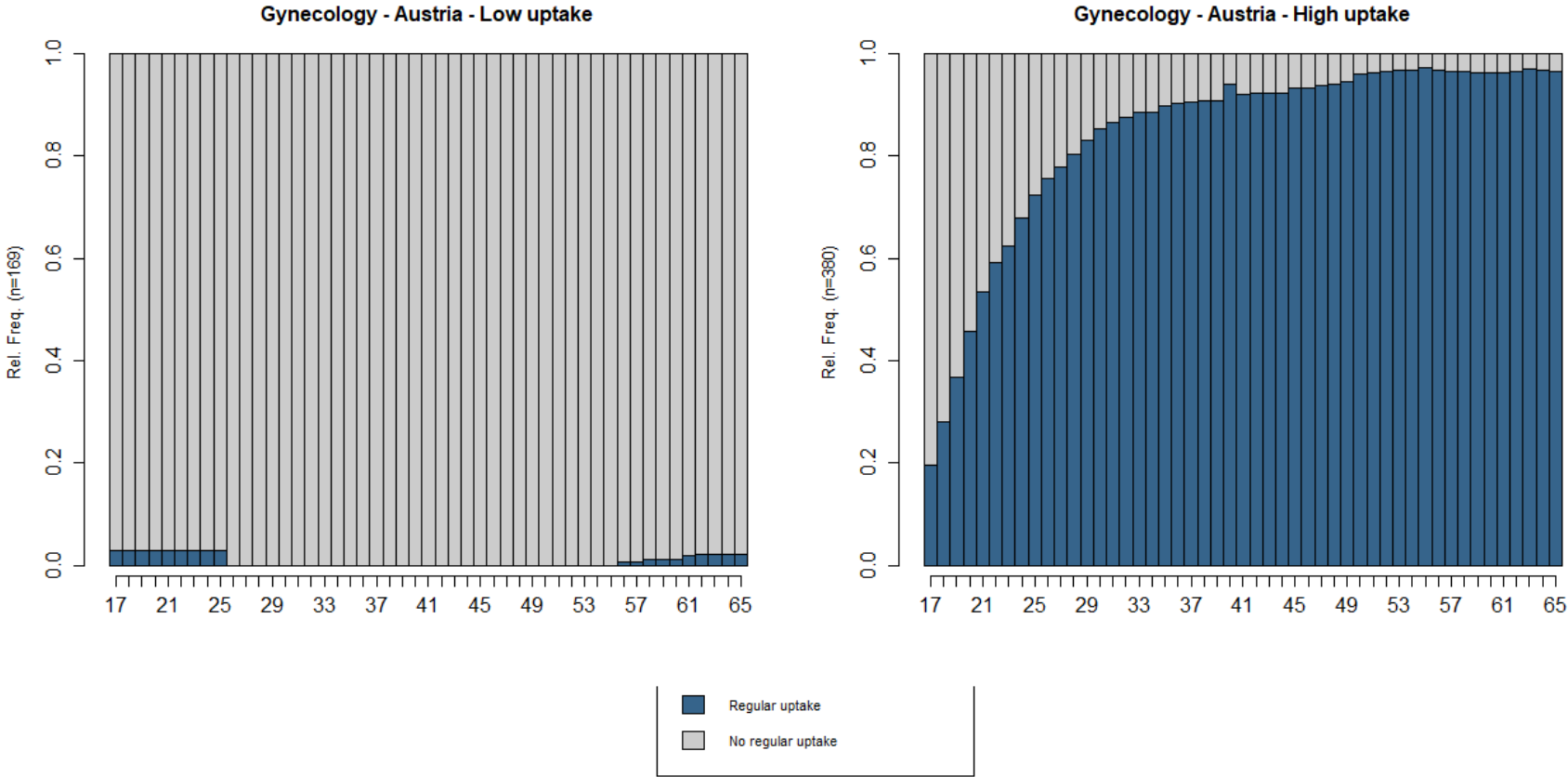


Figure S13 Routine healthcare uptake clusters – Austria – Mammography

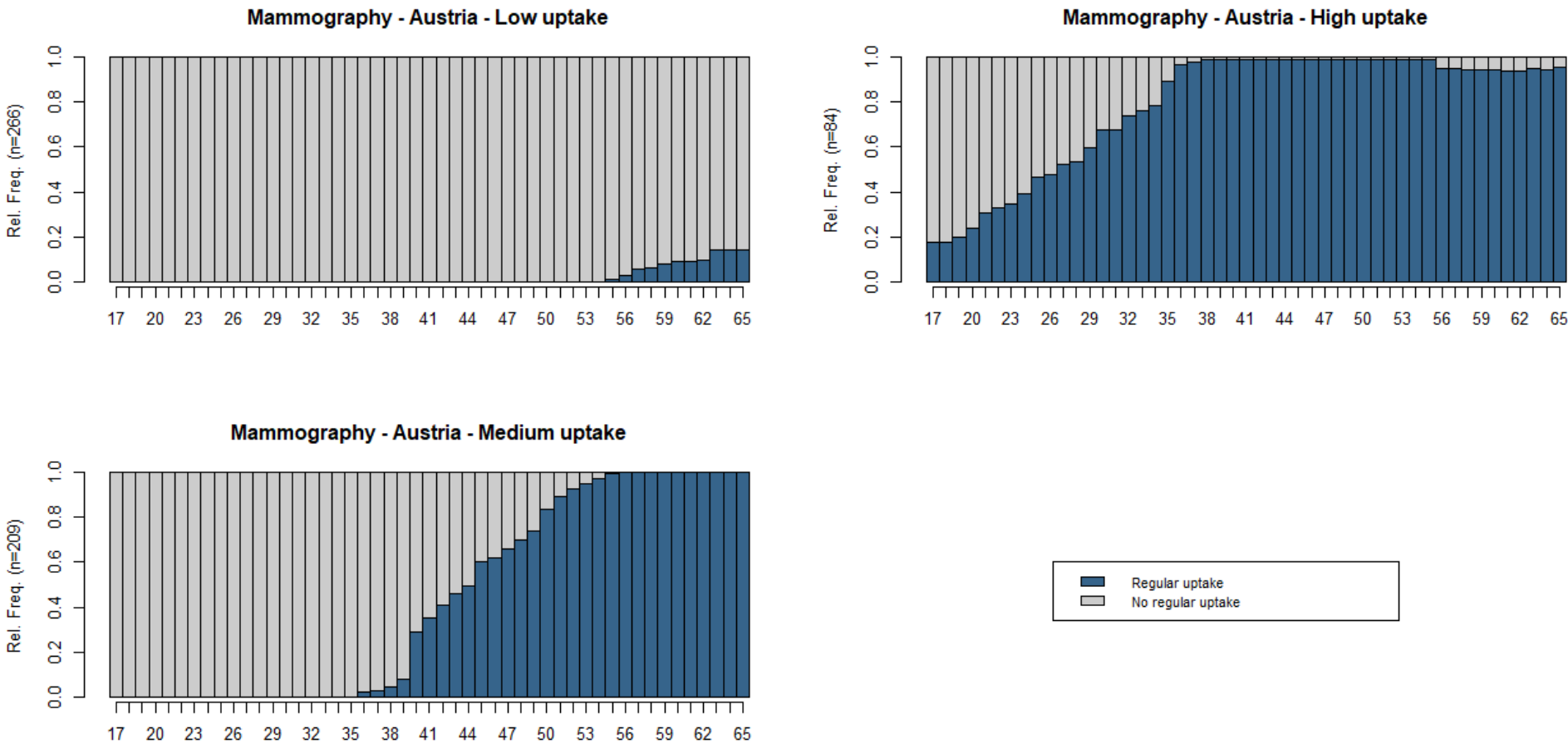


Figure S14 Routine healthcare uptake clusters – Belgium – Blood pressure

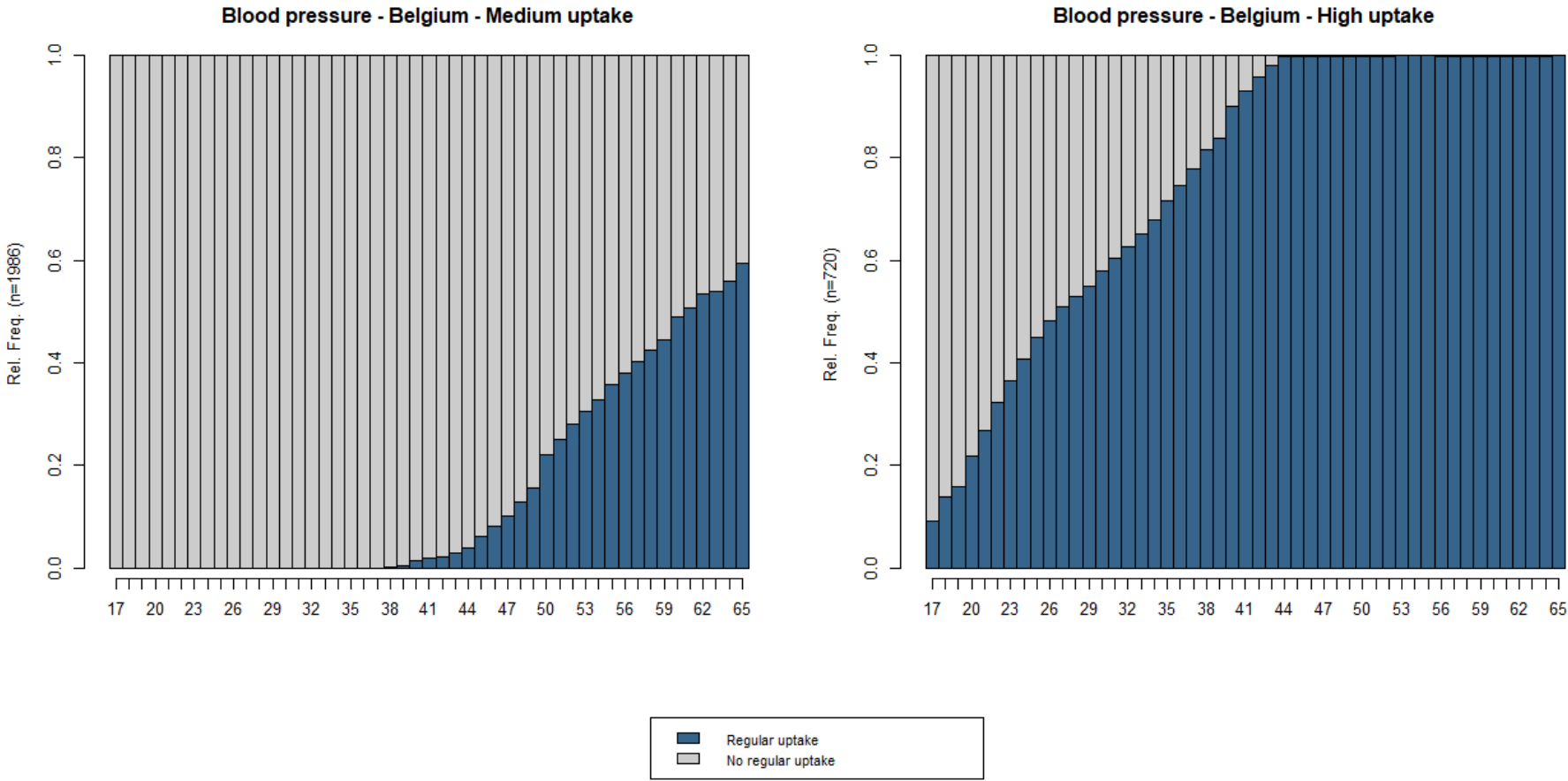


Figure S15 Routine healthcare uptake clusters – Belgium – Blood test

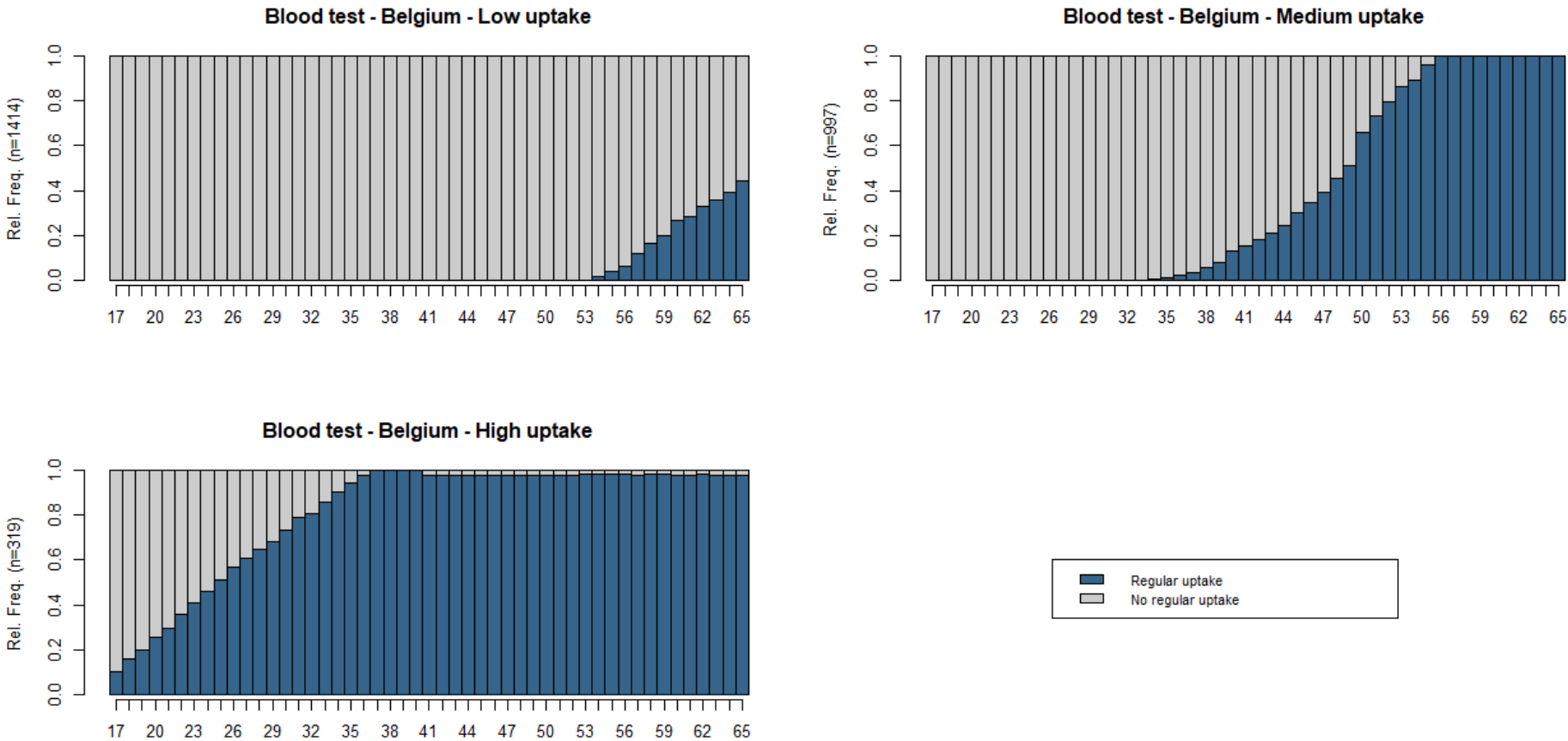


Figure S16 Routine healthcare uptake clusters – Belgium – Vision

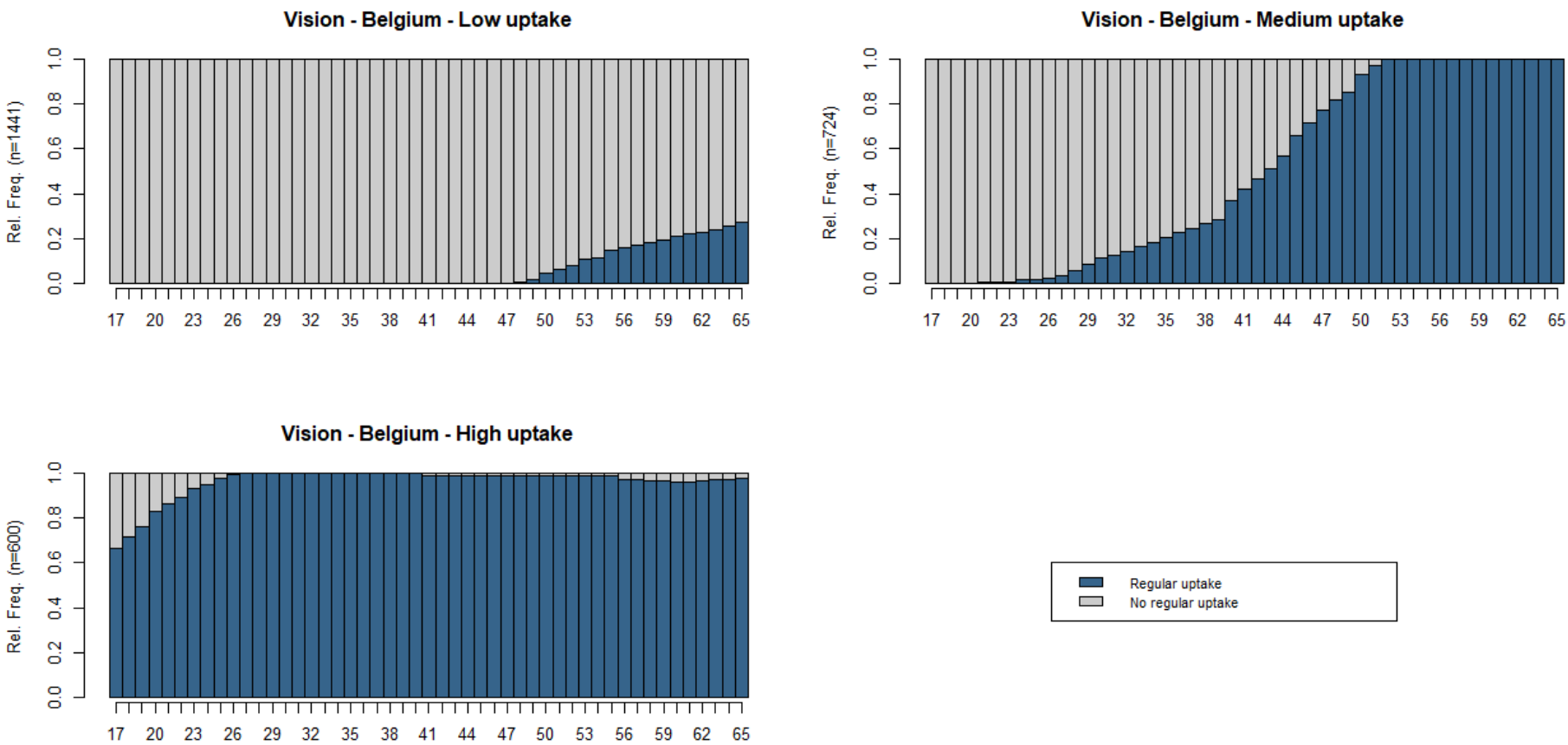


Figure S17 Routine healthcare uptake clusters – Belgium – Gynecology

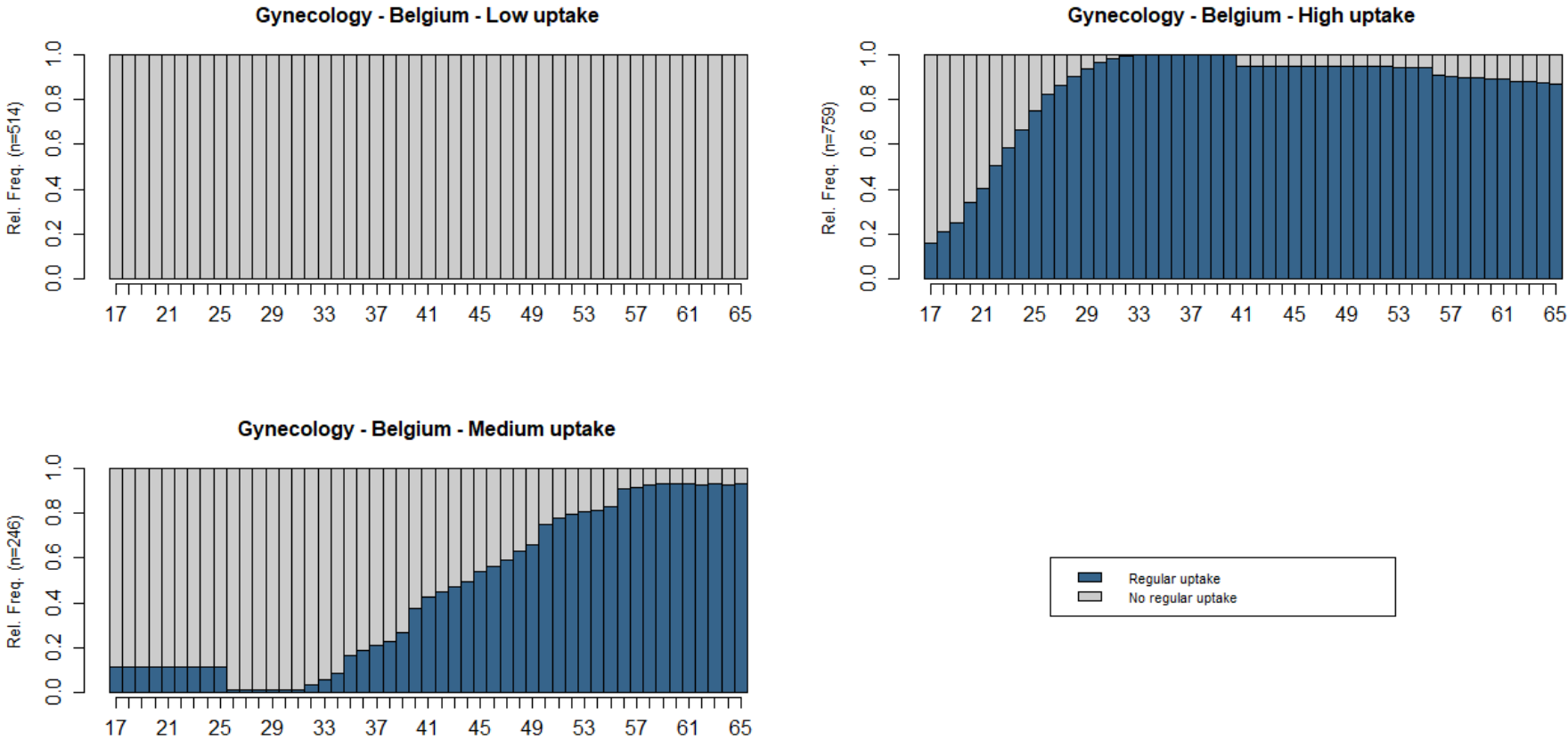


Figure S18 Routine healthcare uptake clusters – Belgium – Mammography

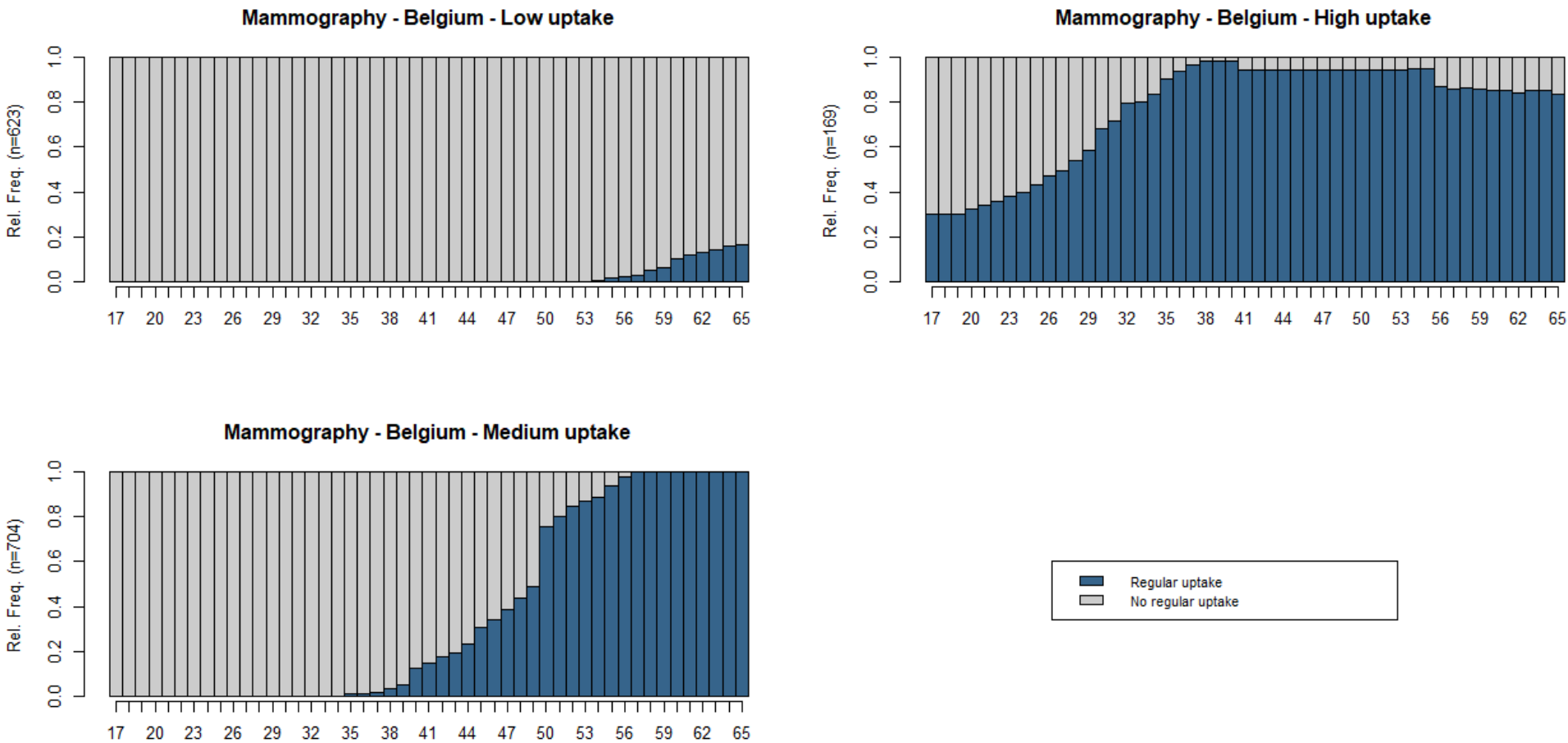


Figure S19 Routine healthcare uptake clusters – Czech Republic – Blood pressure

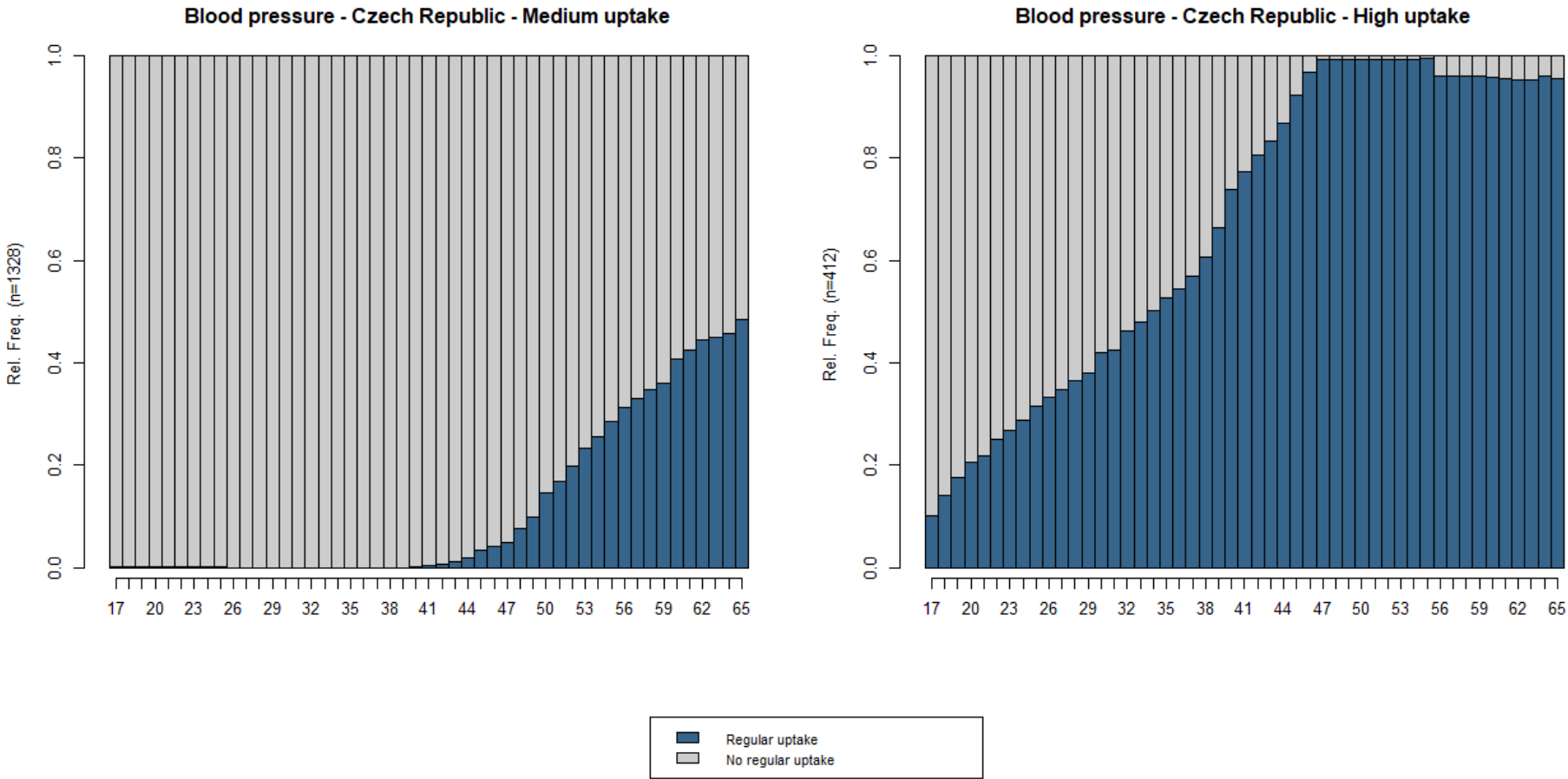


Figure S20 Routine healthcare uptake clusters – Czech Republic – Blood test

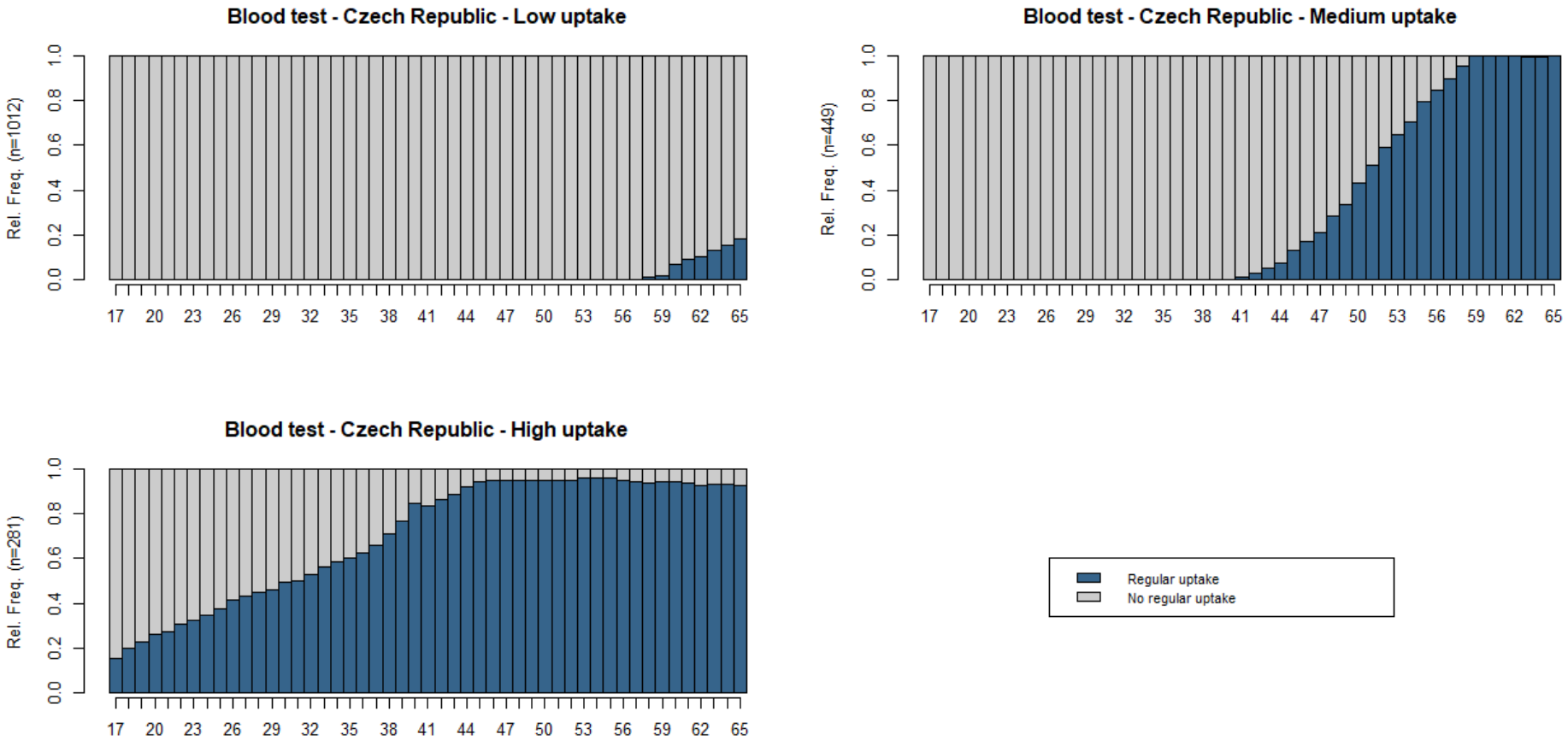


Figure S21 Routine healthcare uptake clusters – Czech Republic – Vision

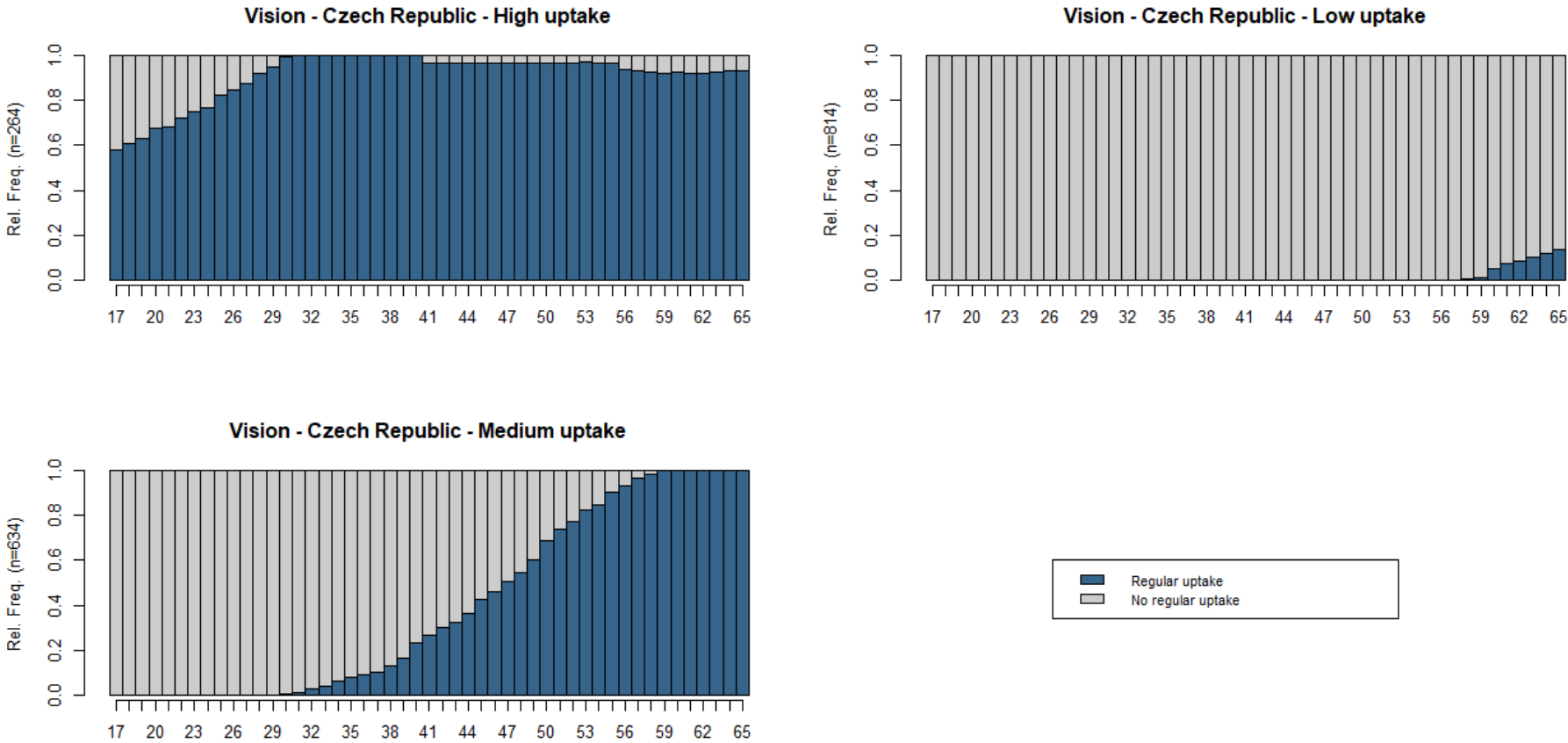


Figure S22 Routine healthcare uptake clusters – Czech Republic – Gynecology

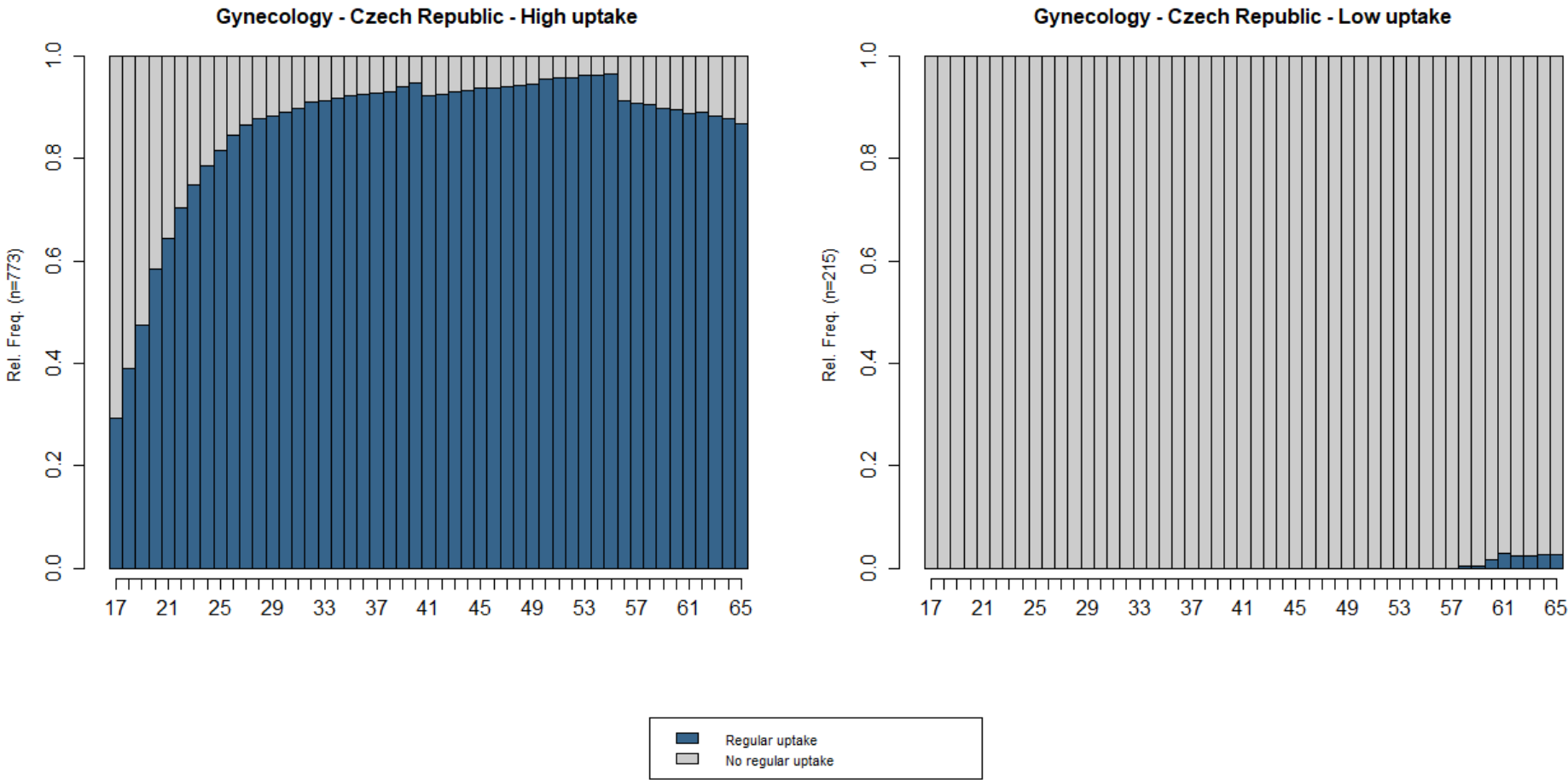


Figure S23 Routine healthcare uptake clusters – Czech Republic – Mammography

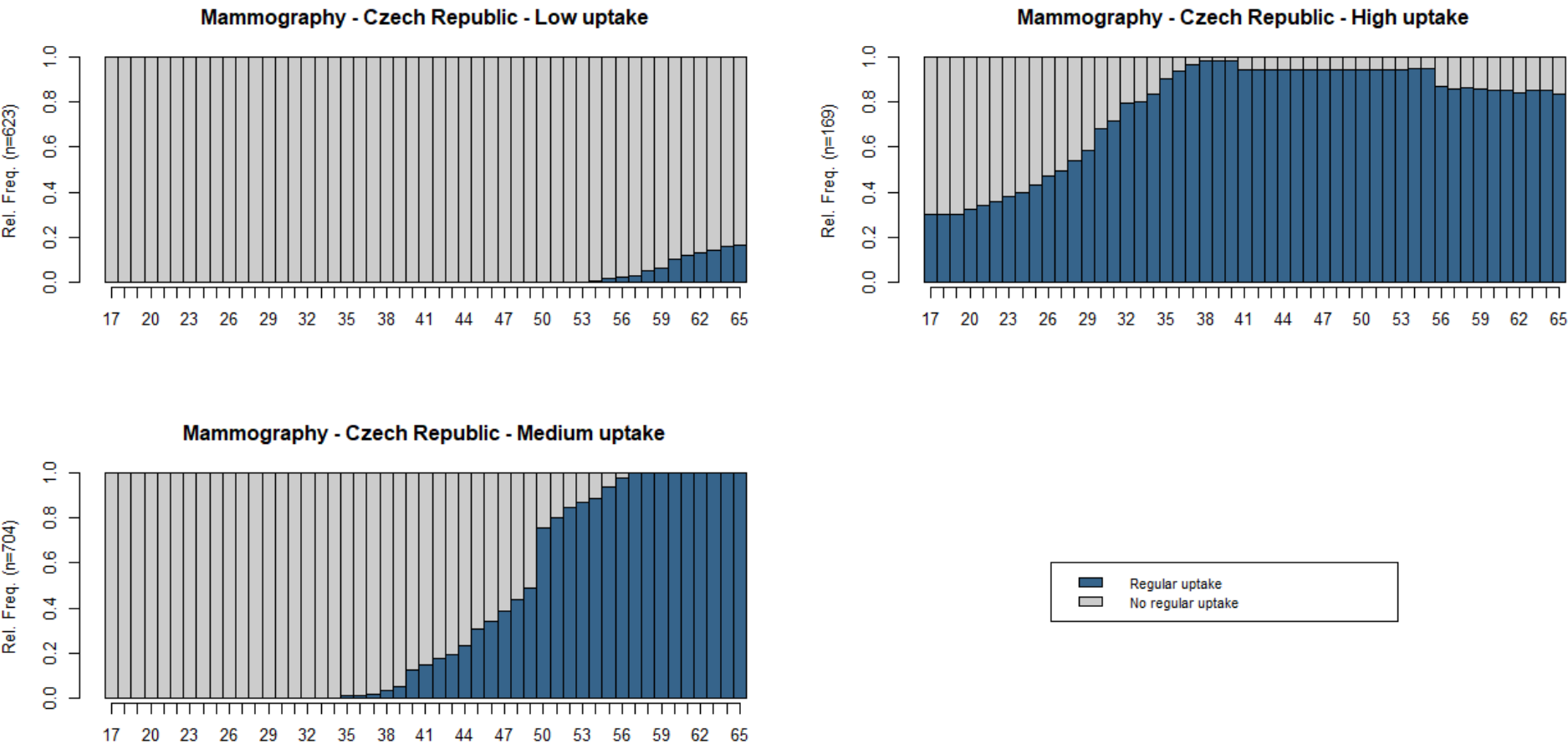


Figure S24 Routine healthcare uptake clusters – Denmark – Blood pressure

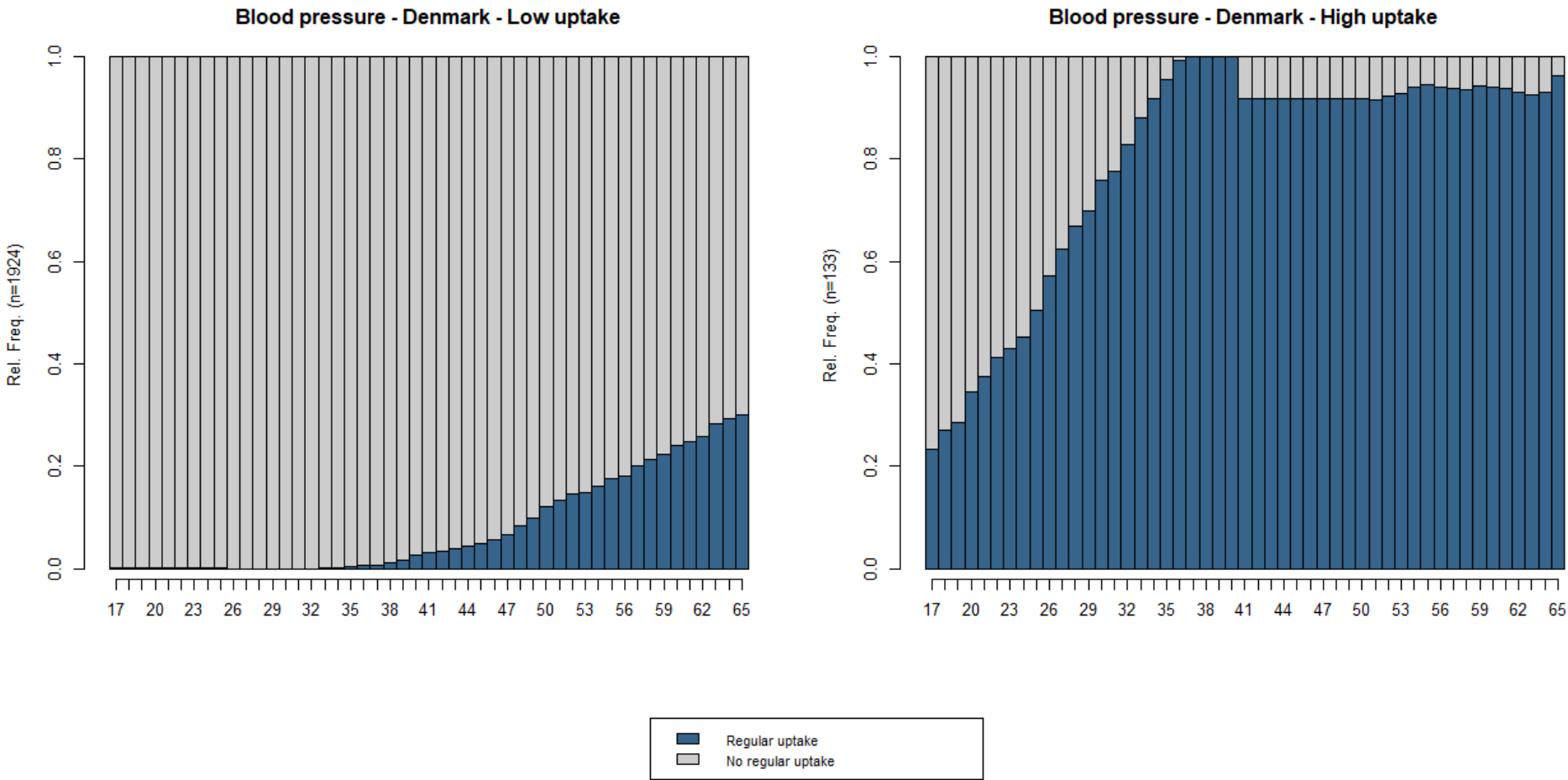


Figure S25 Routine healthcare uptake clusters – Denmark – Blood test

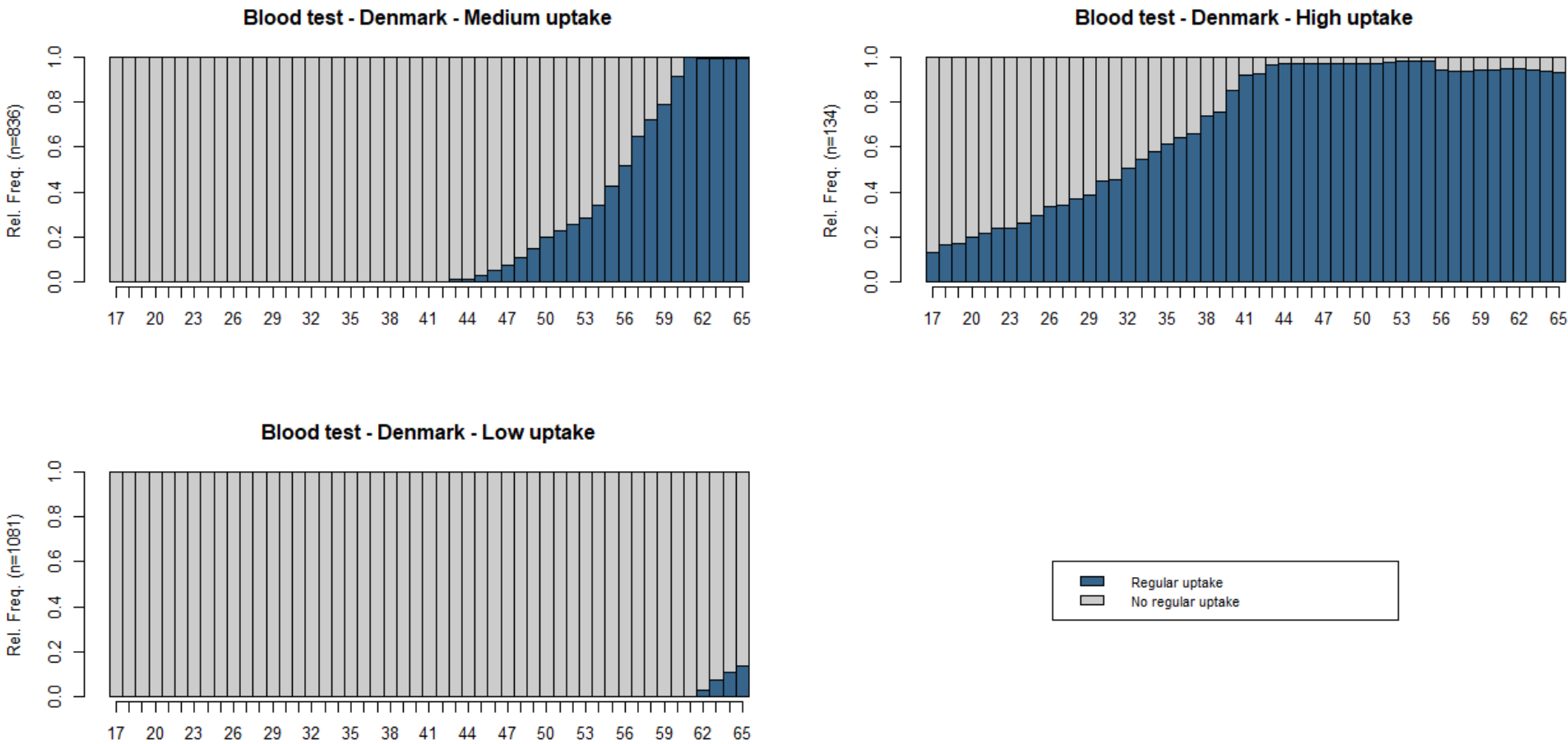


Figure S26 Routine healthcare uptake clusters – Denmark – Vision

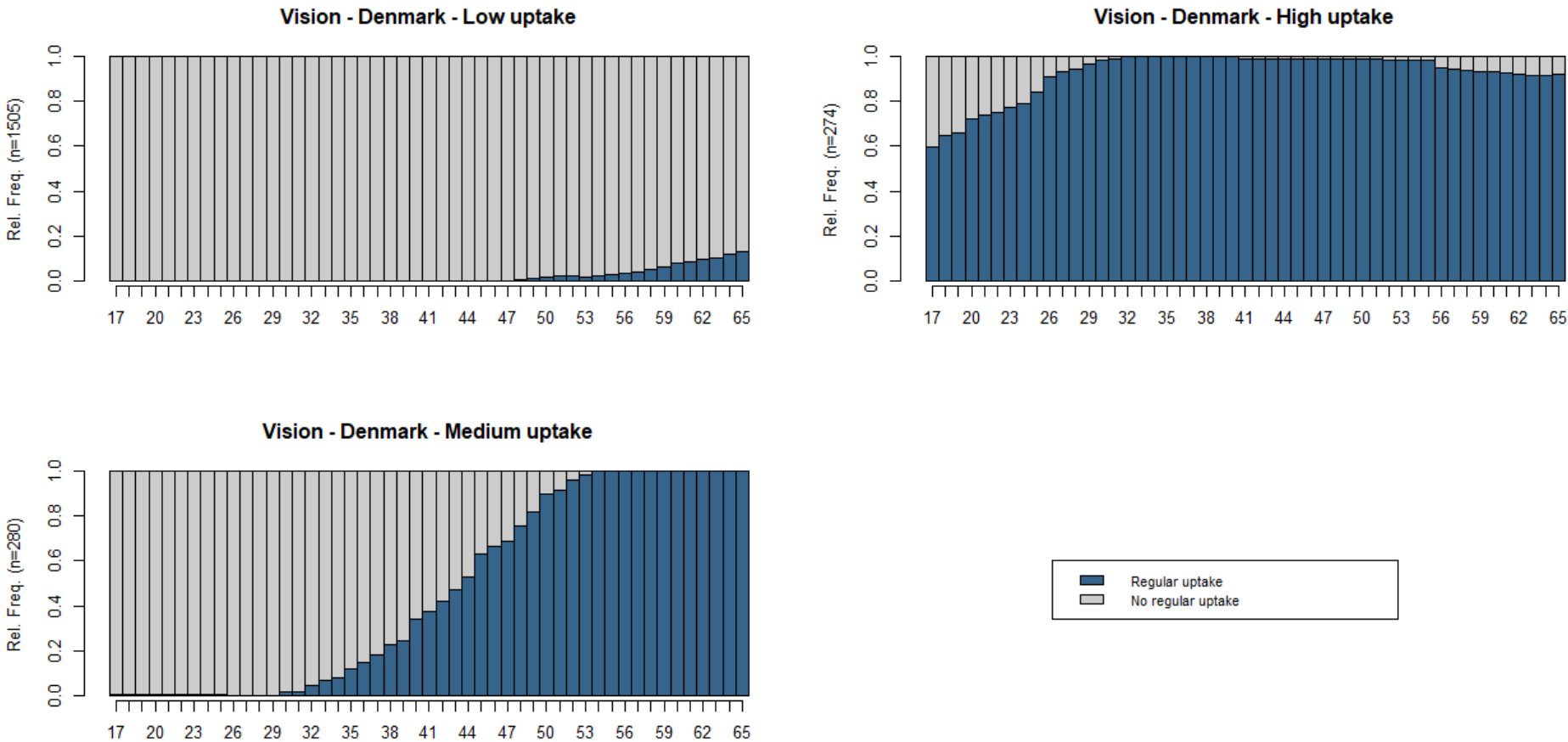


Figure S27 Routine healthcare uptake clusters – Denmark – Gynecology

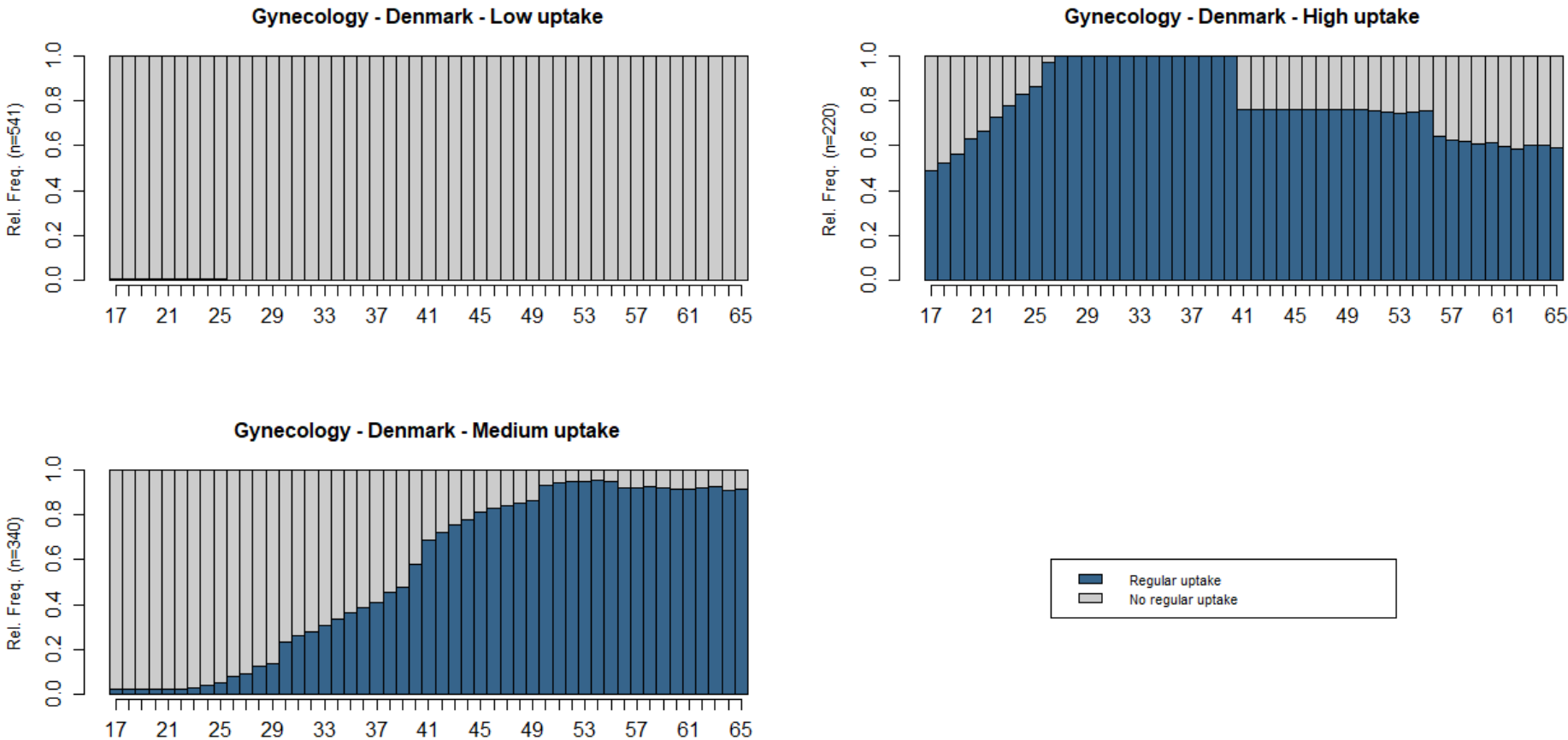


Figure S28 Routine healthcare uptake clusters – Denmark – Mammography

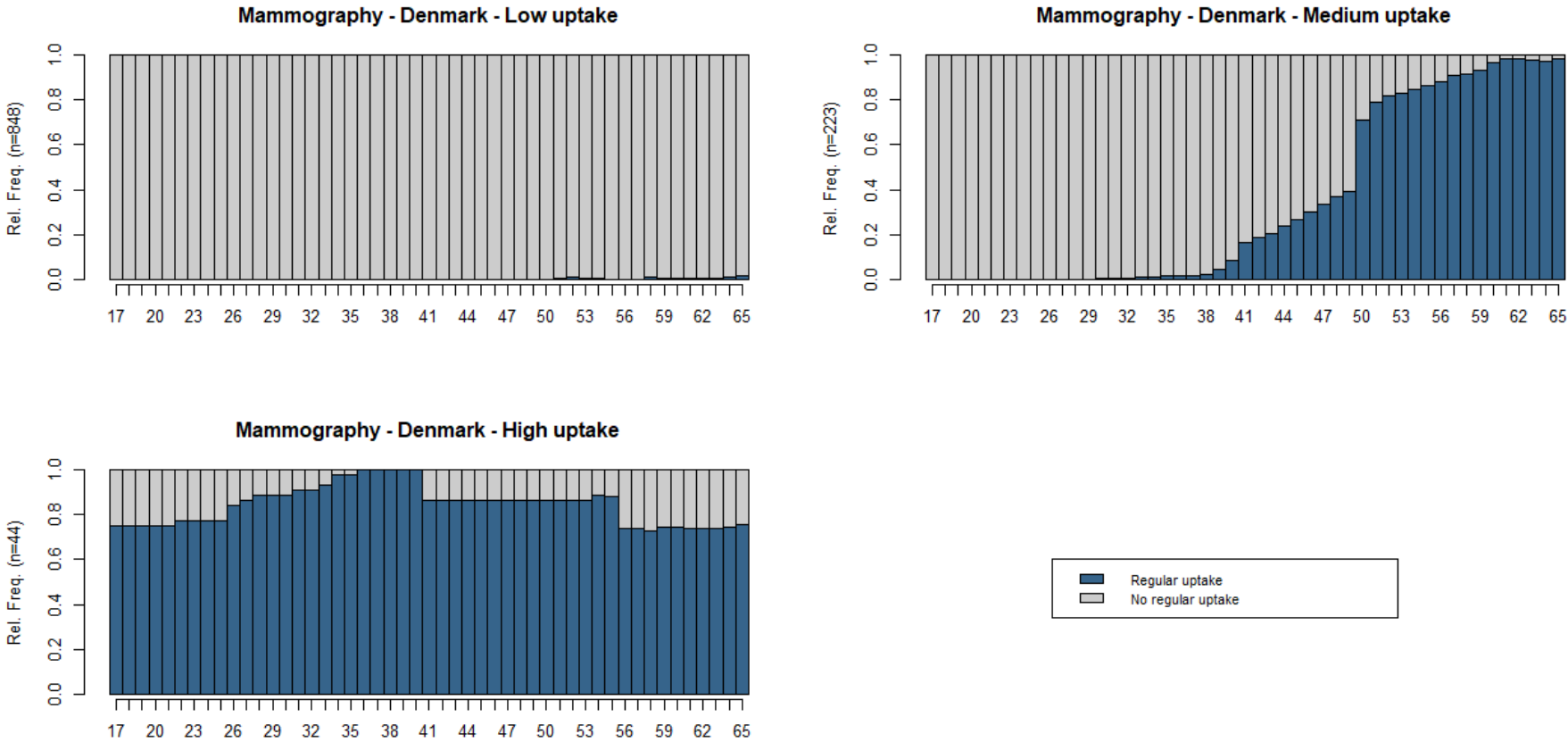


Figure S29 Routine healthcare uptake clusters – France – Blood pressure

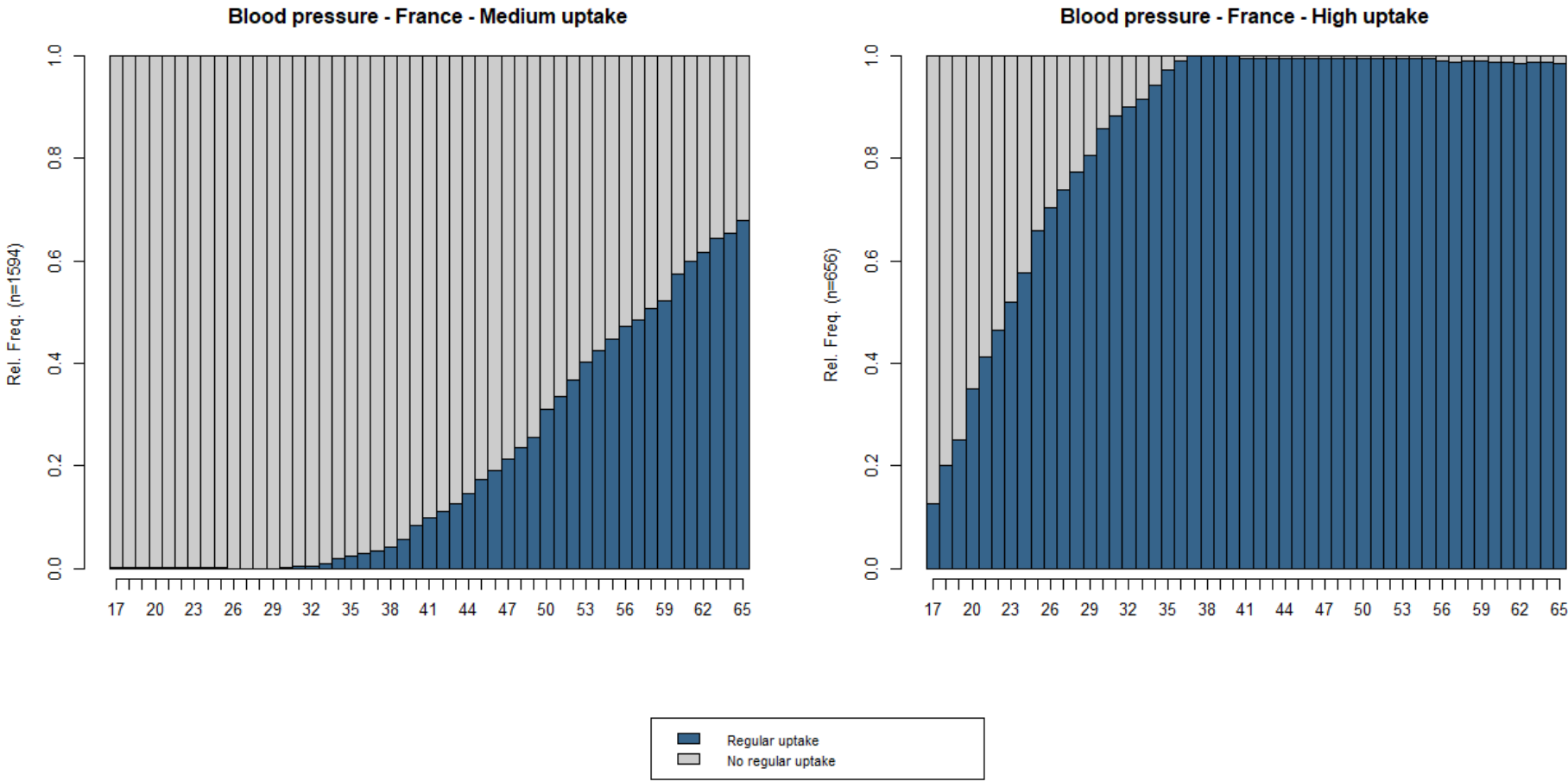


Figure S30 Routine healthcare uptake clusters – France – Blood test

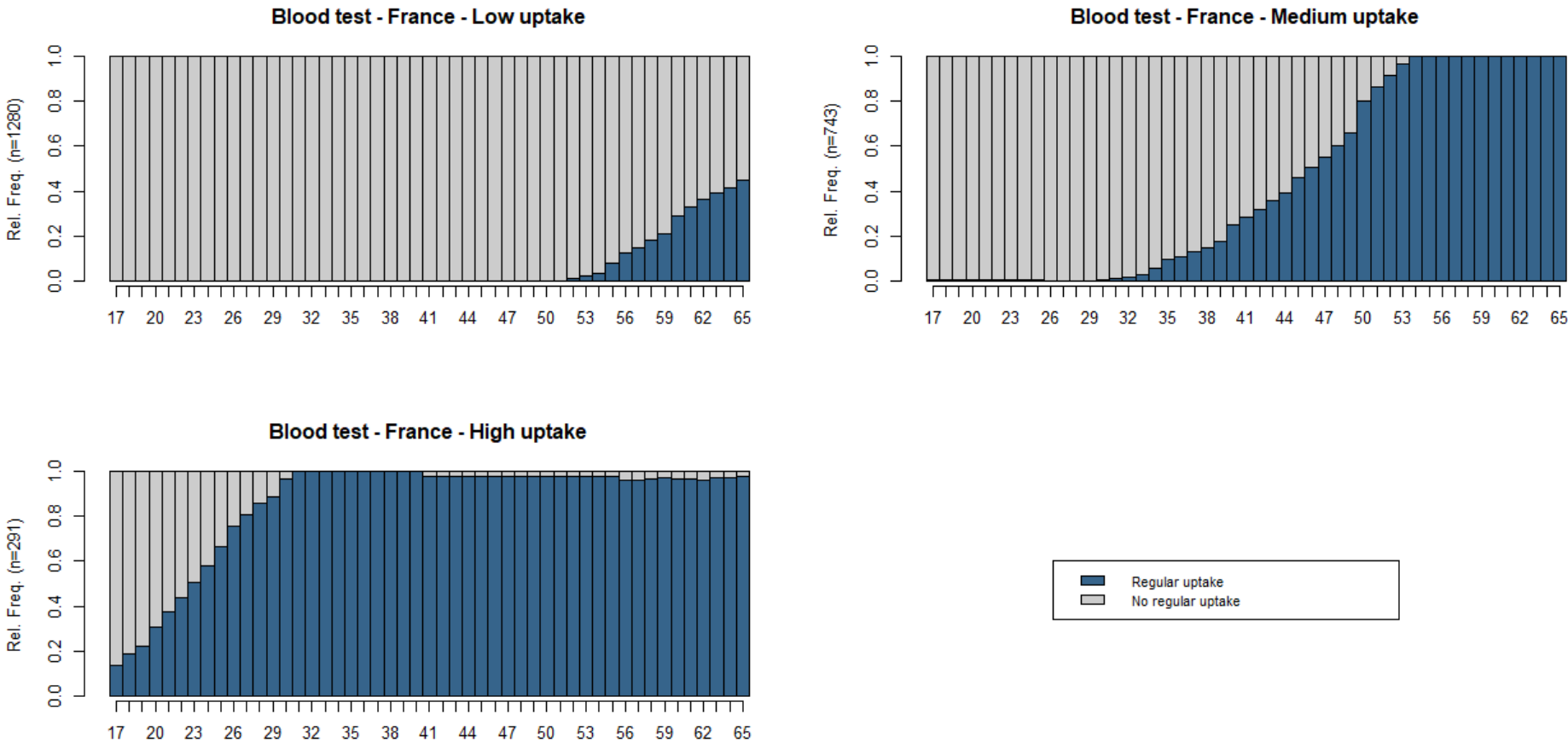


Figure S31 Routine healthcare uptake clusters – France – Vision

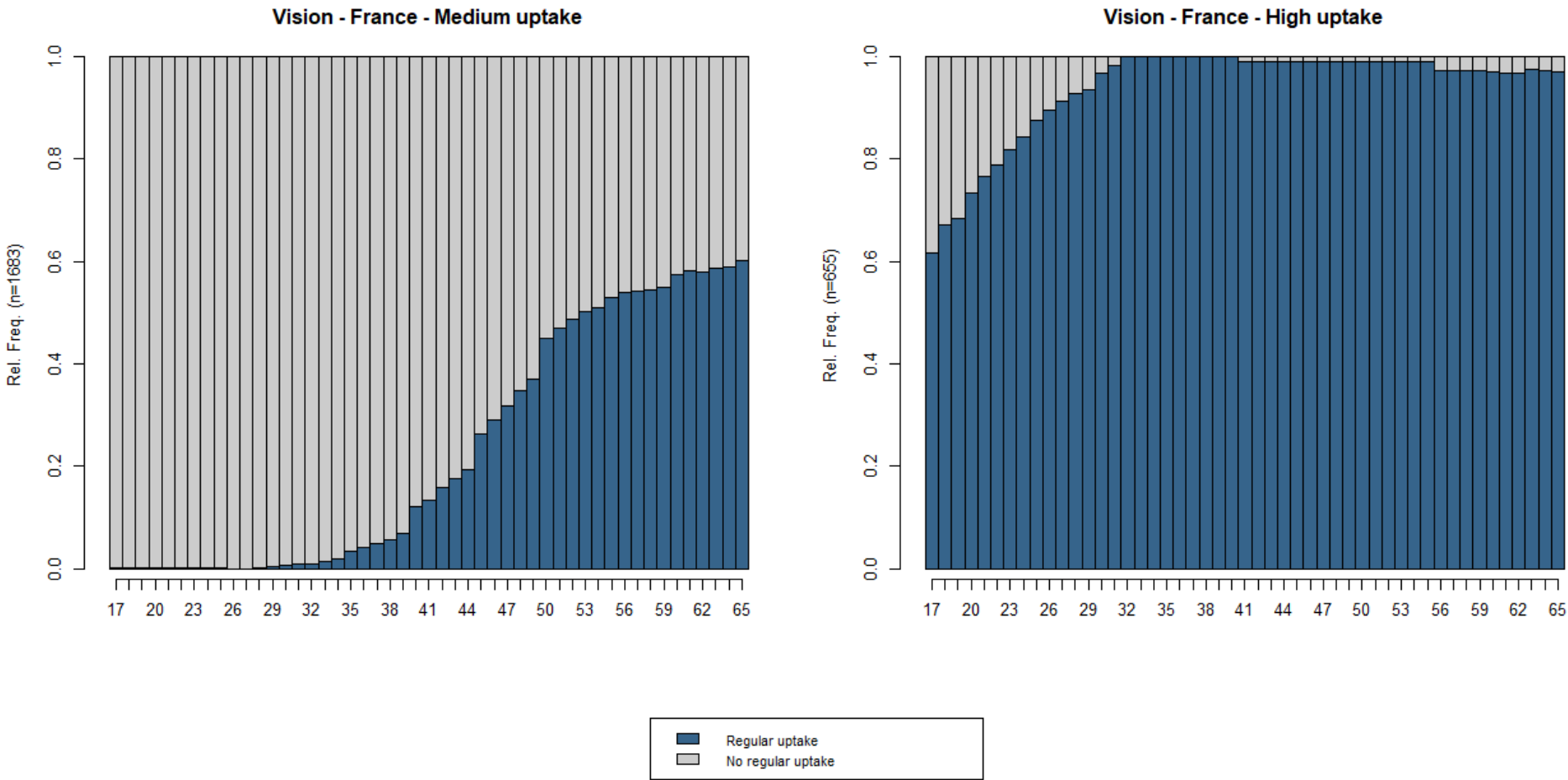


Figure S32 Routine healthcare uptake clusters – France – Gynecology

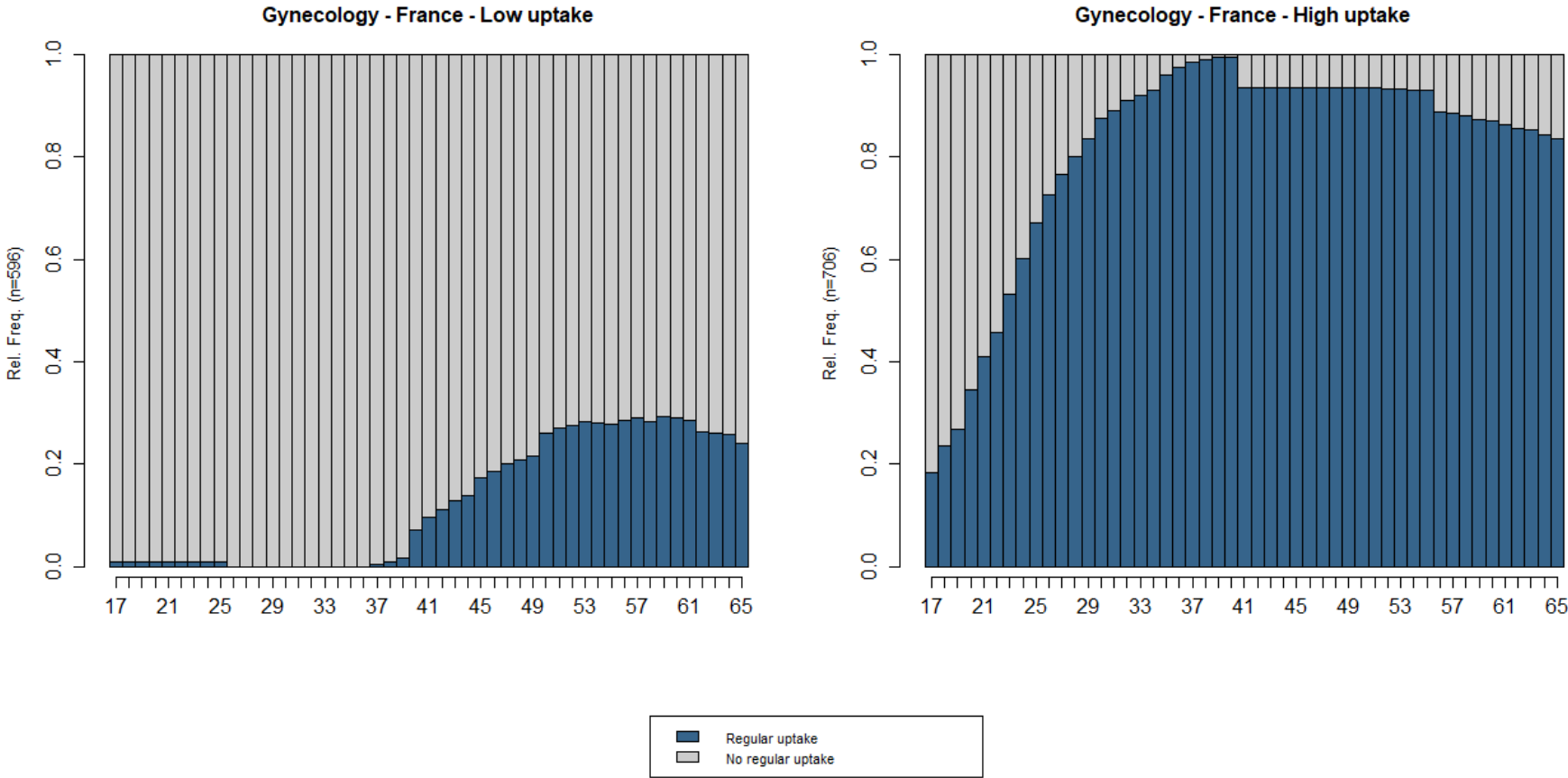


Figure S33 Routine healthcare uptake clusters – France – Mammography

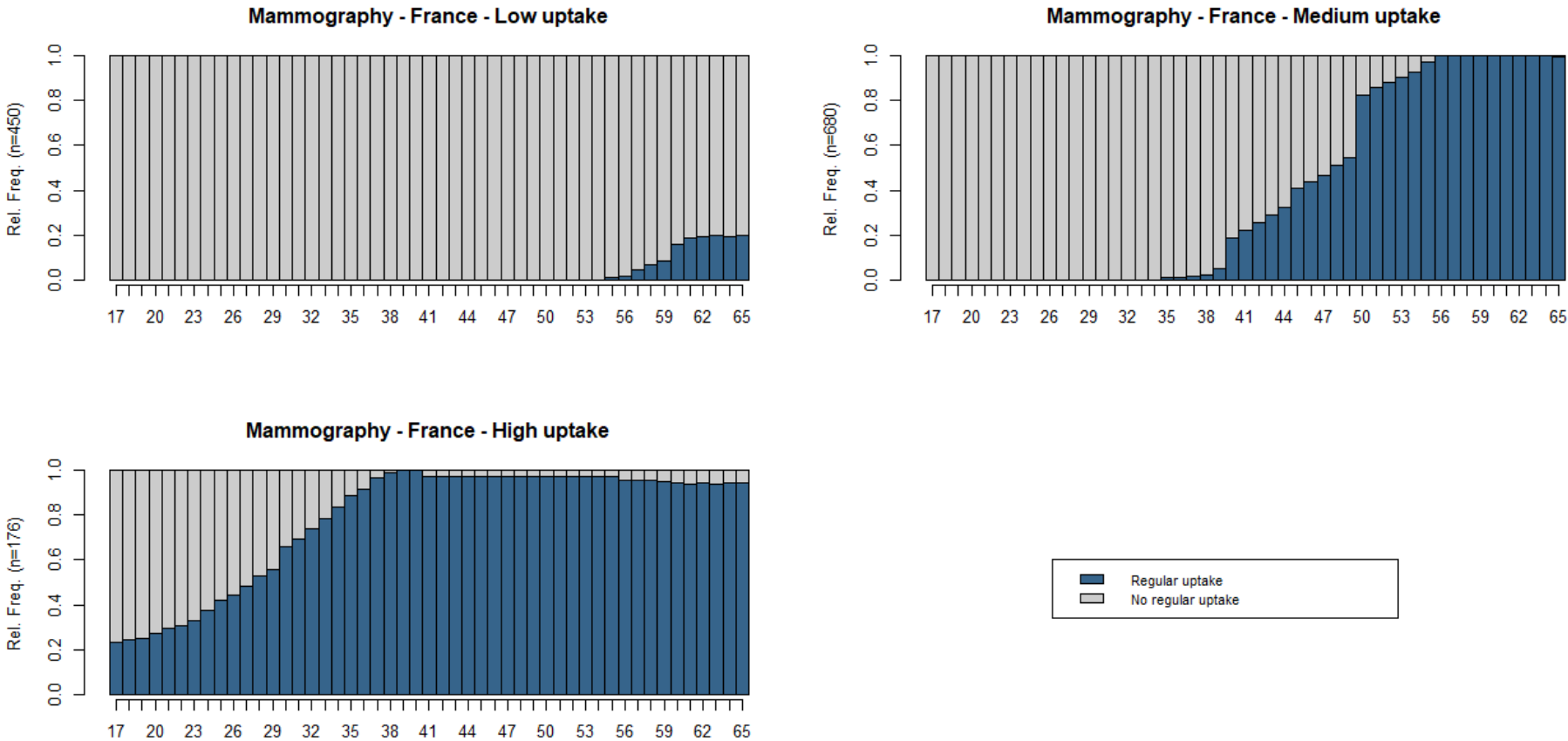


Figure S34 Routine healthcare uptake clusters – Germany – Blood pressure

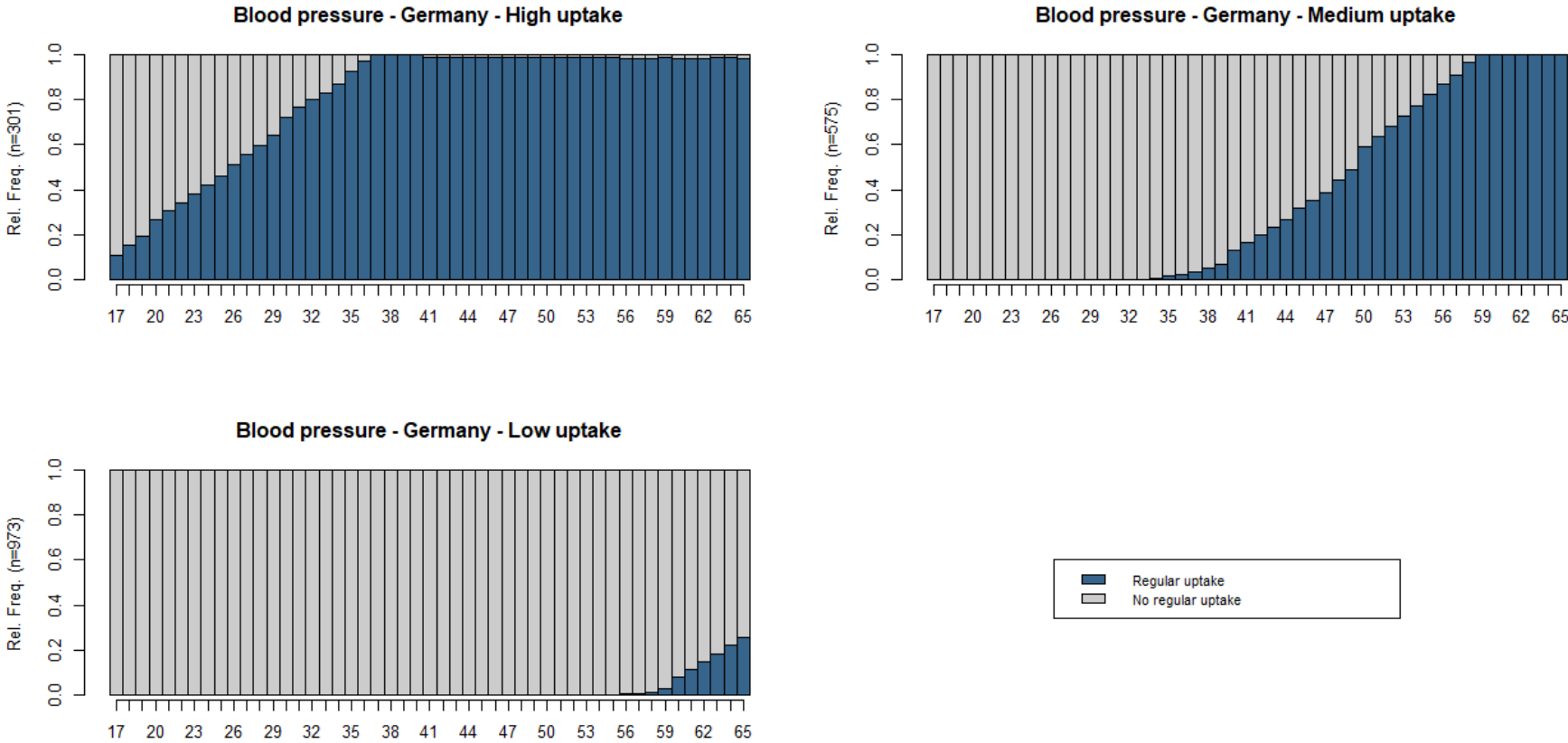


Figure S35 Routine healthcare uptake clusters – Germany – Blood test

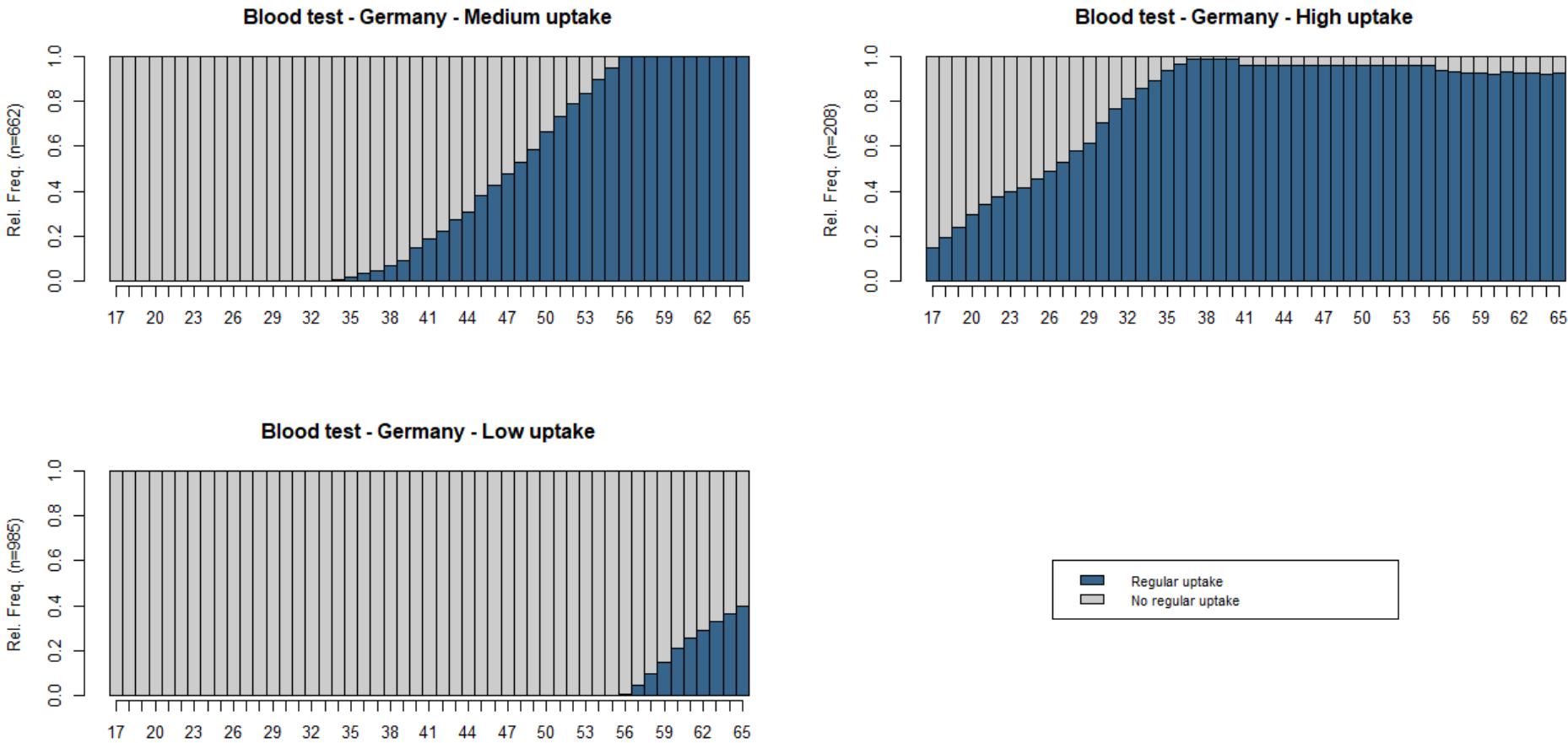


Figure S36 Routine healthcare uptake clusters – Germany – Vision

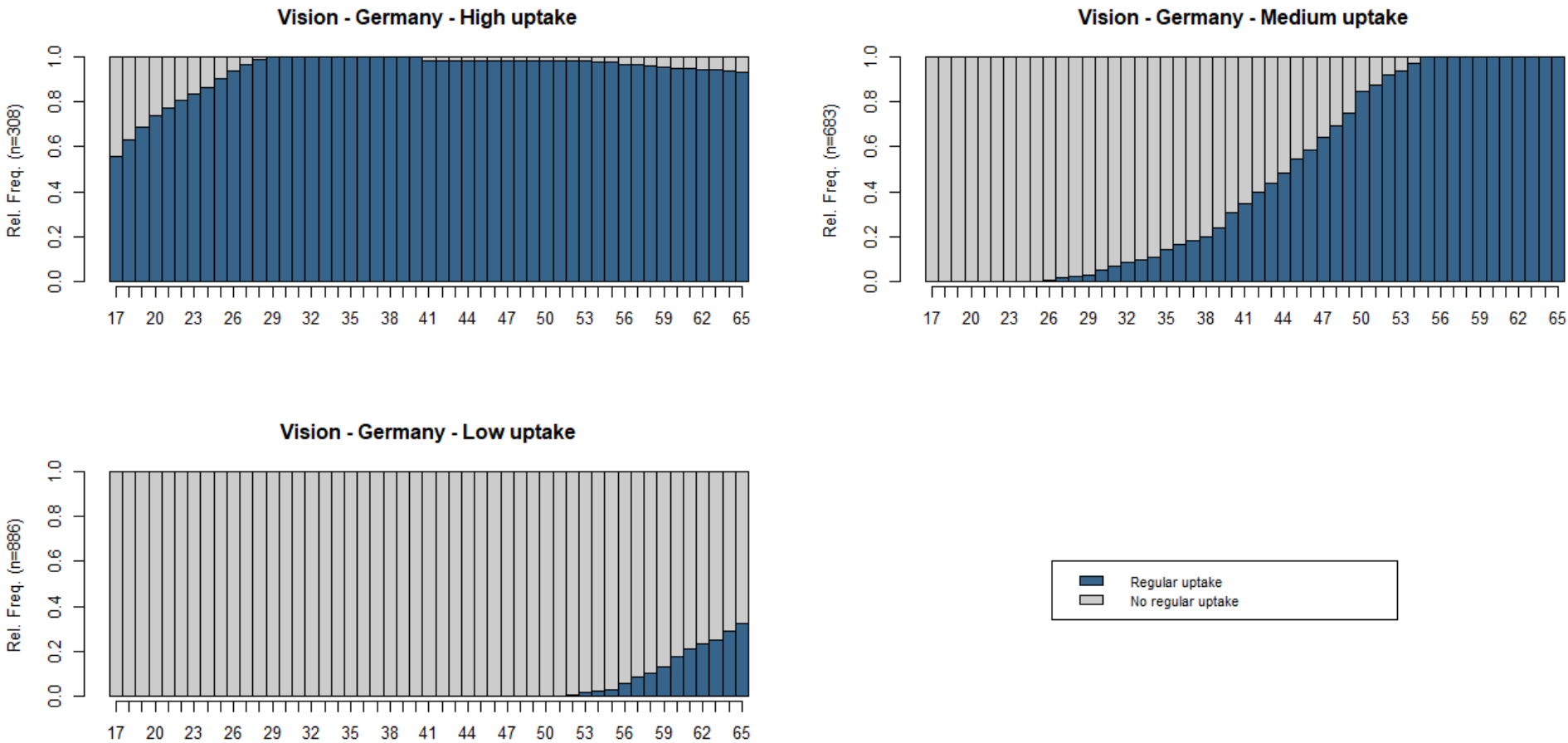


Figure S37 Routine healthcare uptake clusters – Germany – Gynecology

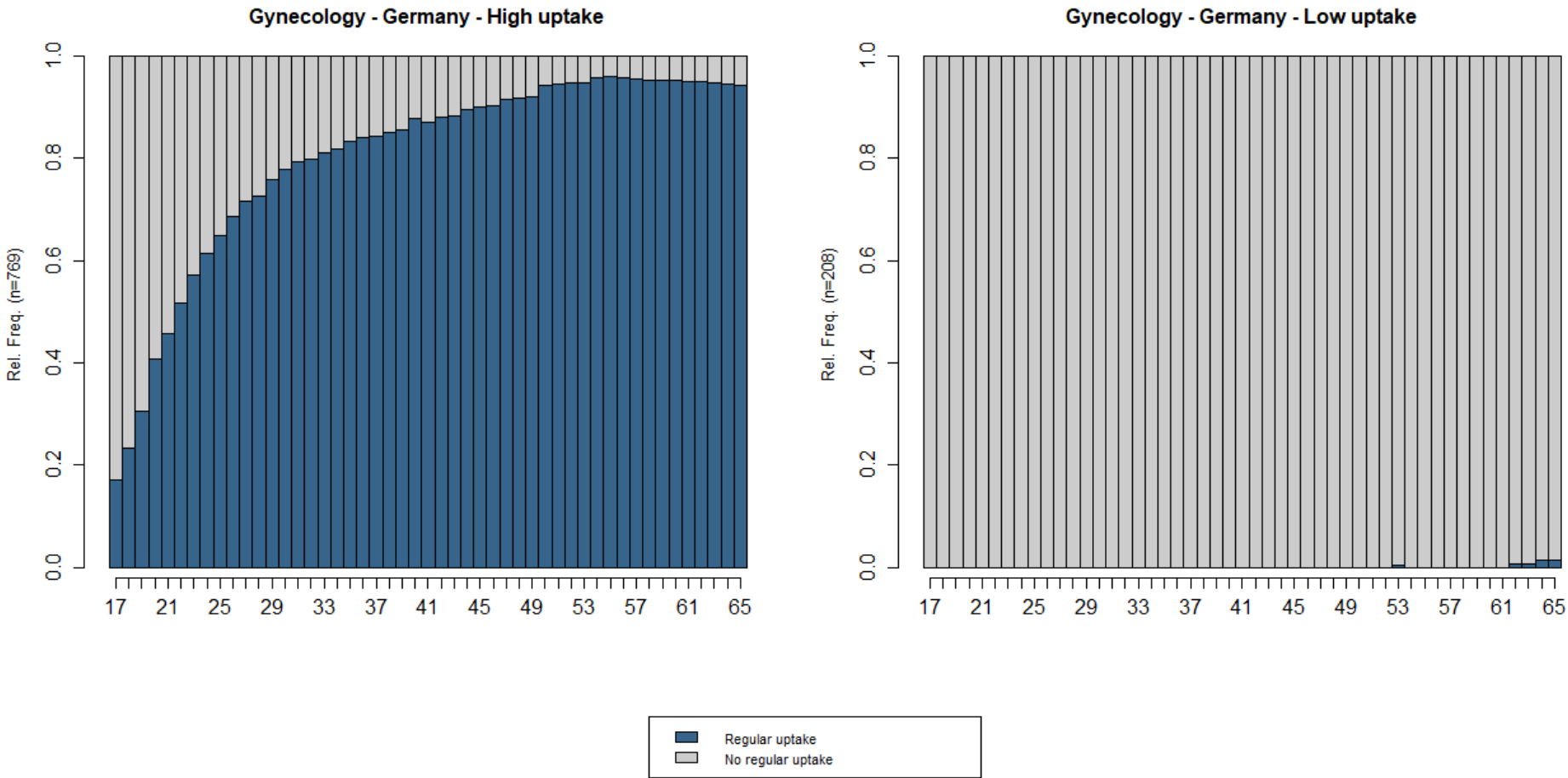


Figure S38 Routine healthcare uptake clusters – Germany – Mammography

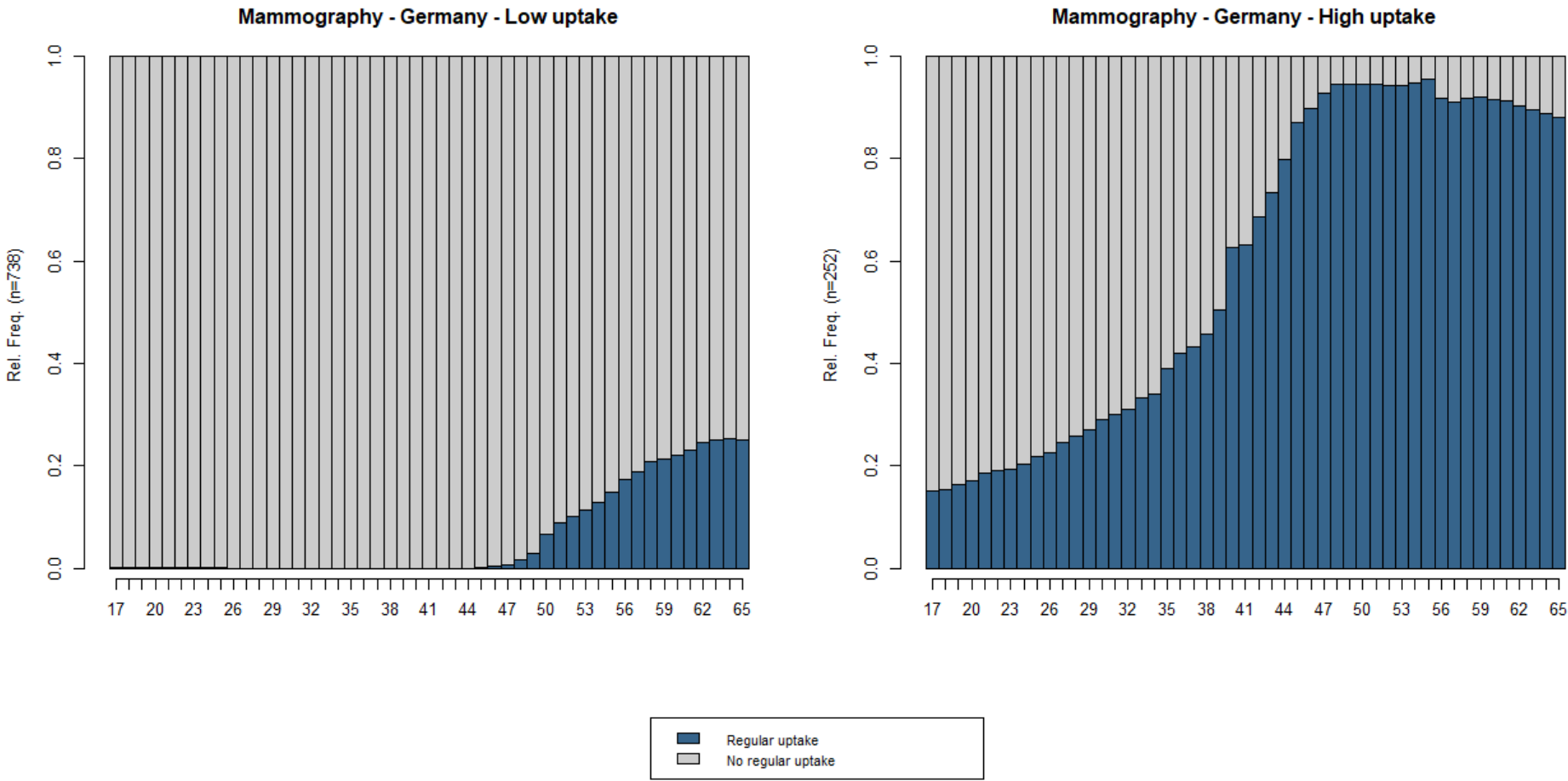


Figure S39 Routine healthcare uptake clusters – Greece – Blood pressure

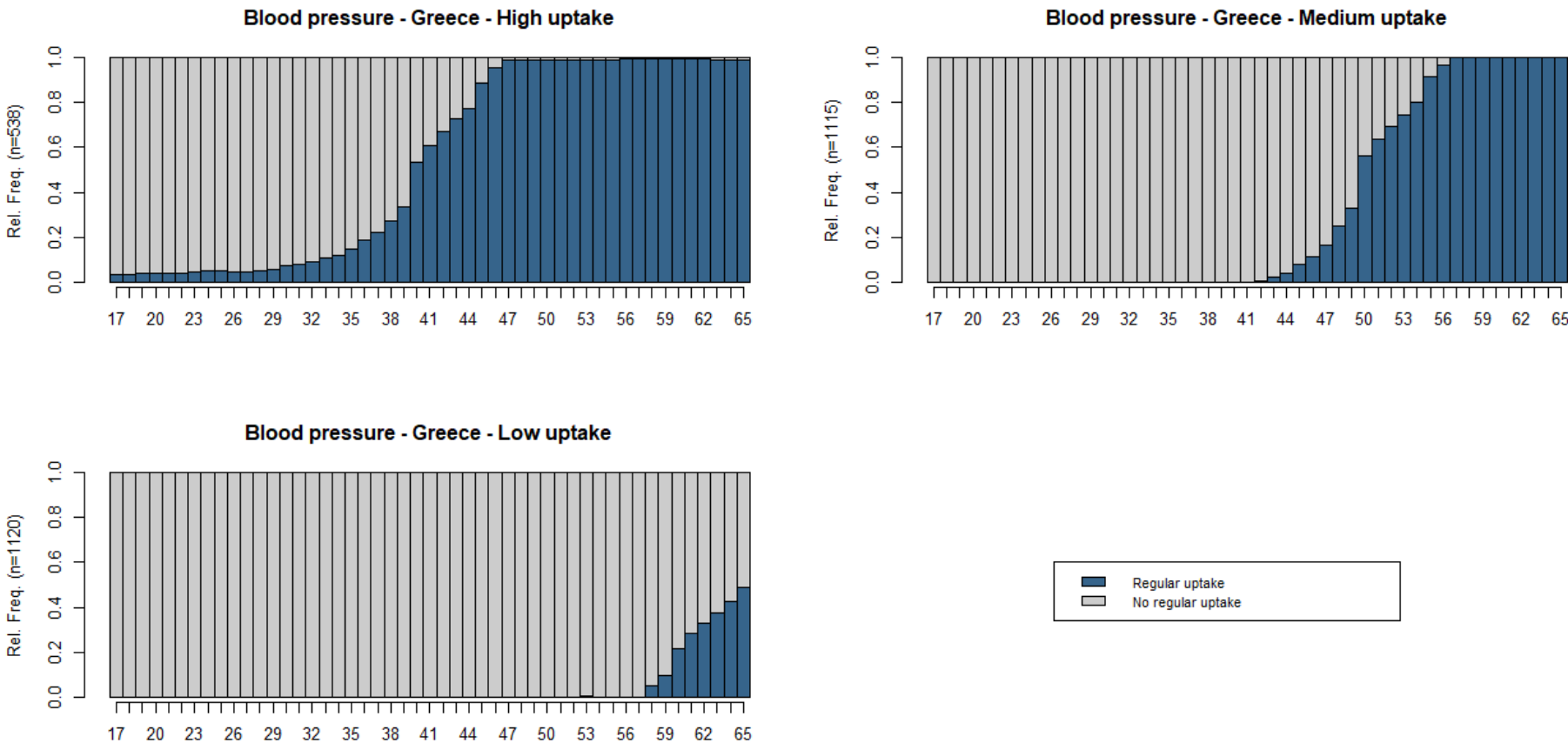


Figure S40 Routine healthcare uptake clusters – Greece – Blood test

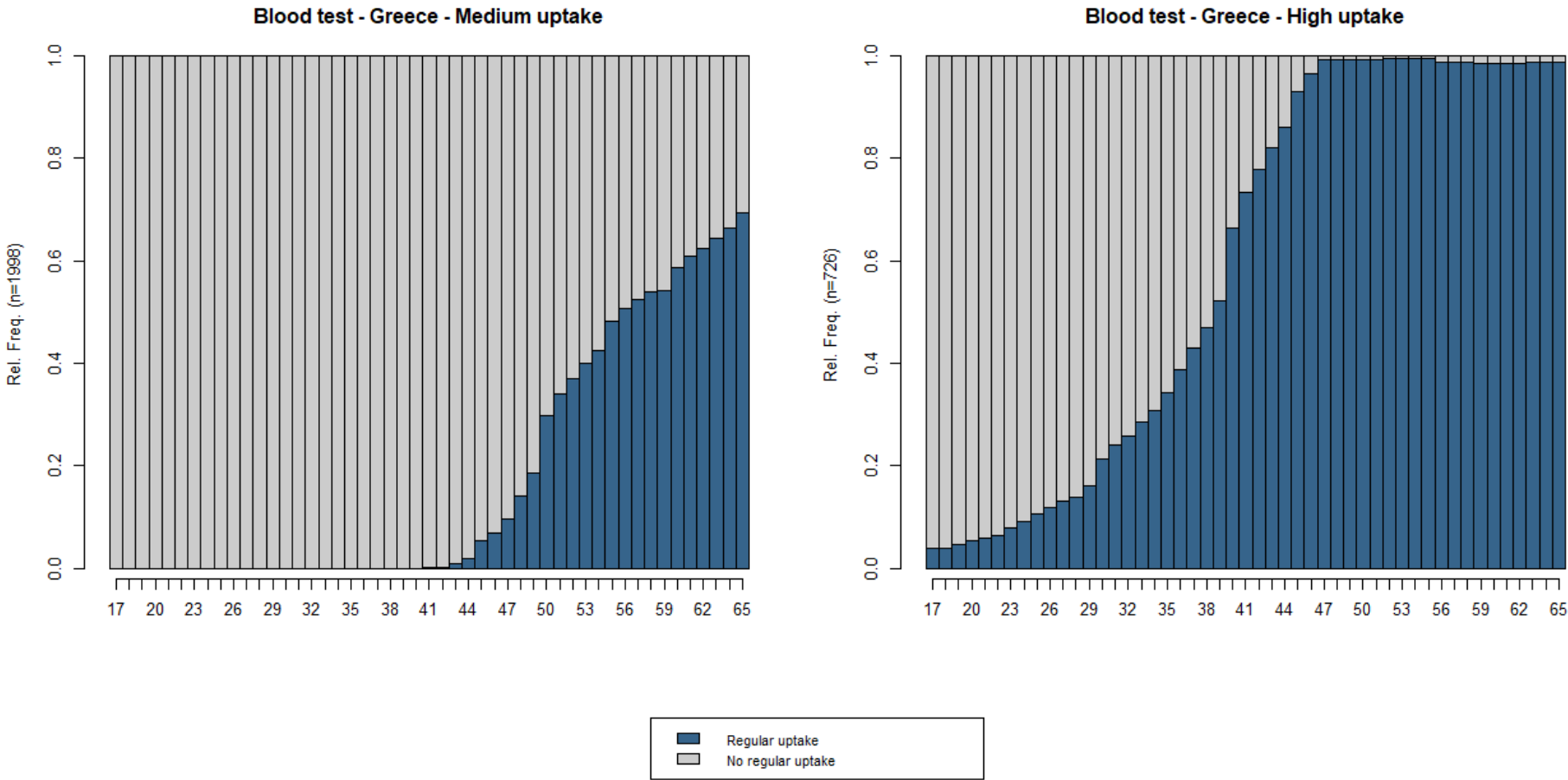


Figure S41 Routine healthcare uptake clusters – Greece – Vision

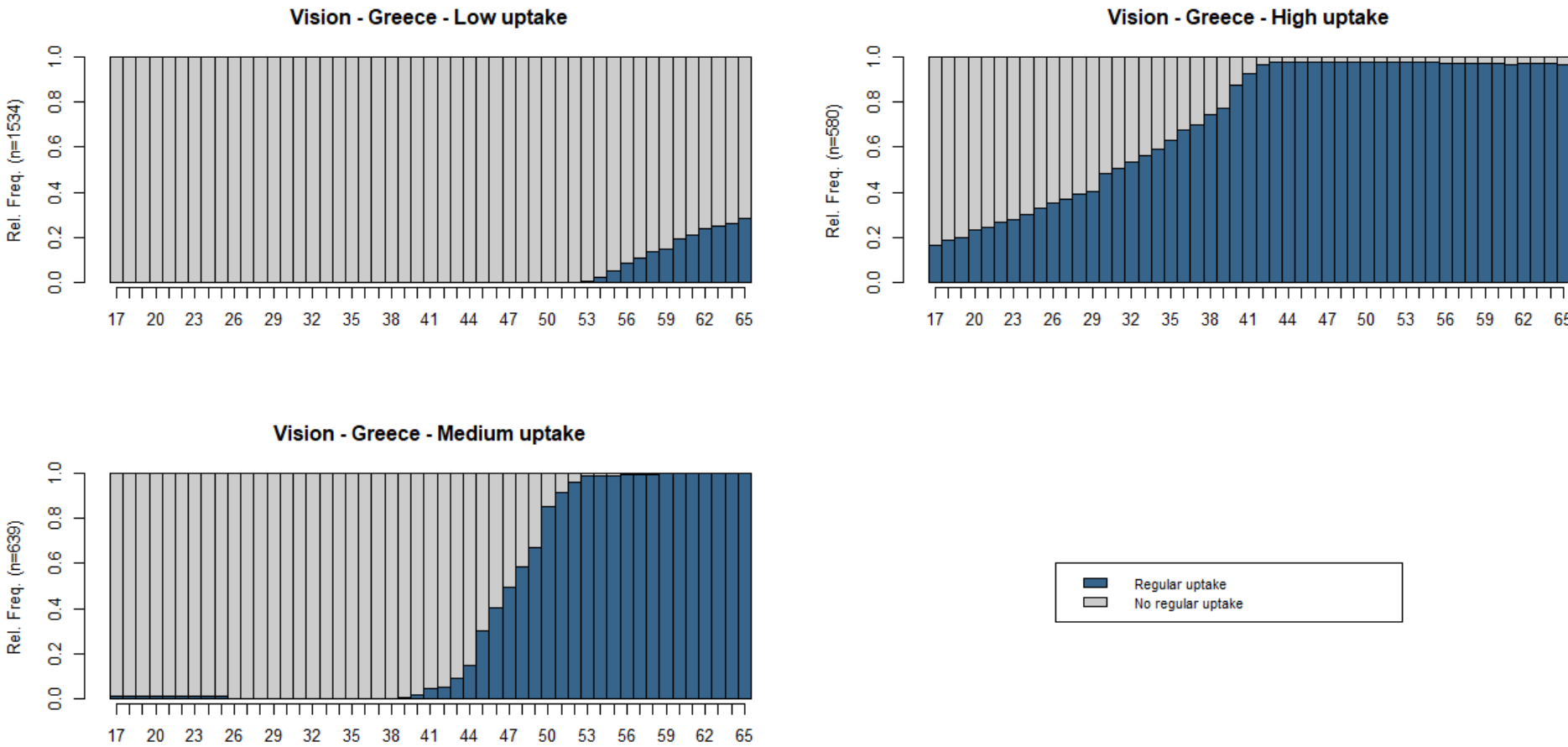


Figure S42 Routine healthcare uptake clusters – Greece – Gynecology

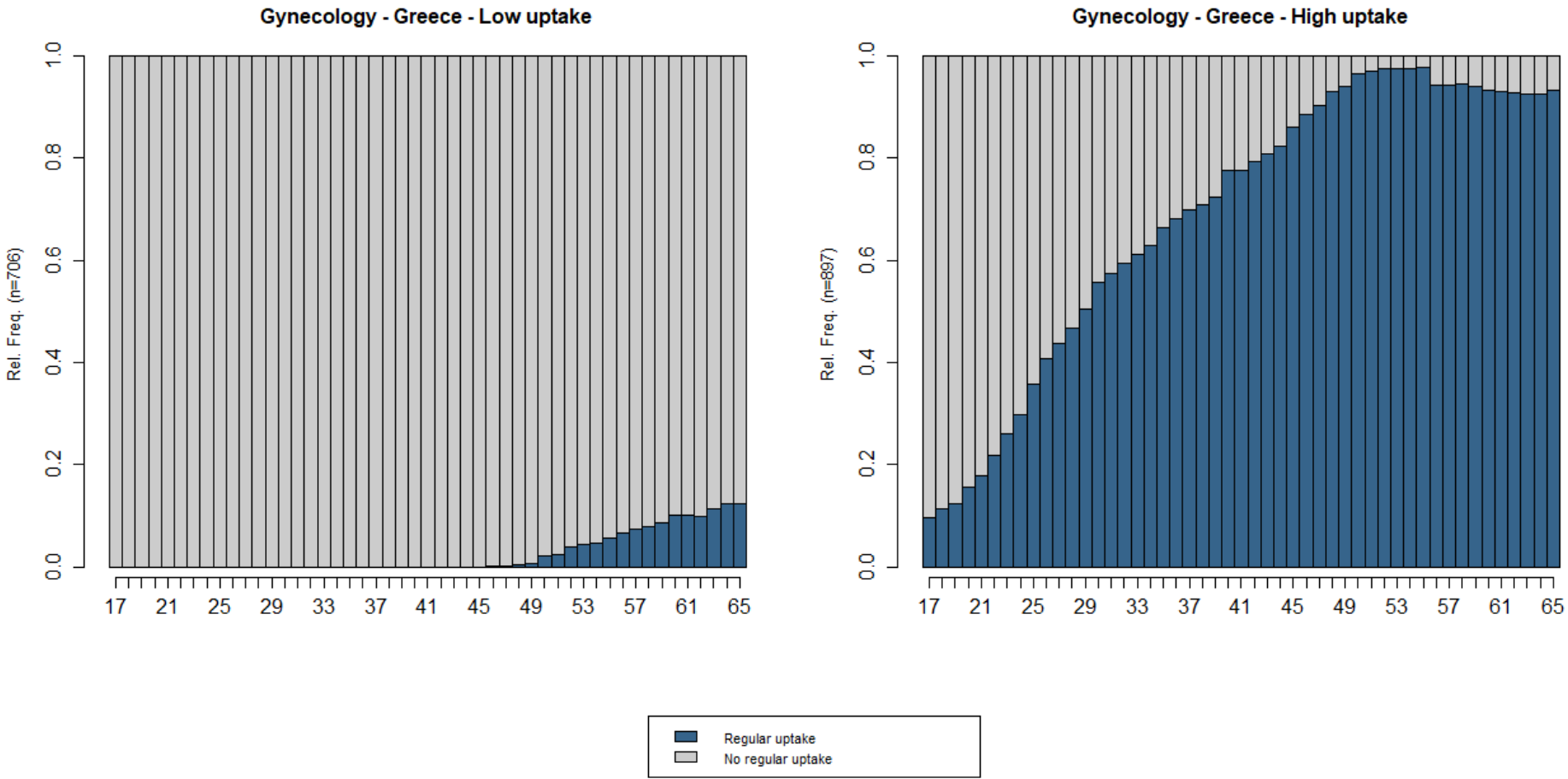


Figure S43 Routine healthcare uptake clusters – Greece – Mammography

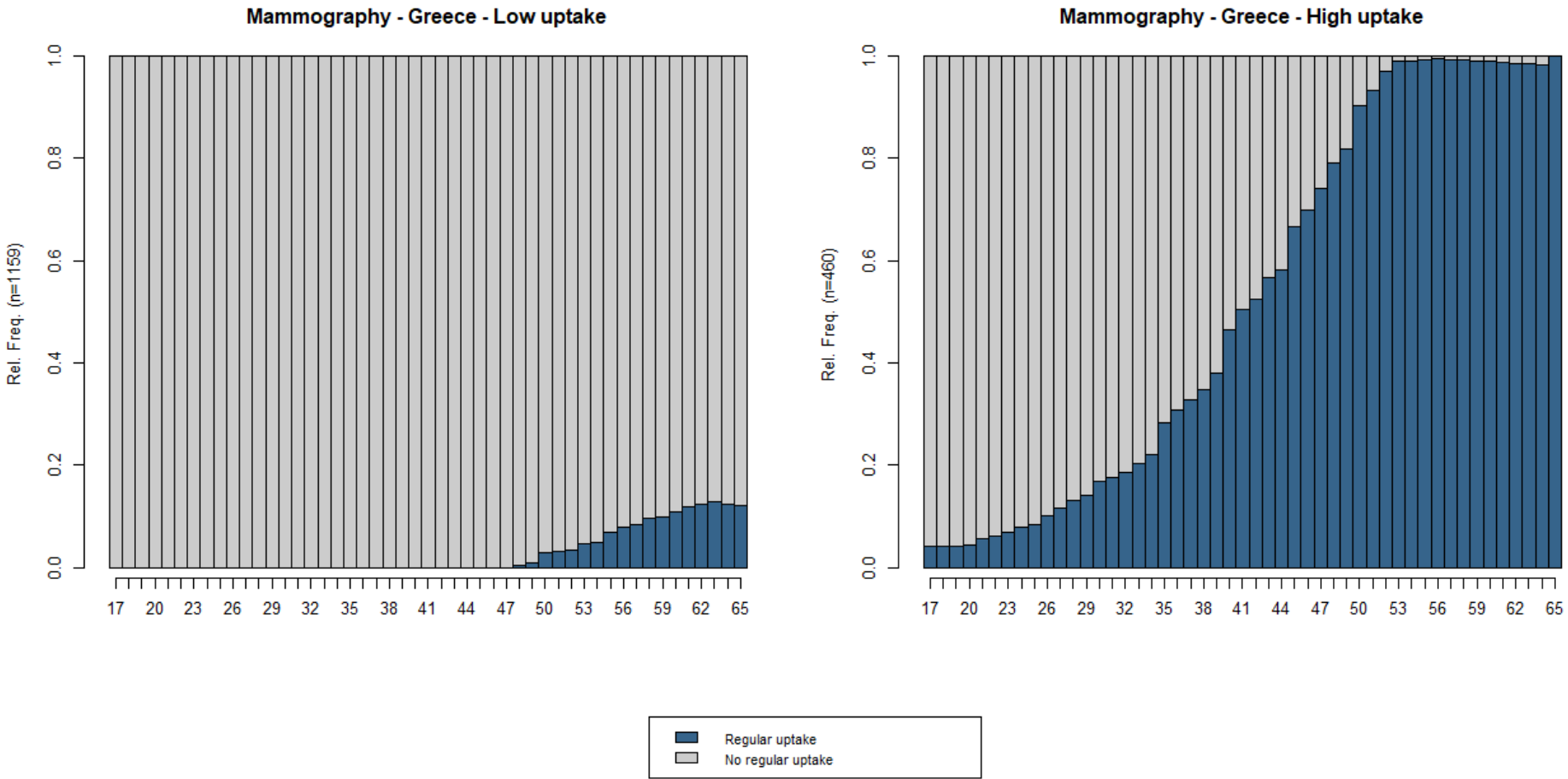


Figure S44 Routine healthcare uptake clusters – Ireland – Blood pressure

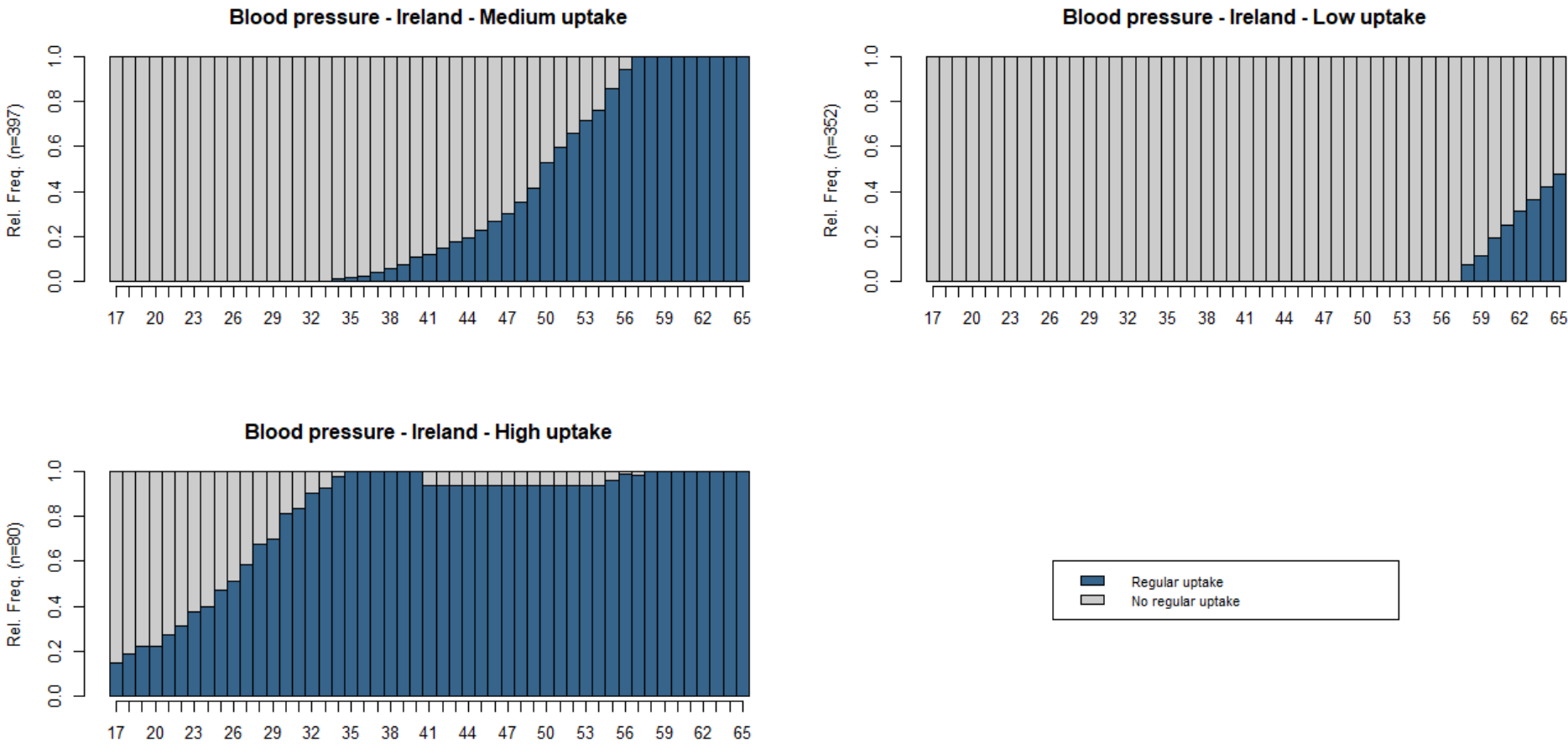


Figure S45 Routine healthcare uptake clusters – Ireland – Blood test

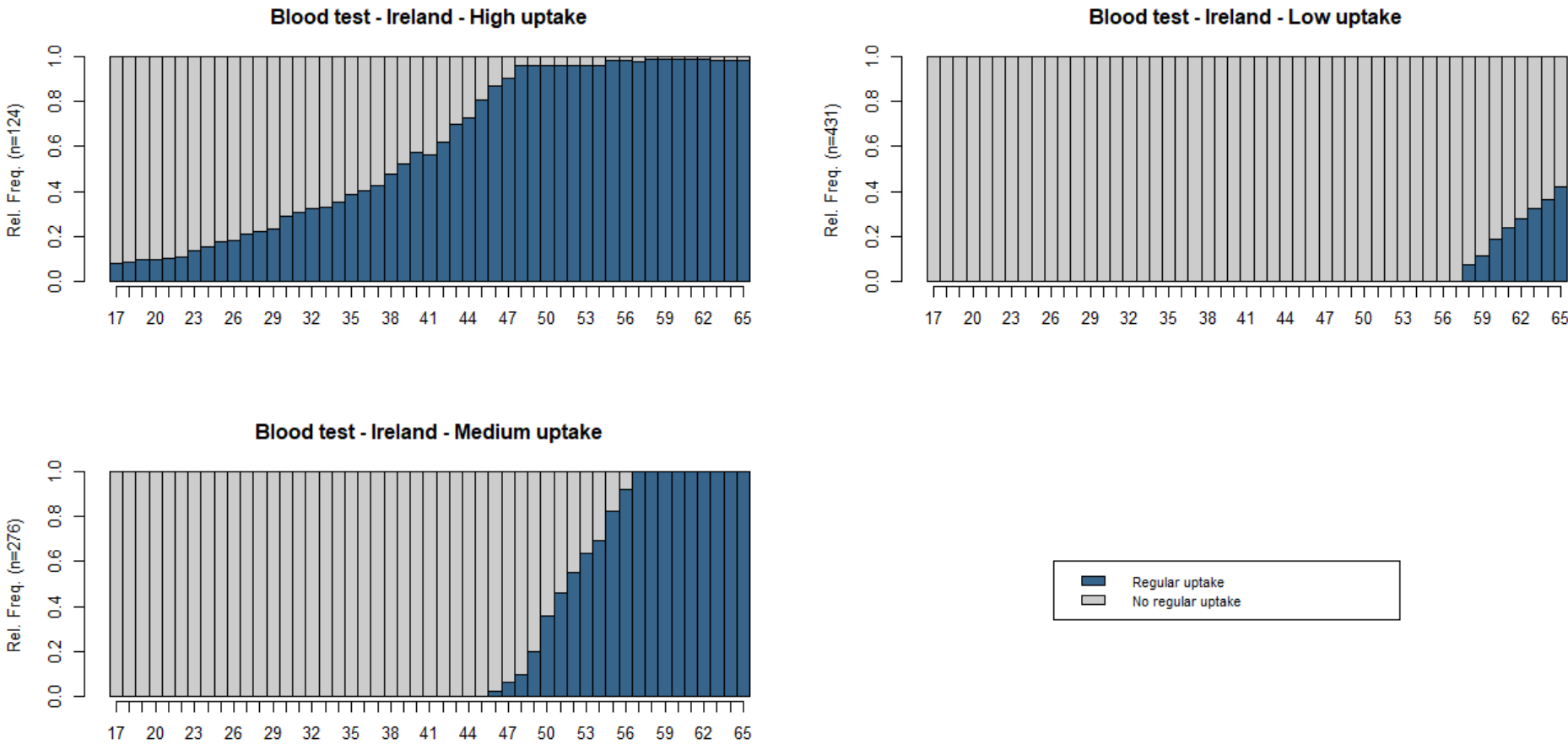


Figure S46 Routine healthcare uptake clusters – Ireland – Vision

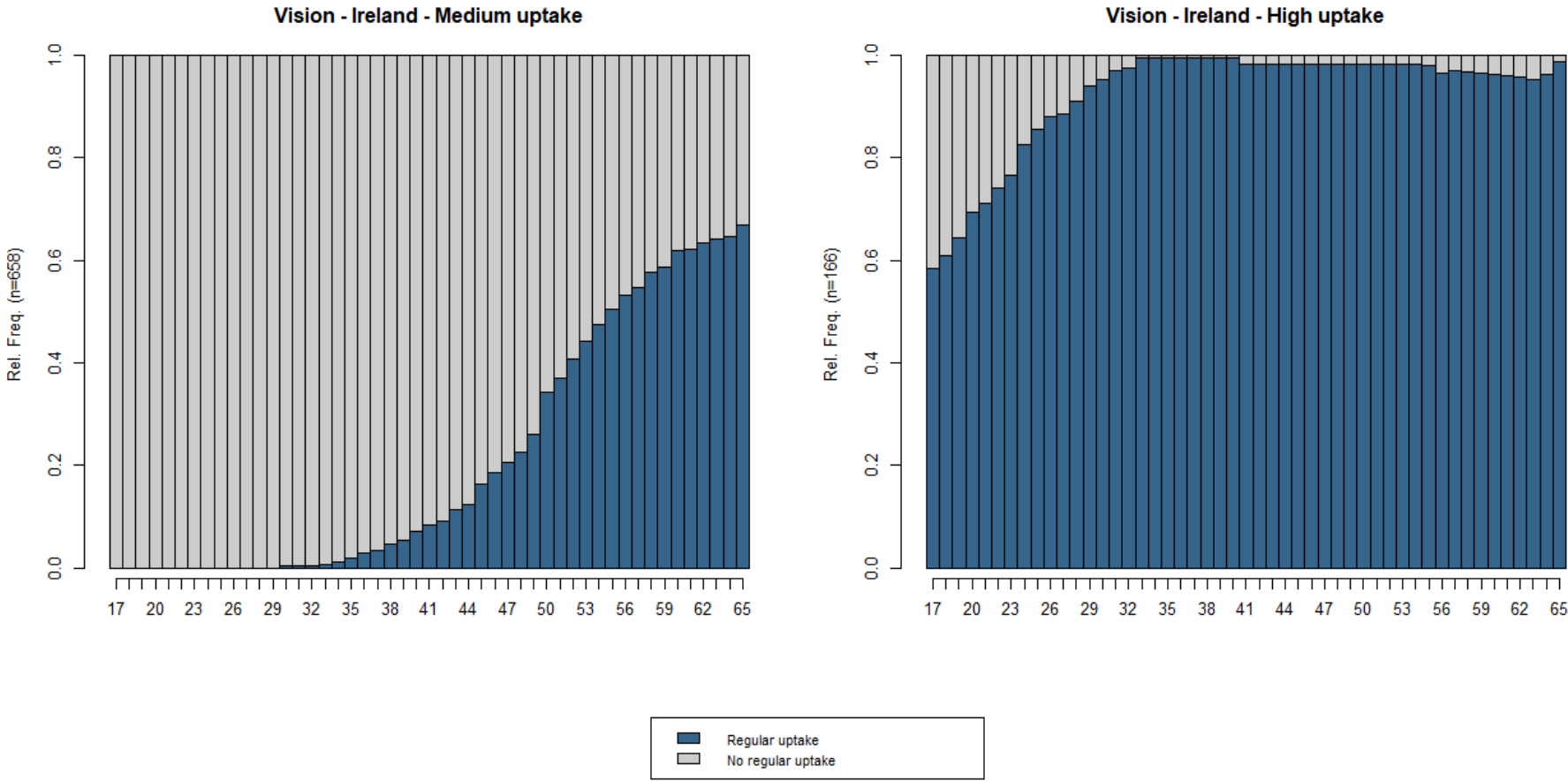


Figure S47 Routine healthcare uptake clusters – Ireland – Gynecology

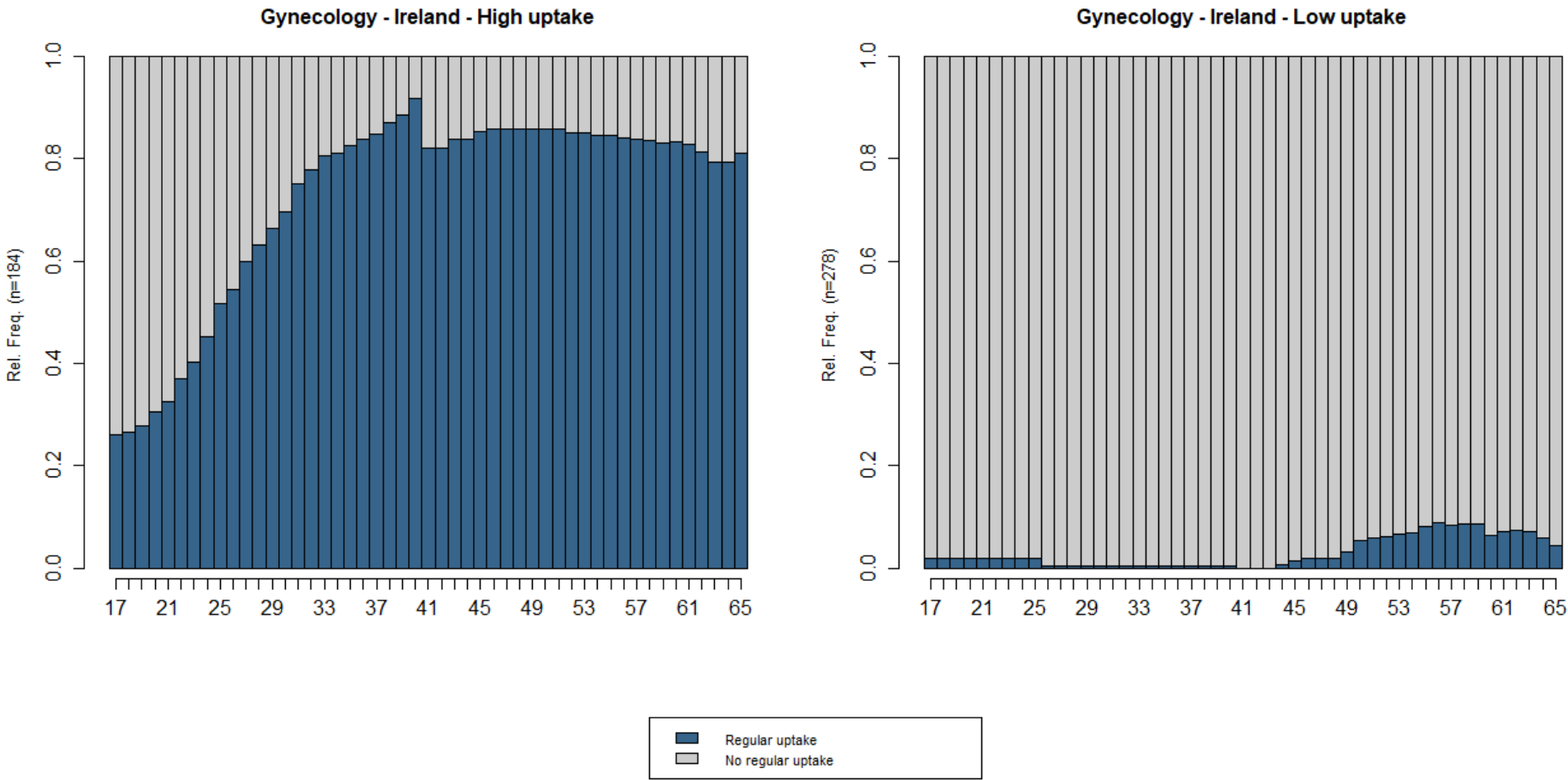


Figure S48 Routine healthcare uptake clusters – Ireland – Mammography

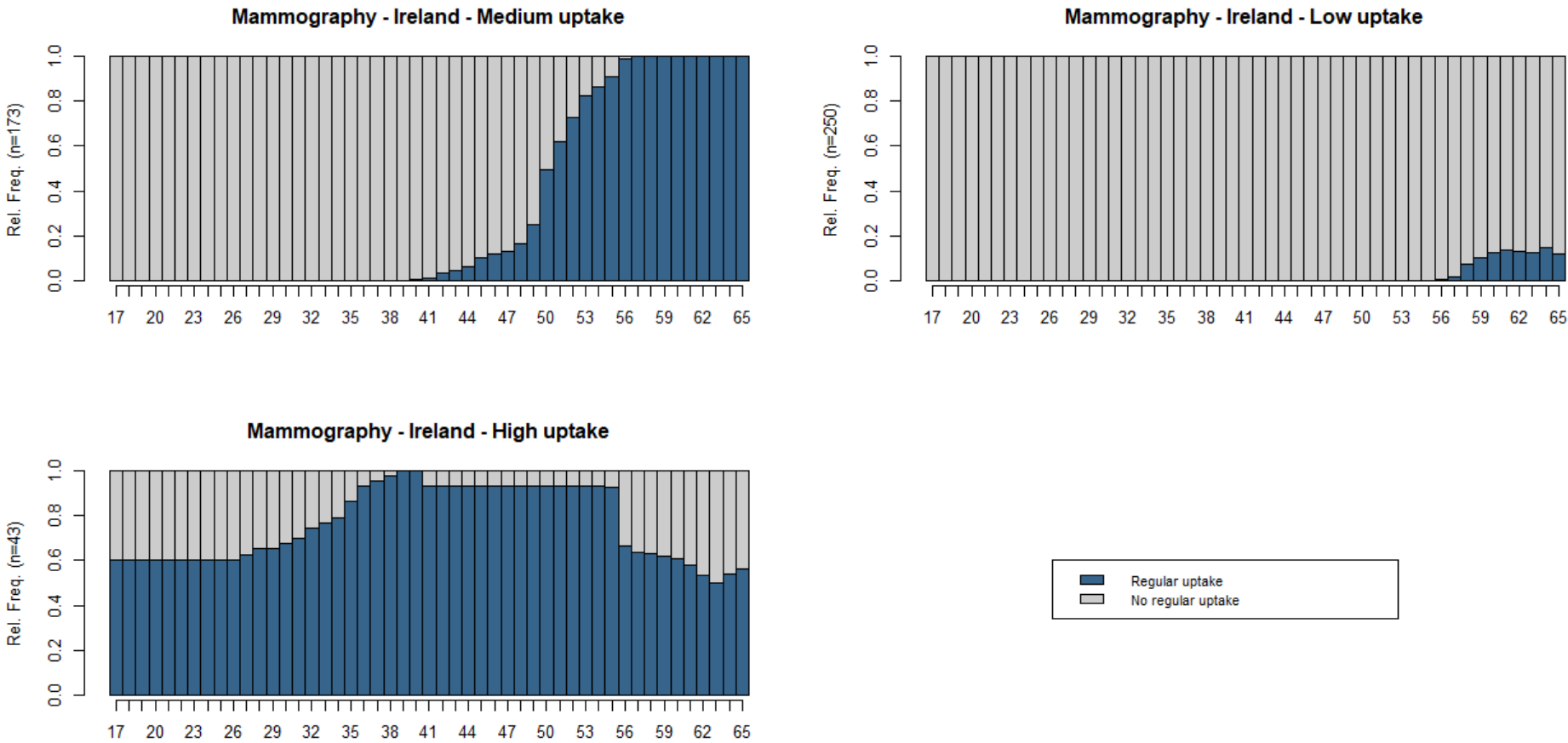


Figure S49 Routine healthcare uptake clusters – Italy – Blood pressure

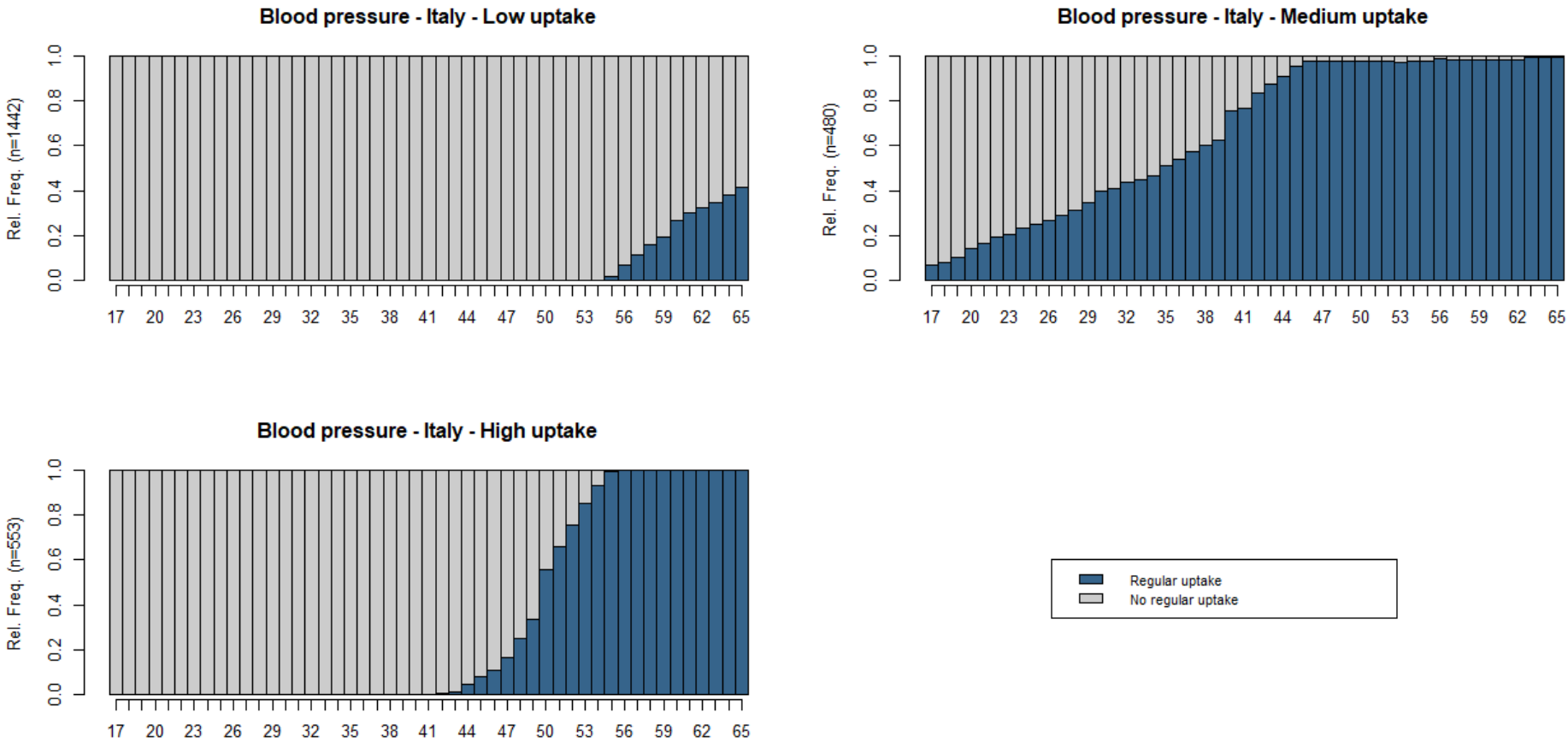


Figure S50 Routine healthcare uptake clusters – Italy – Blood test

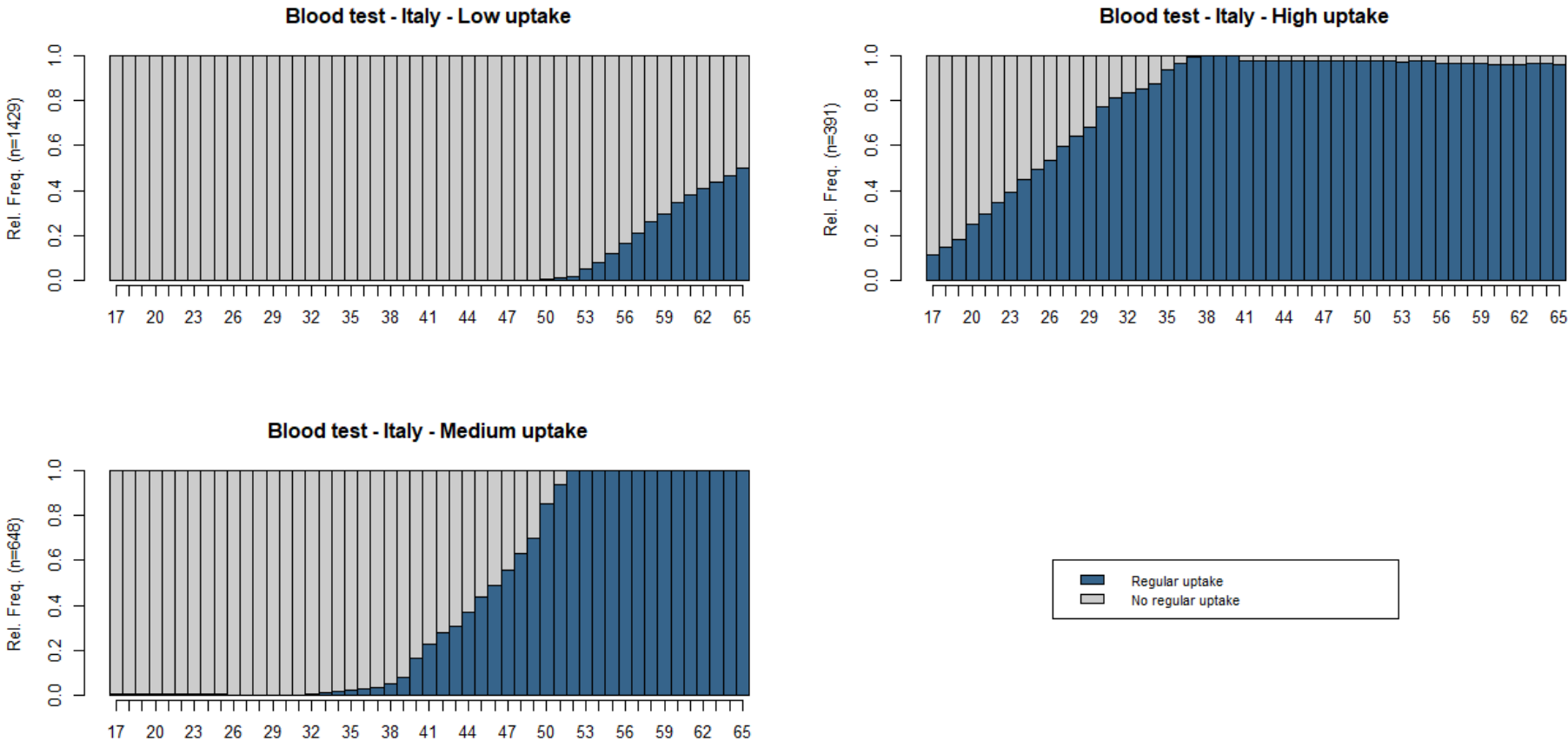


Figure S51 Routine healthcare uptake clusters – Italy – Vision

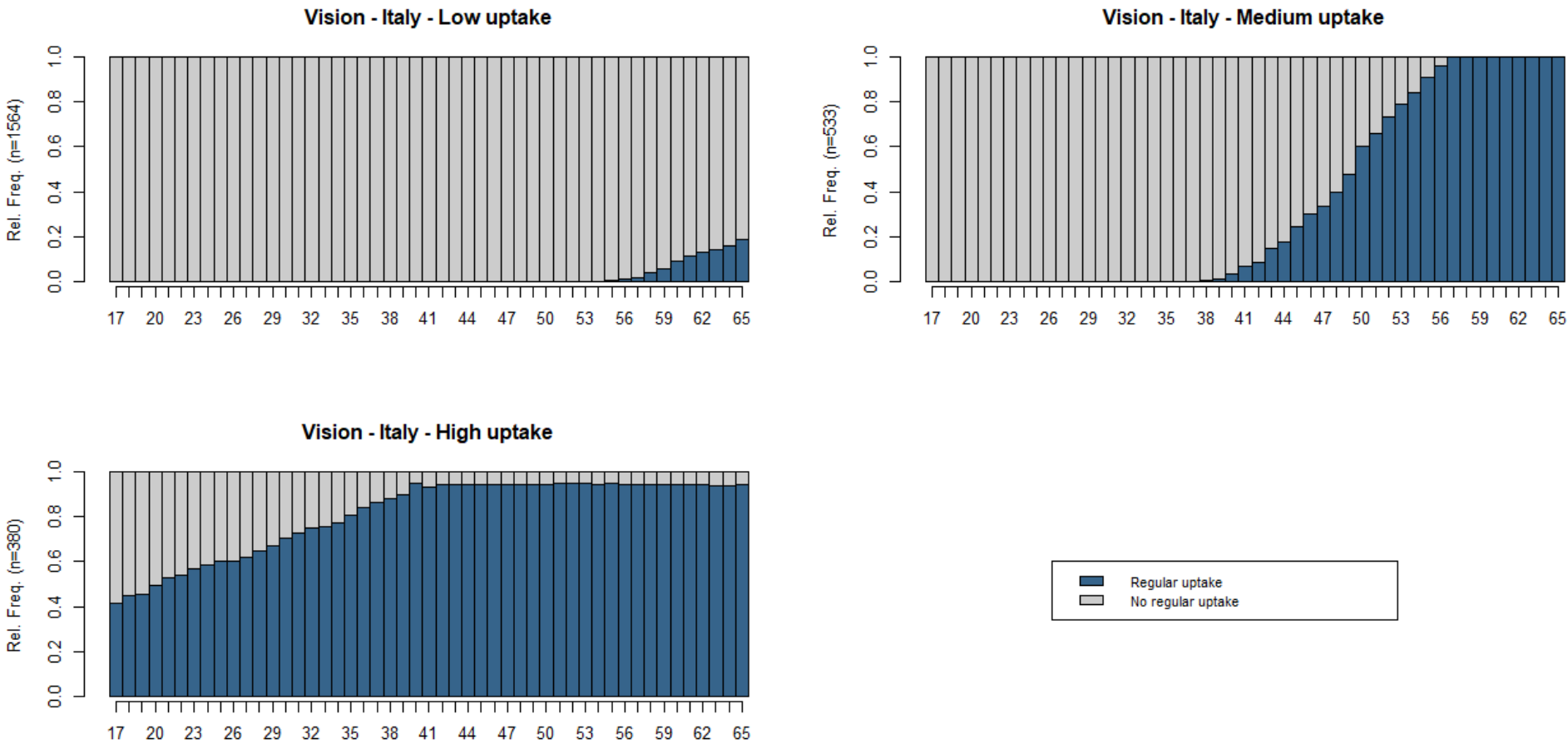


Figure S52 Routine healthcare uptake clusters – Italy – Gynecology

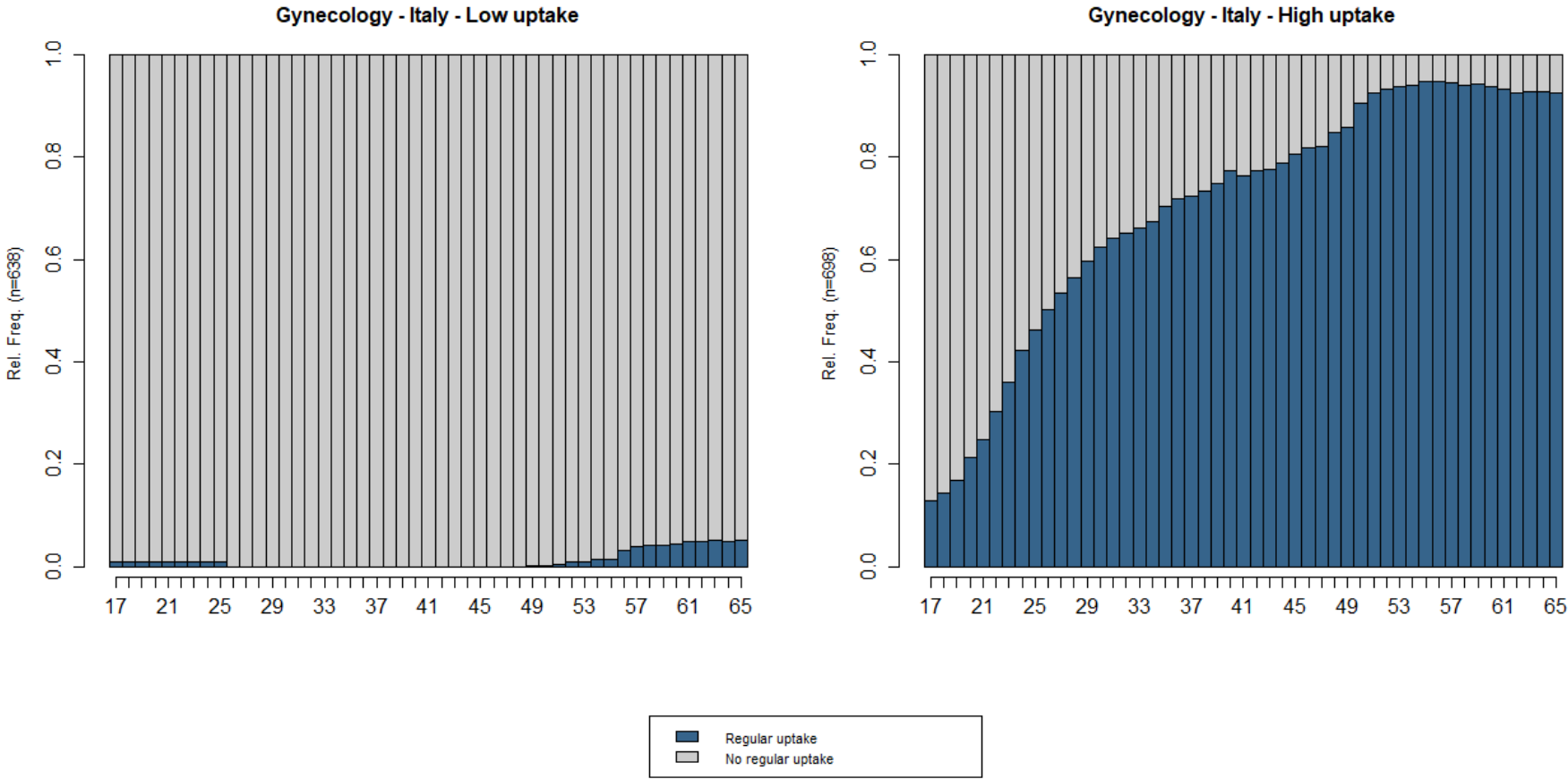


Figure S53 Routine healthcare uptake clusters – Italy – Mammography

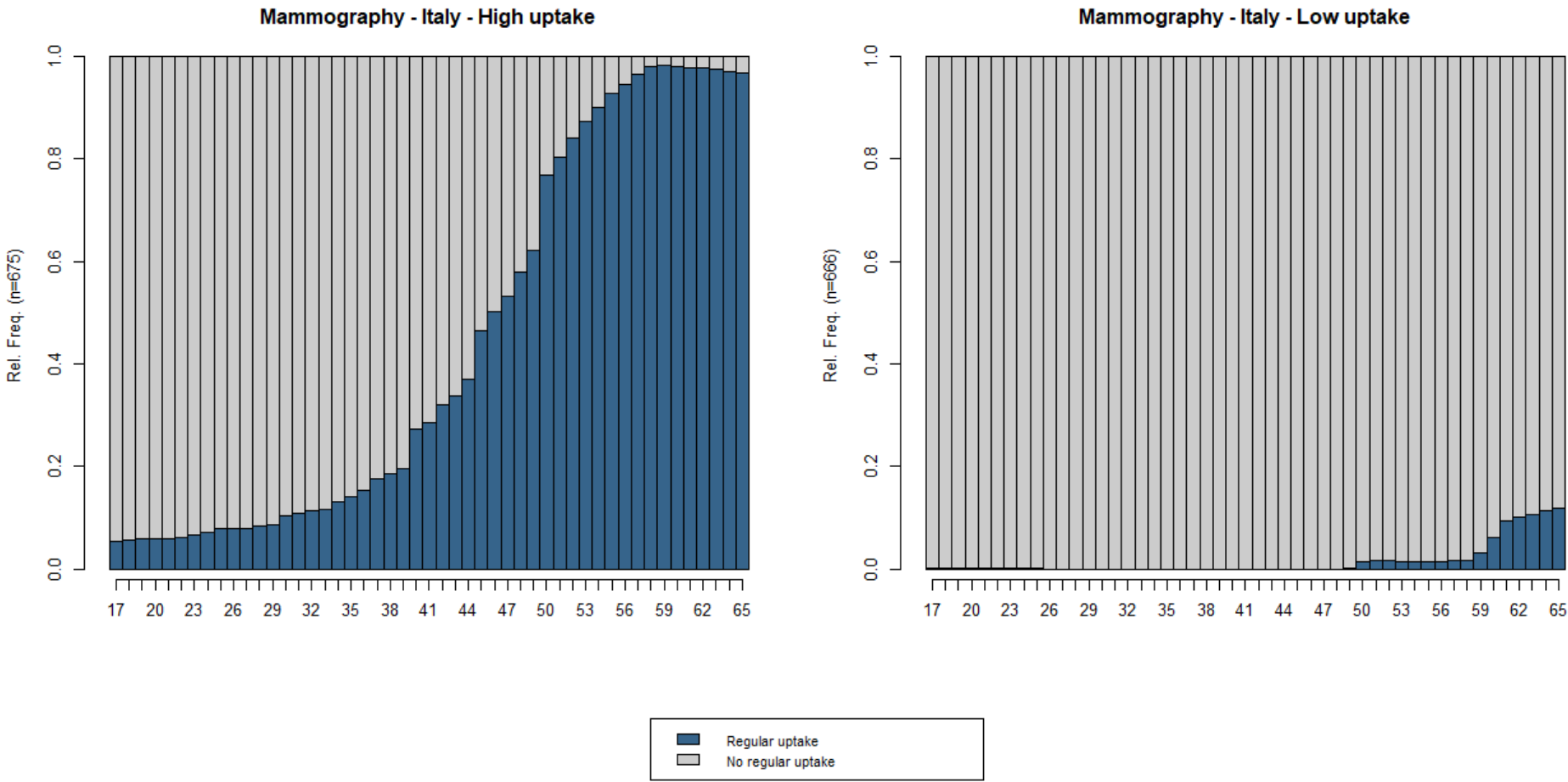


Figure S54 Routine healthcare uptake clusters – Netherlands – Blood pressure

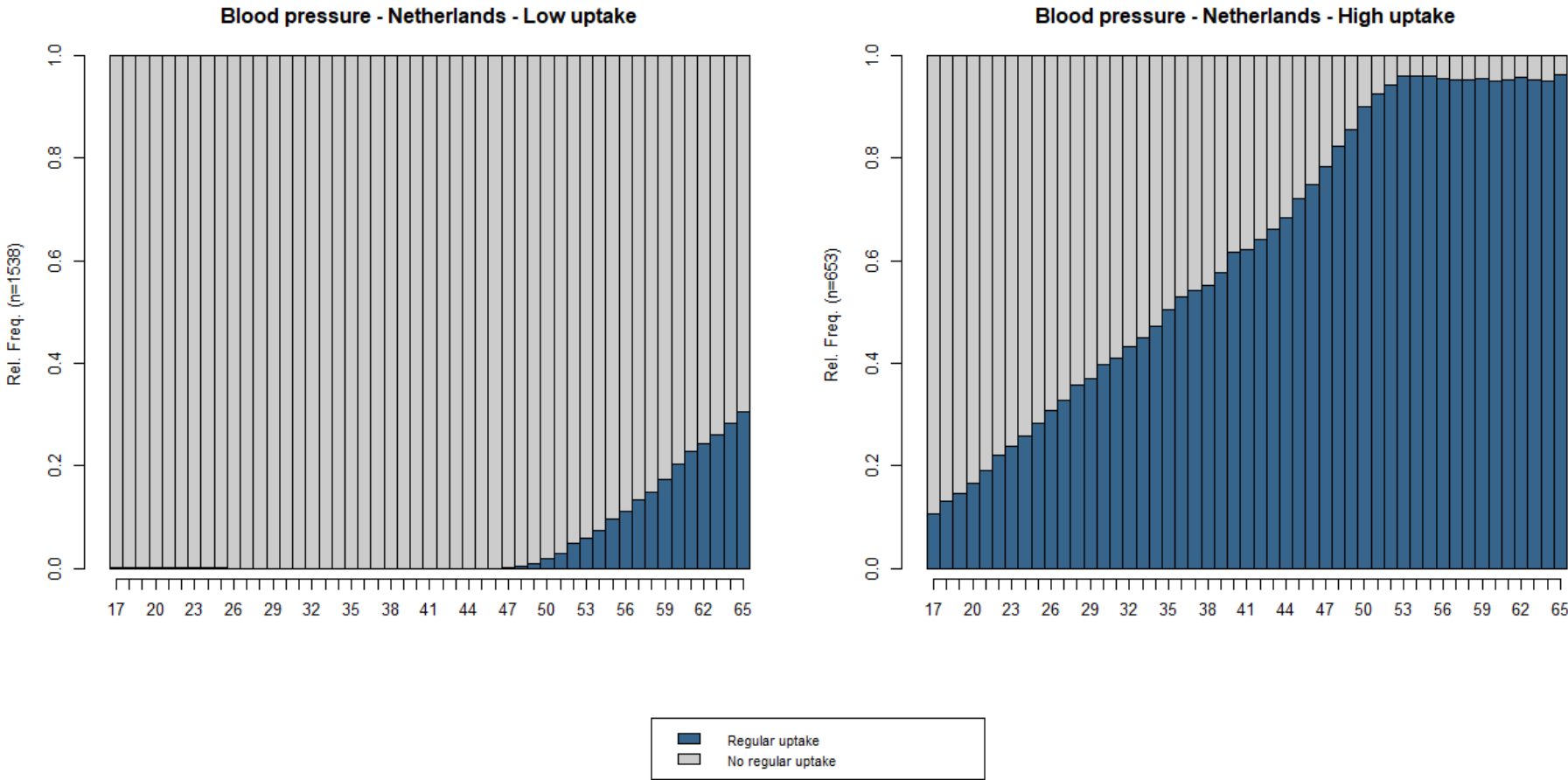


Figure S55 Routine healthcare uptake clusters – Netherlands – Blood test

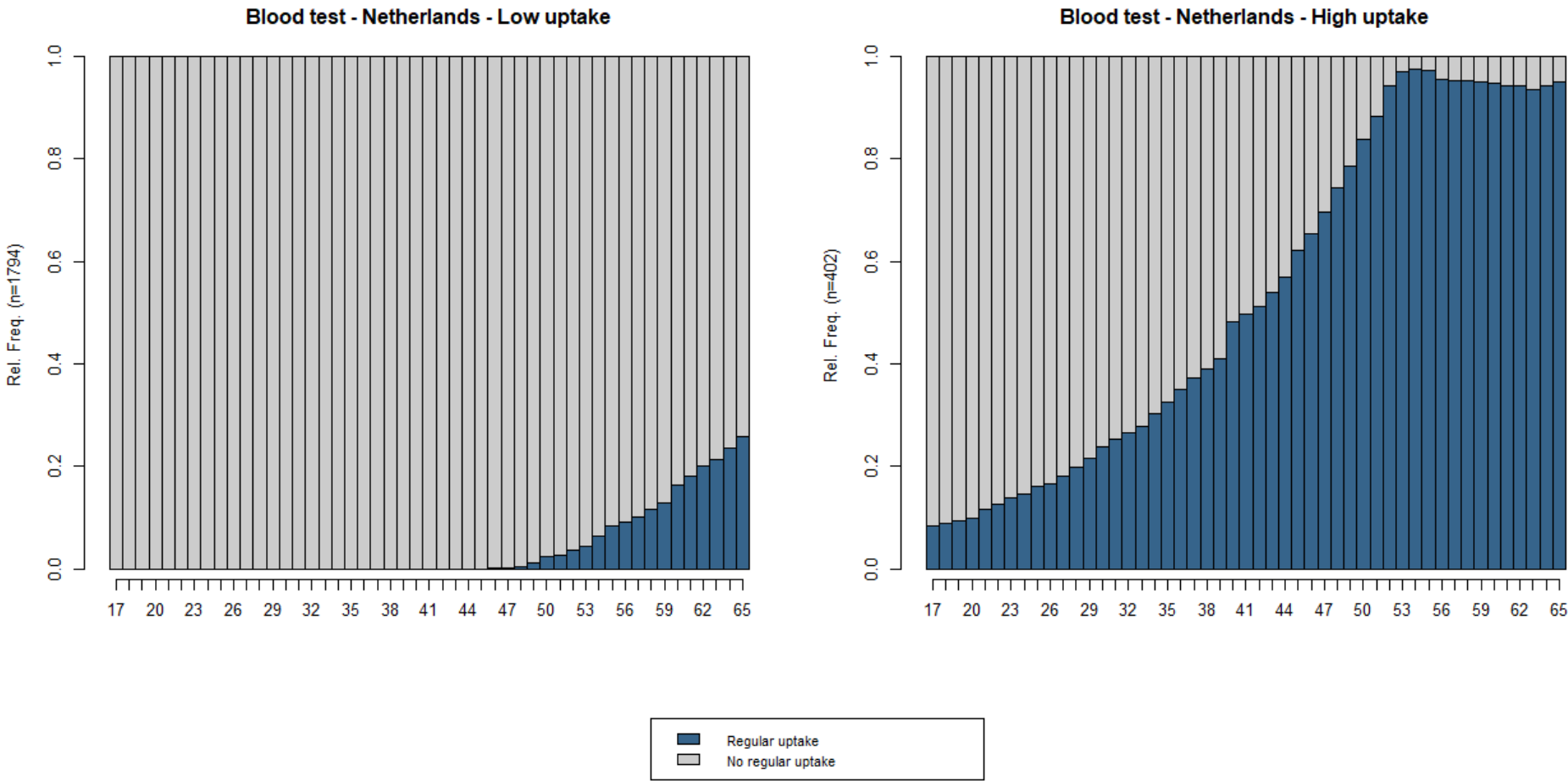


Figure S56 Routine healthcare uptake clusters – Netherlands – Vision

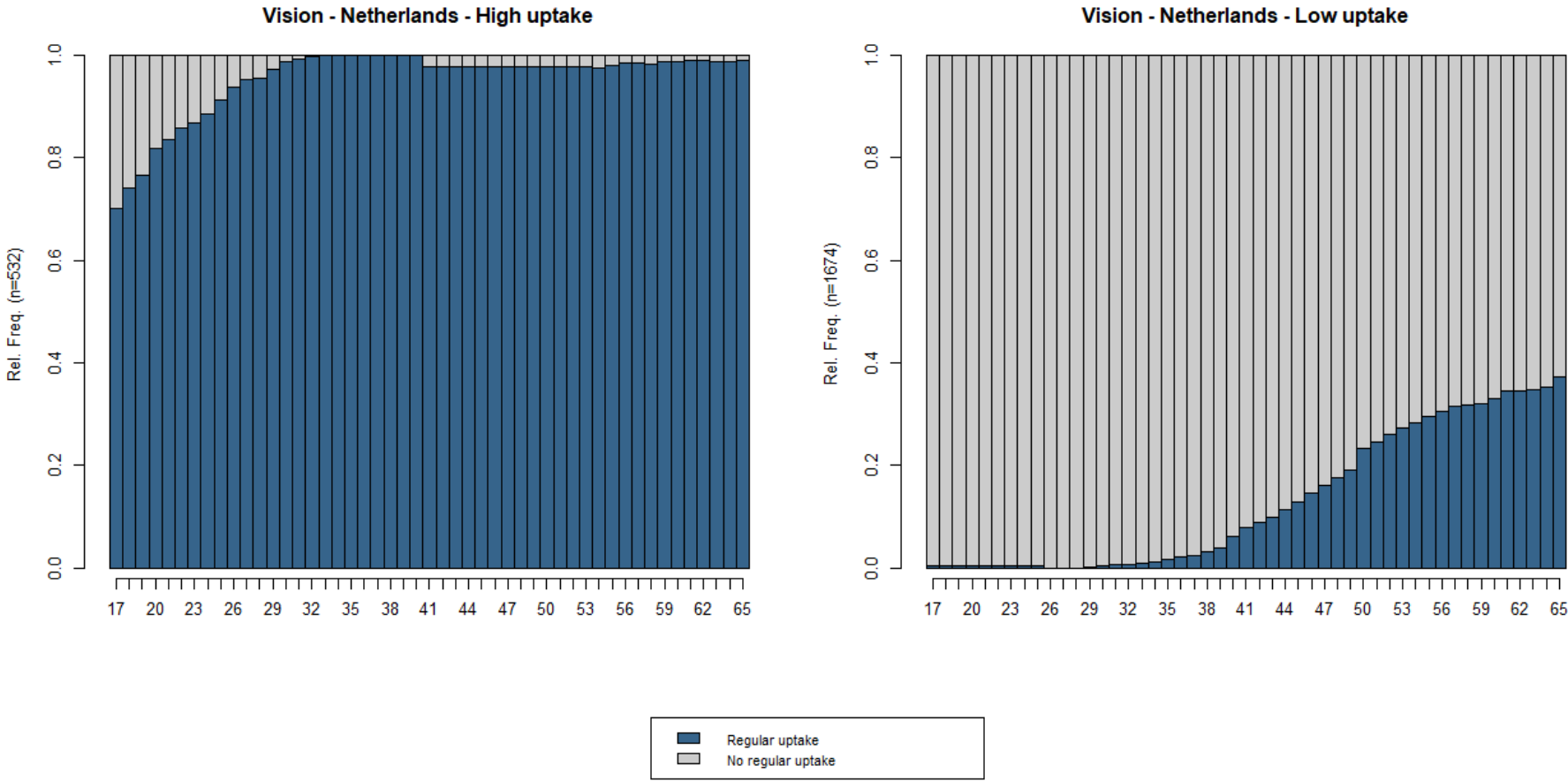


Figure S57 Routine healthcare uptake clusters – Netherlands – Gynecology

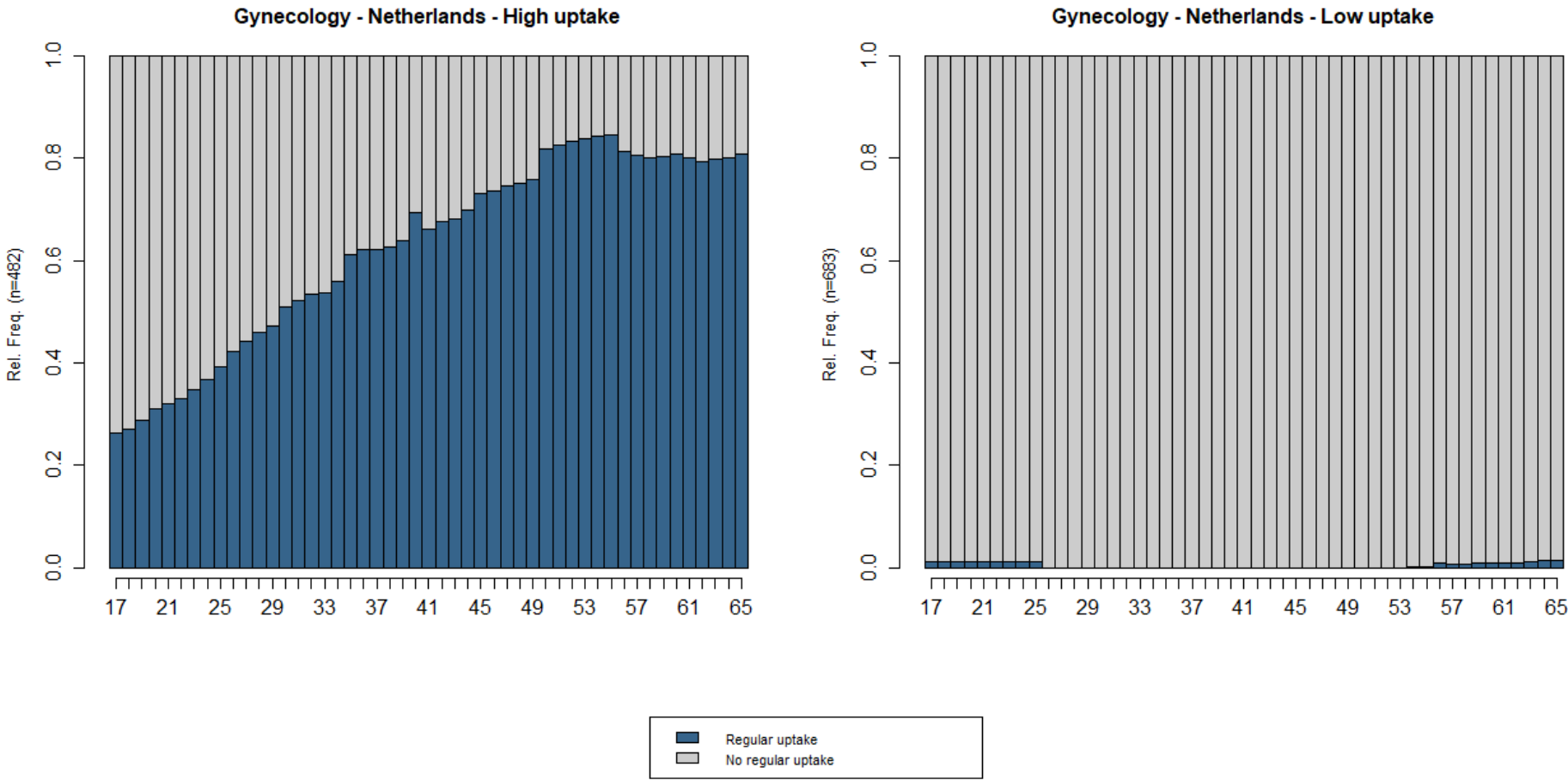


Figure S58 Routine healthcare uptake clusters – Netherlands – Mammography

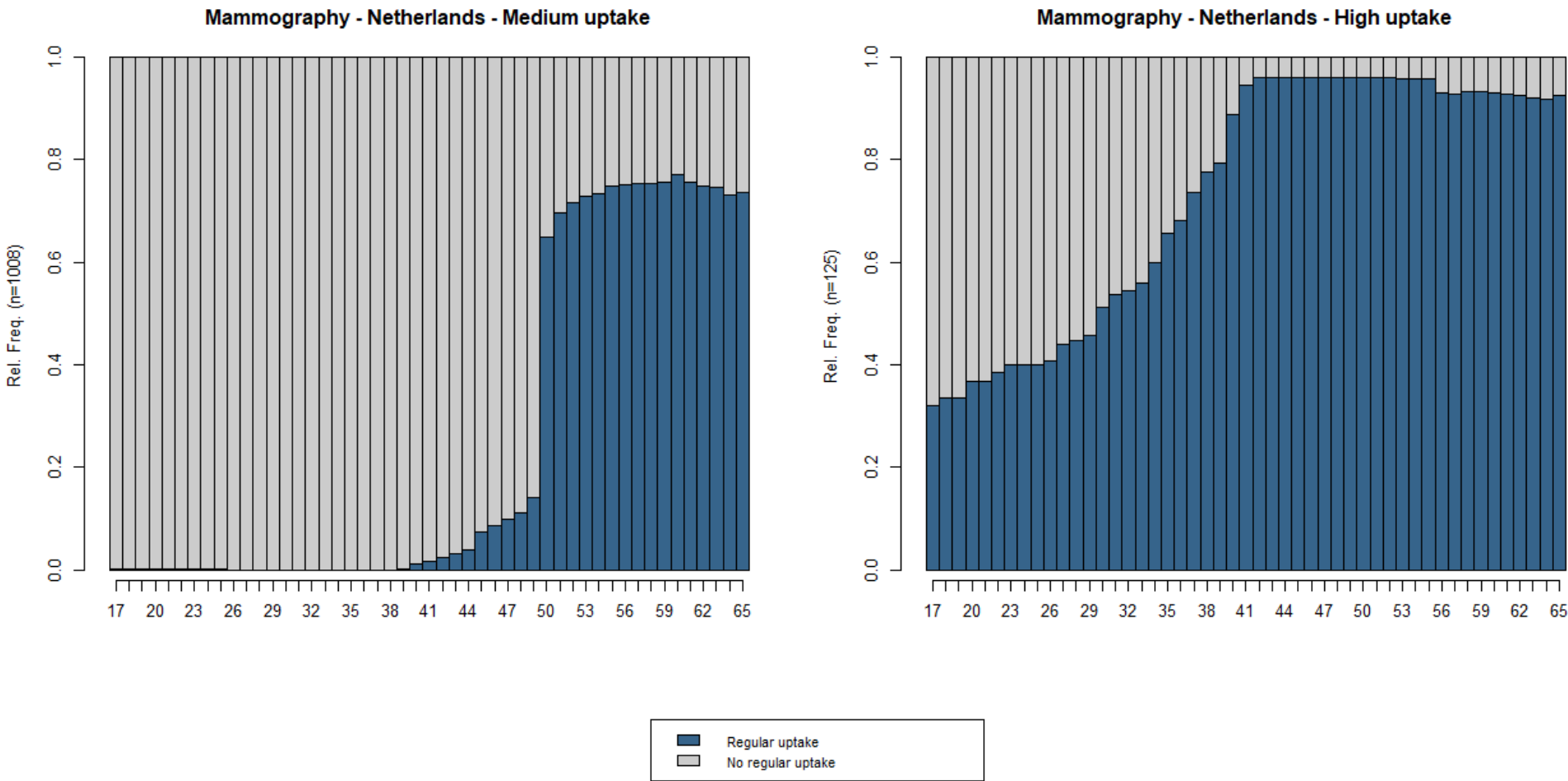


Figure S59 Routine healthcare uptake clusters – Poland – Blood pressure

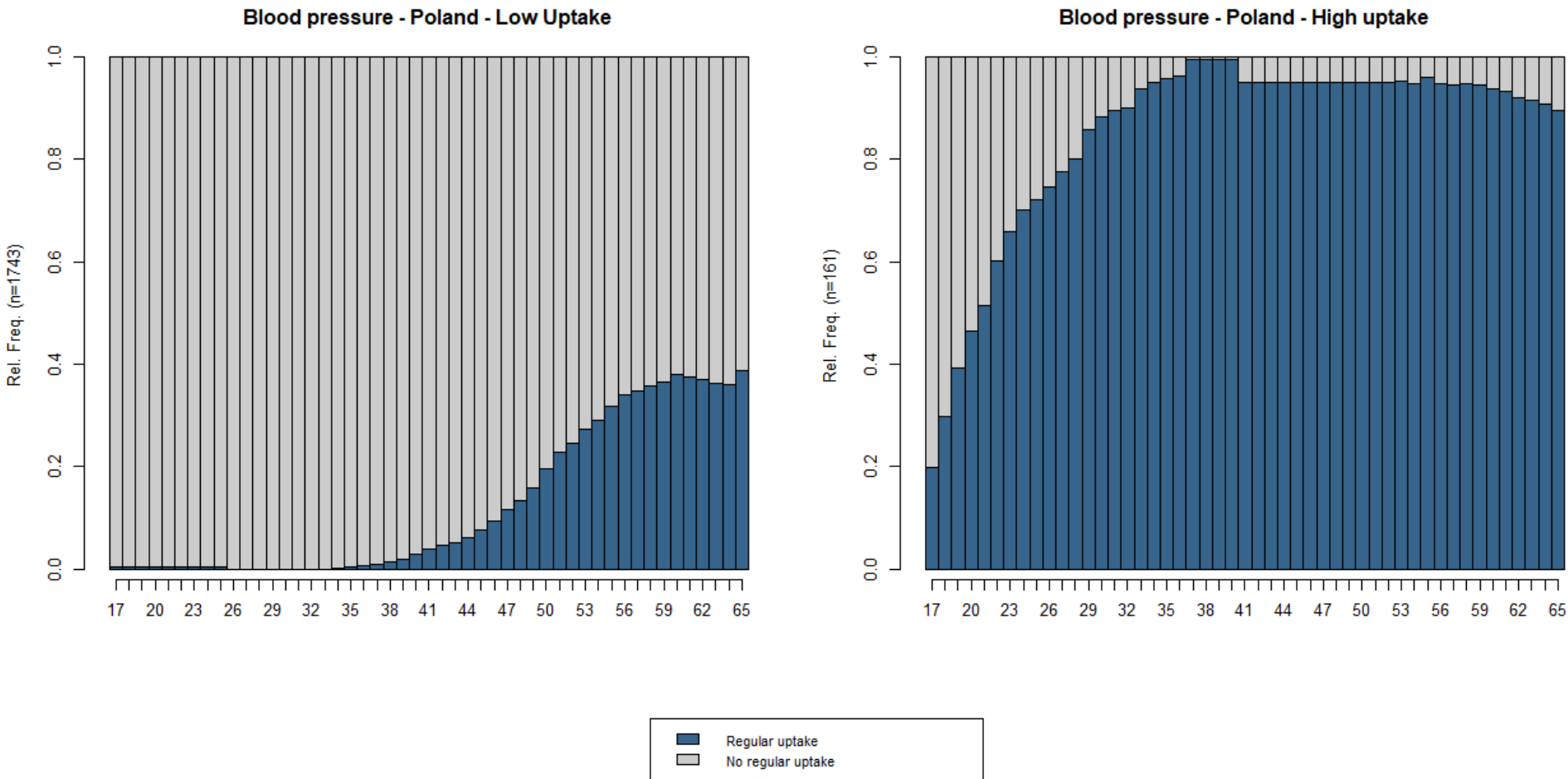


Figure S60 Routine healthcare uptake clusters – Poland – Blood test

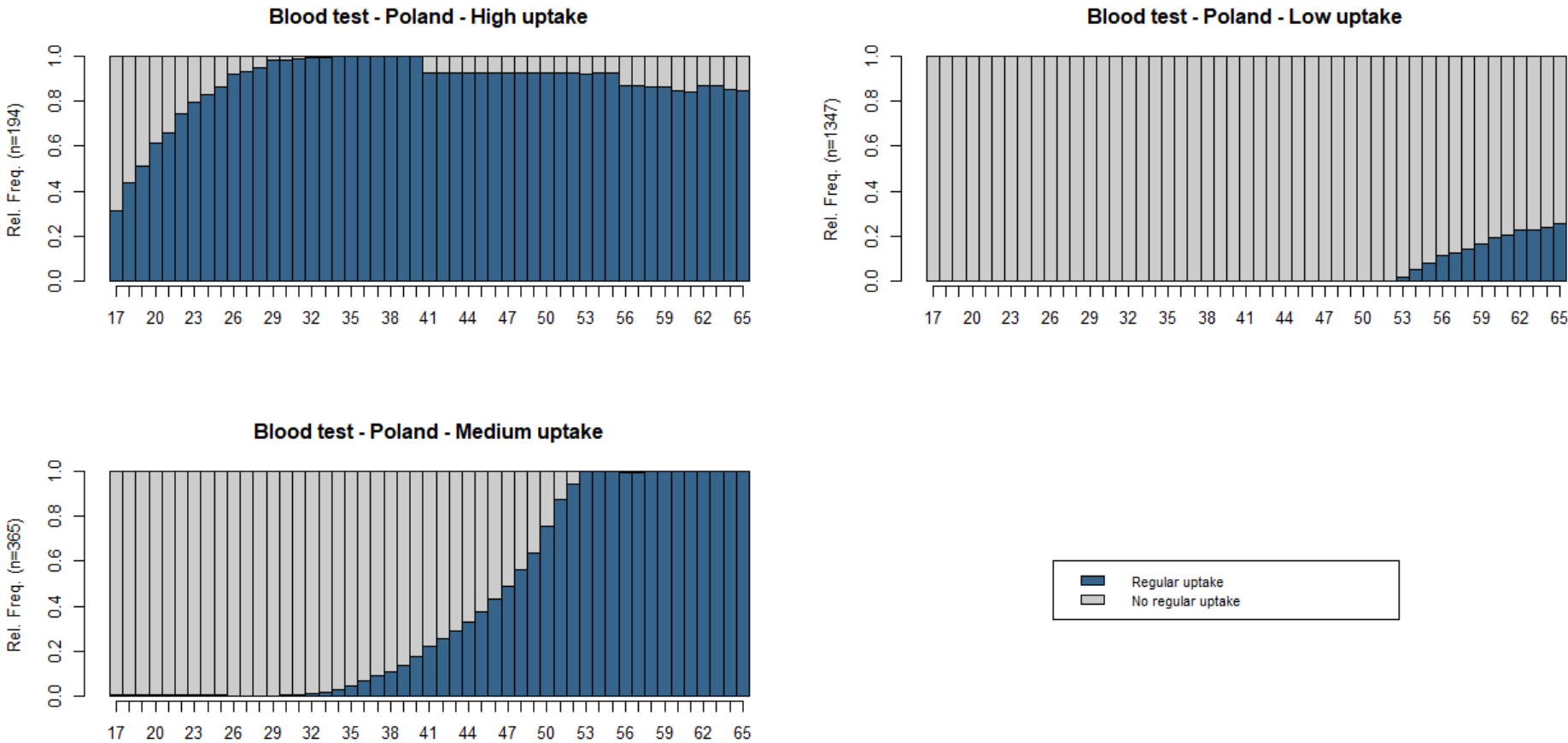


Figure S61 Routine healthcare uptake clusters – Poland – Vision

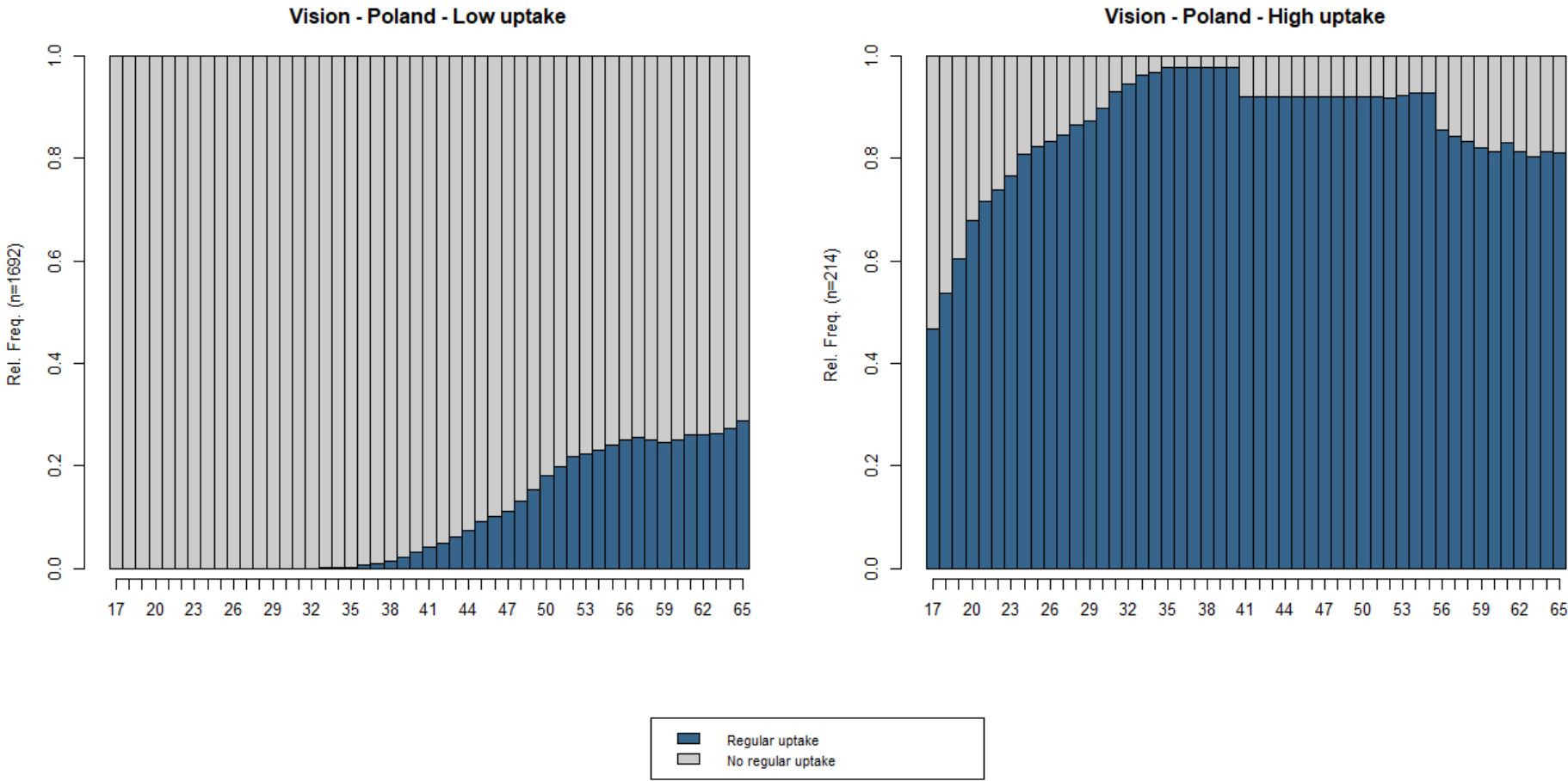


Figure S62 Routine healthcare uptake clusters – Poland – Gynecology

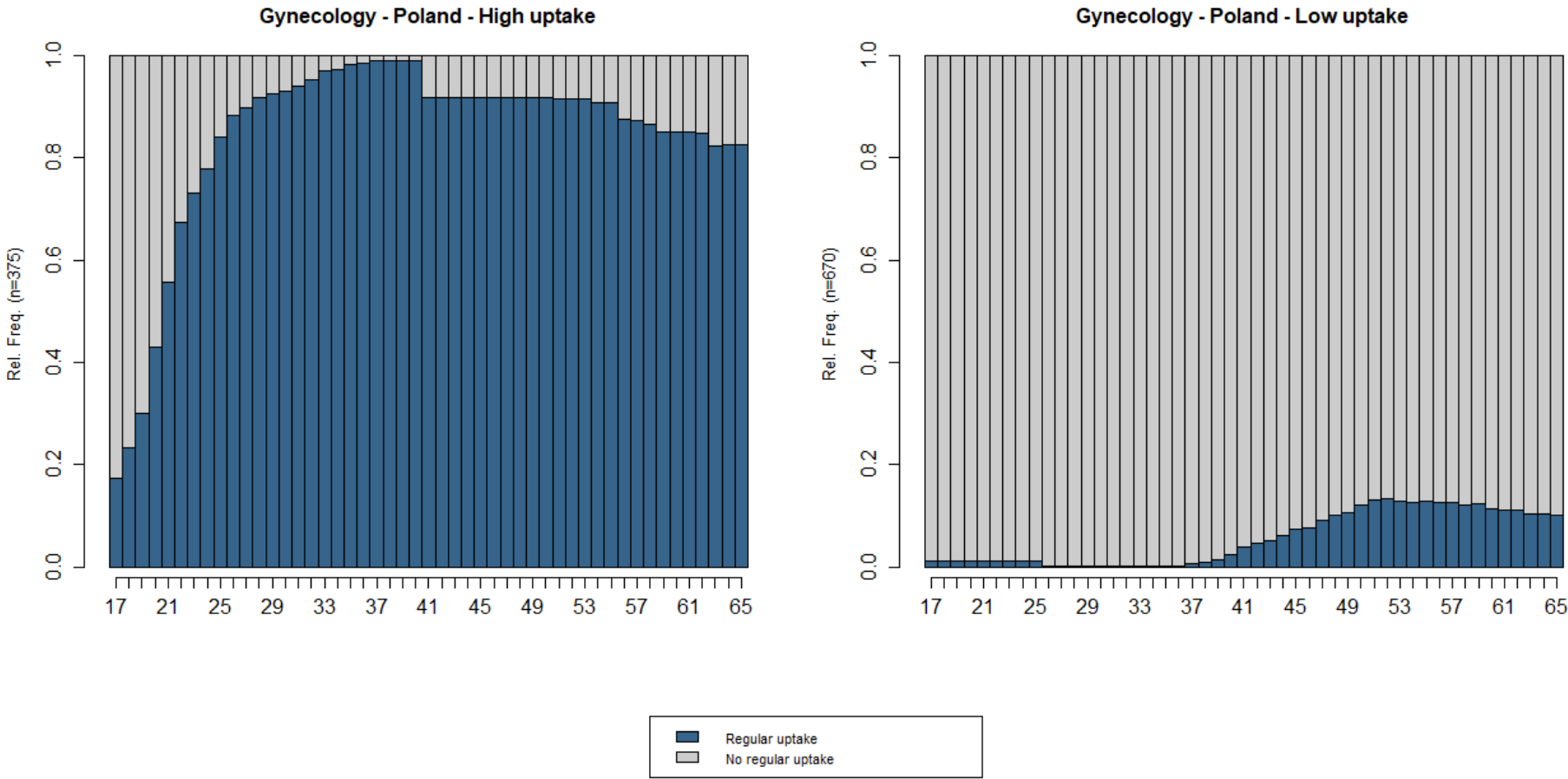


Figure S63 Routine healthcare uptake clusters – Poland – Mammography

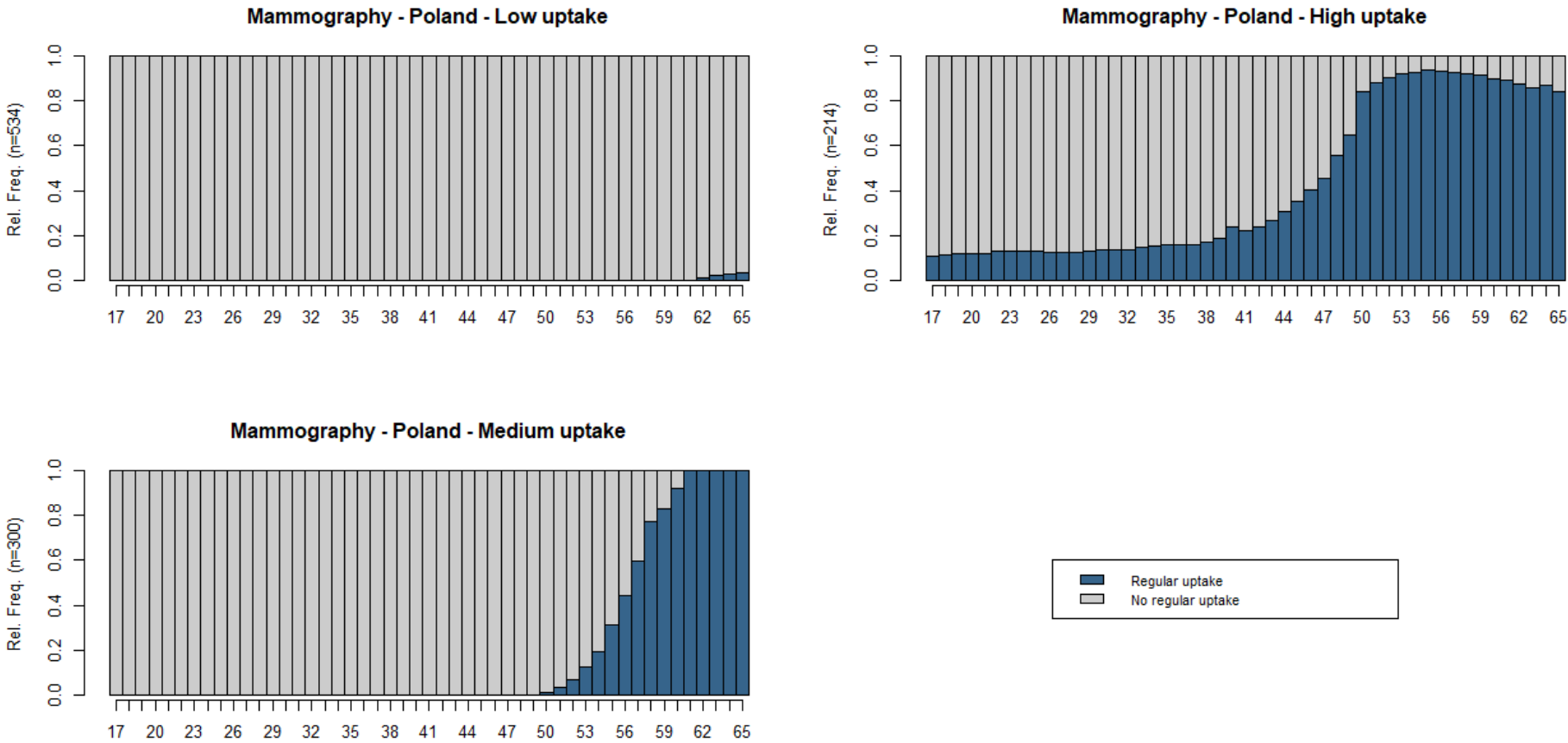


Figure S64 Routine healthcare uptake clusters – Spain – Blood pressure

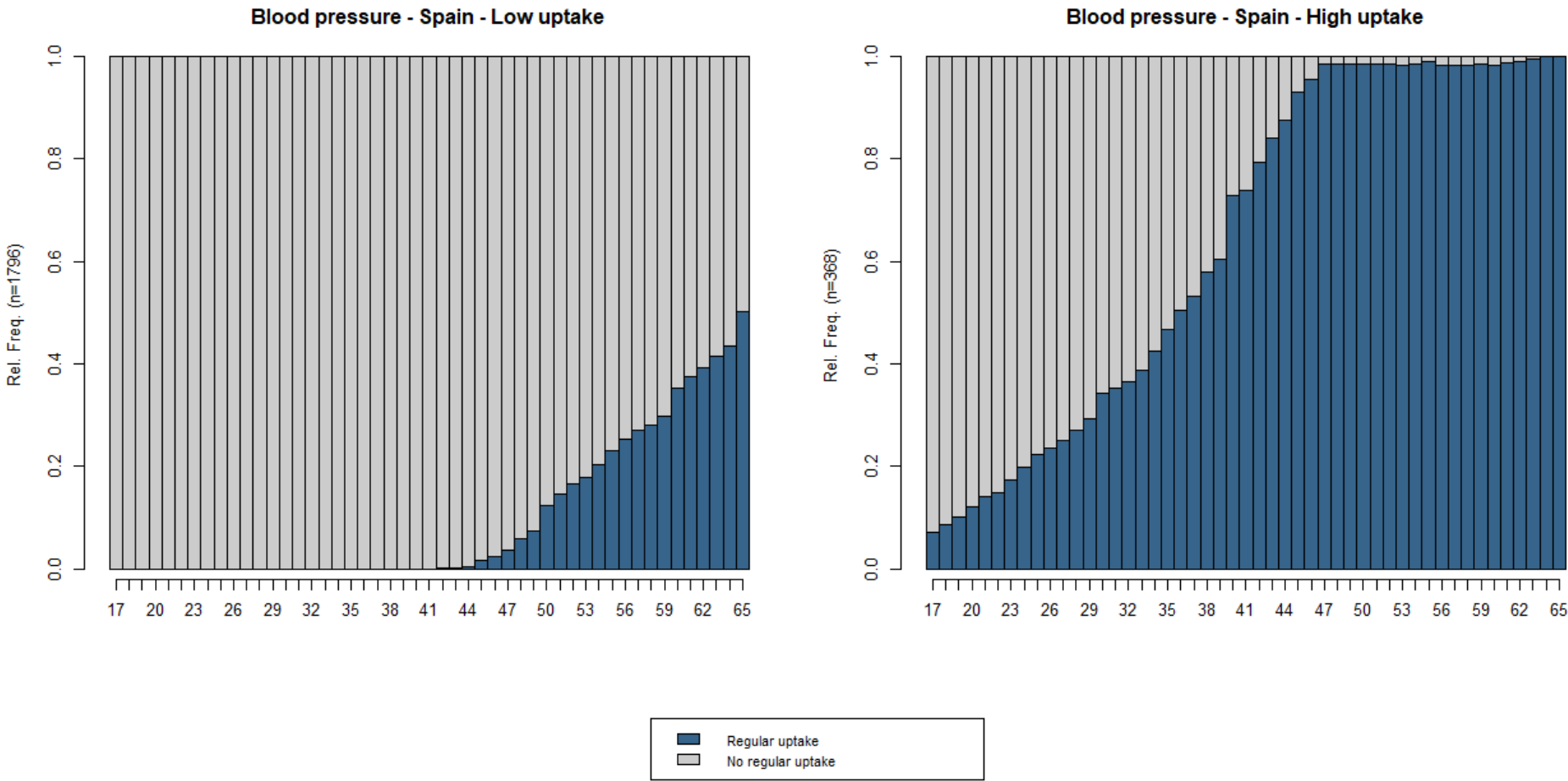


Figure S65 Routine healthcare uptake clusters – Spain – Blood test

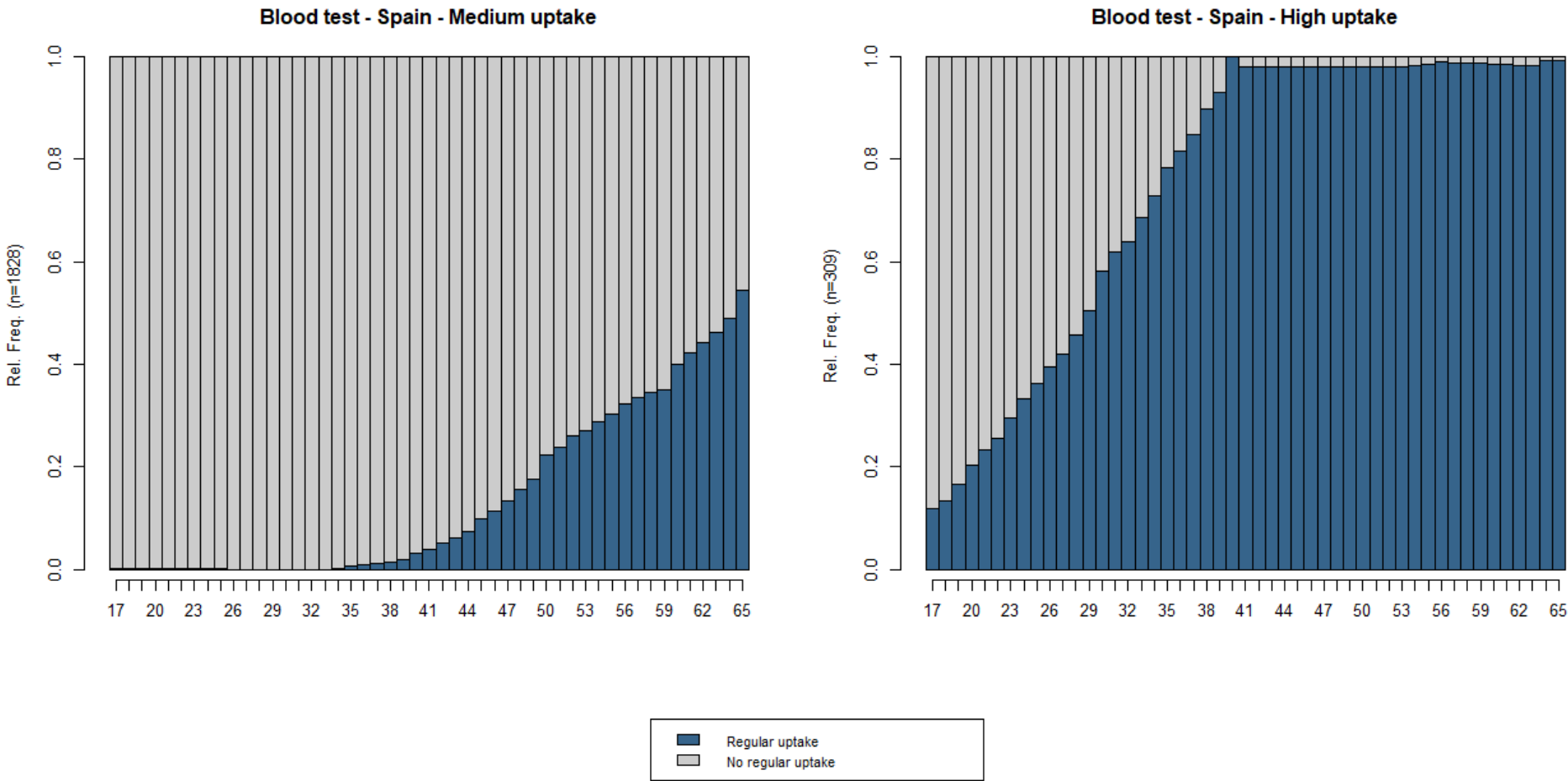


Figure S66 Routine healthcare uptake clusters – Spain – Vision

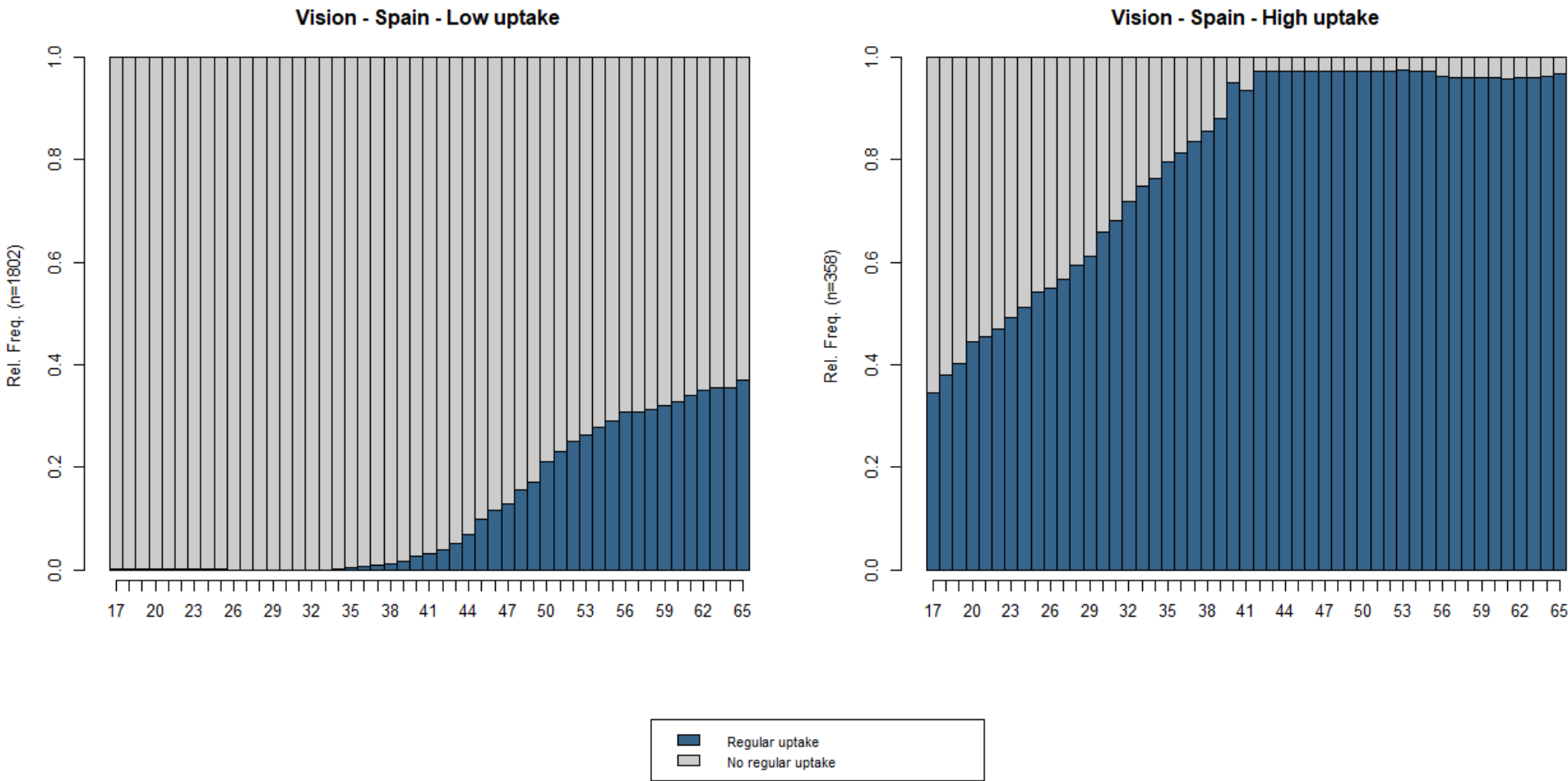


Figure S67 Routine healthcare uptake clusters – Spain – Gynecology

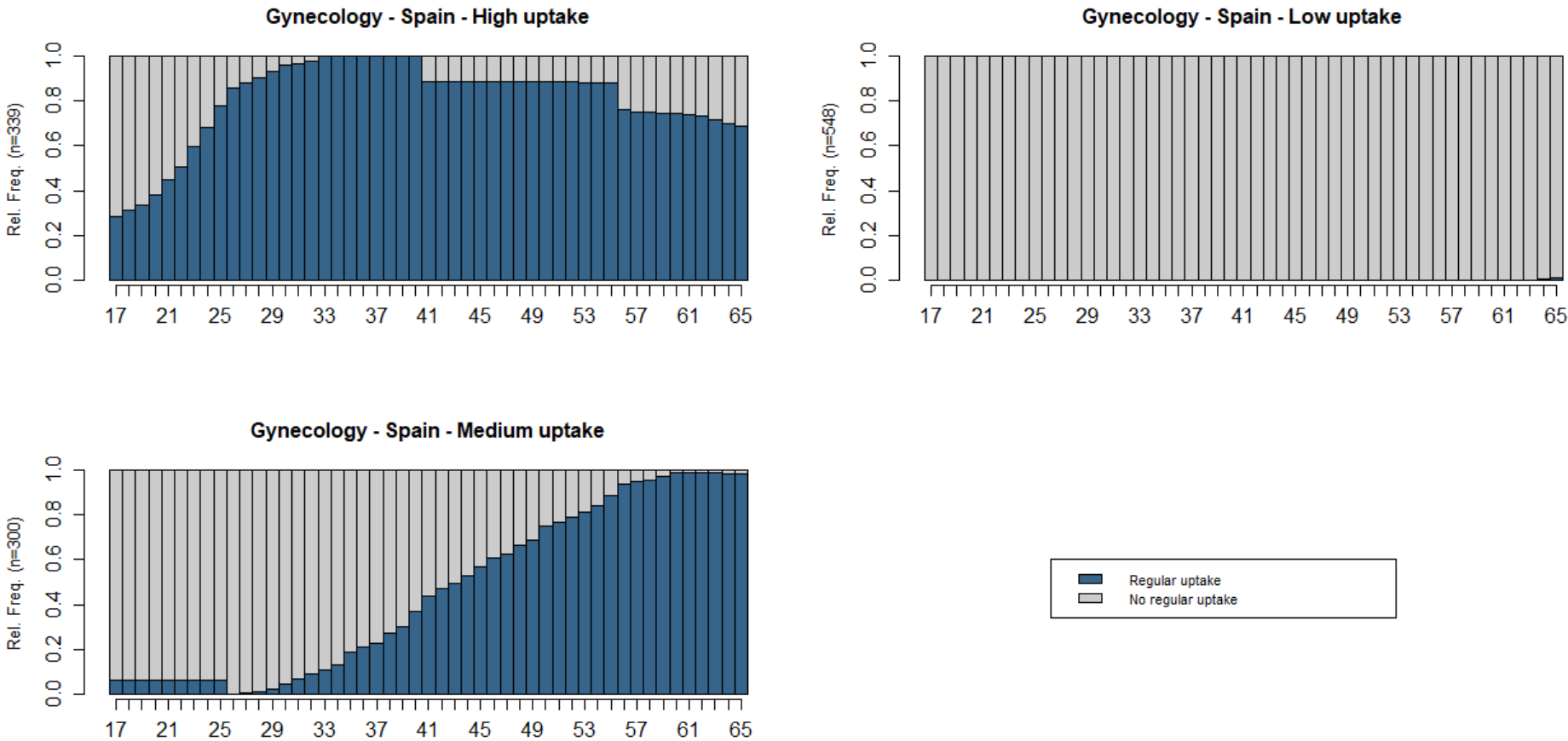


Figure S68 Routine healthcare uptake clusters – Spain – Mammography

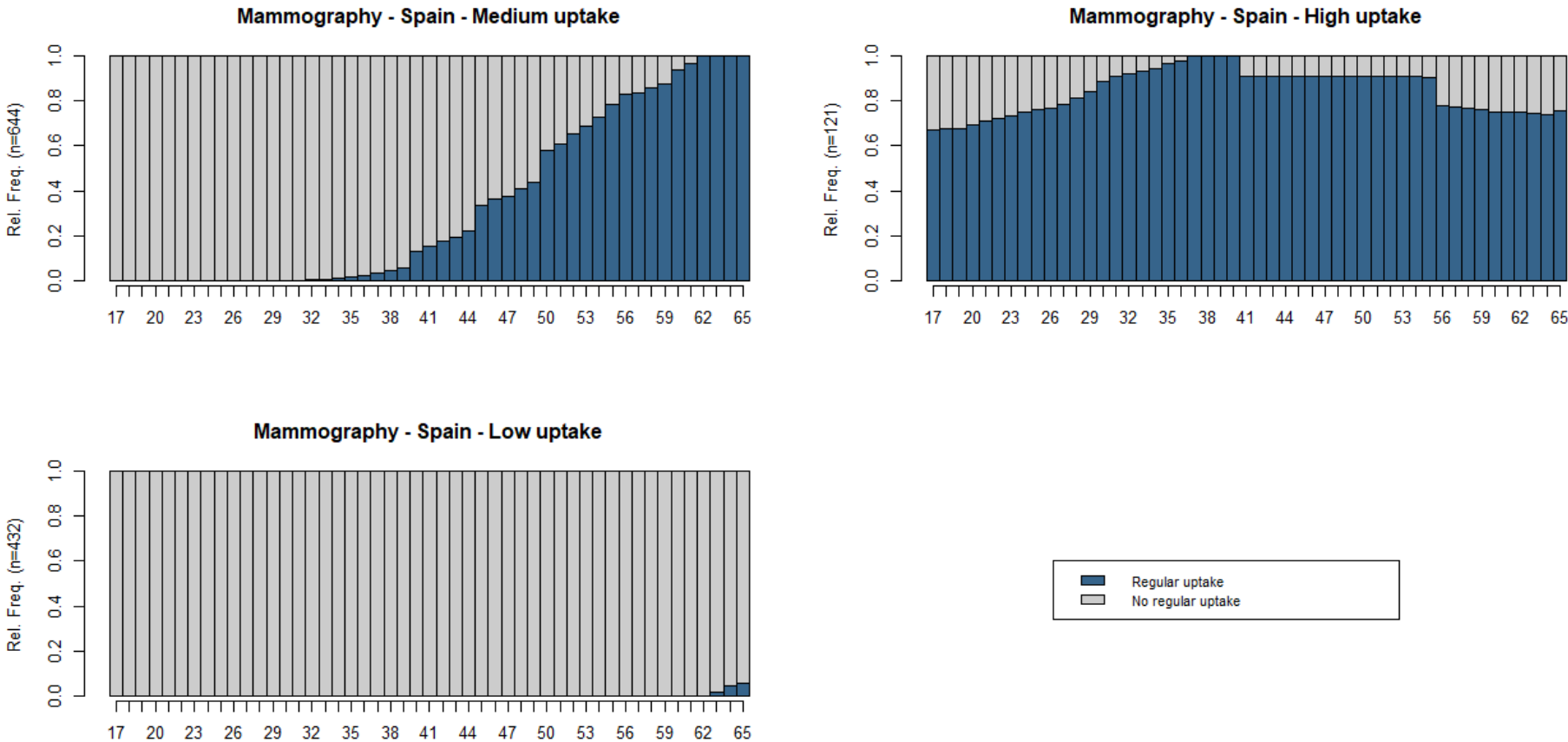


Figure S69 Routine healthcare uptake clusters – Sweden – Blood pressure

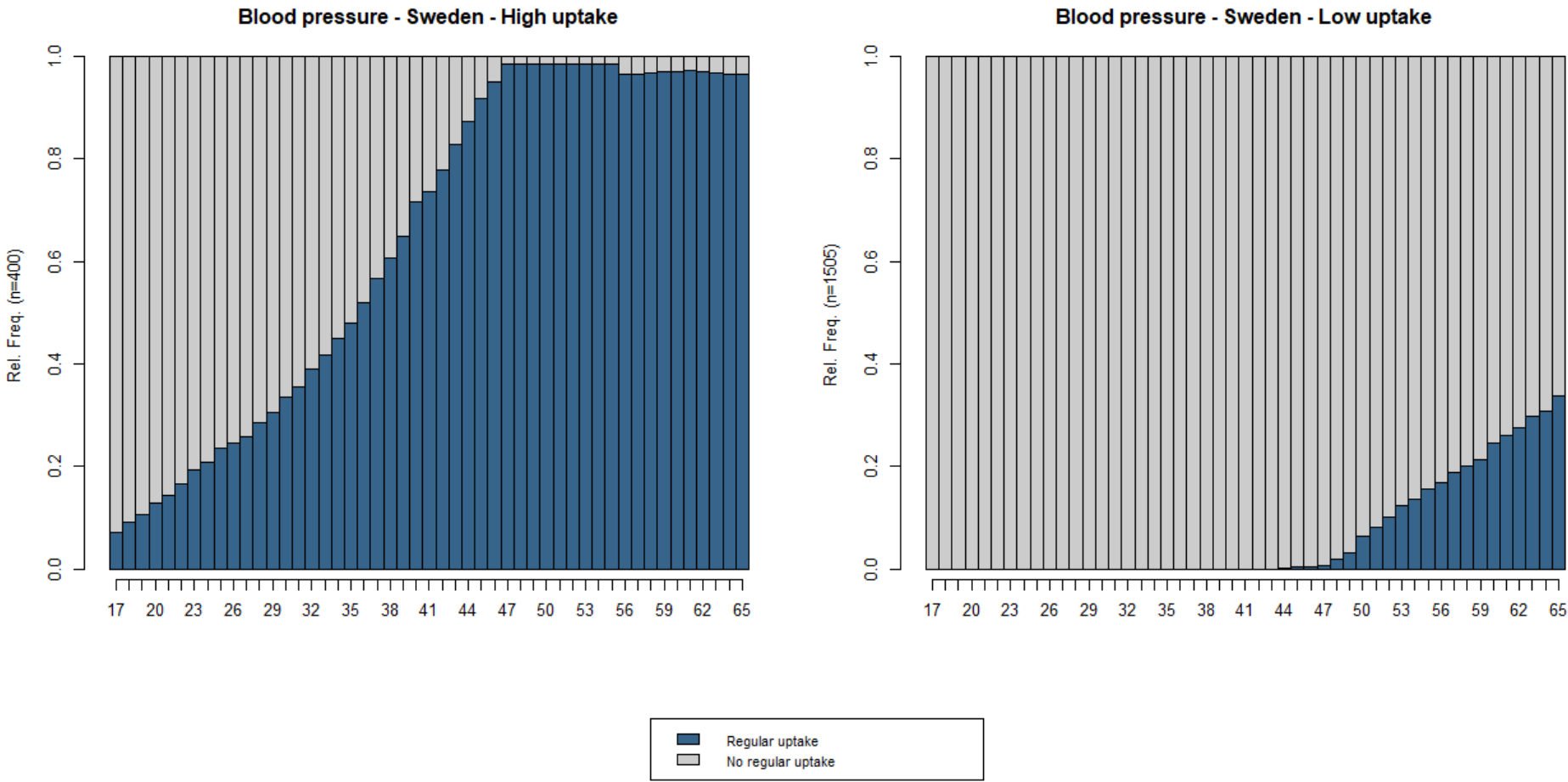


Figure S70 Routine healthcare uptake clusters – Sweden – Blood test

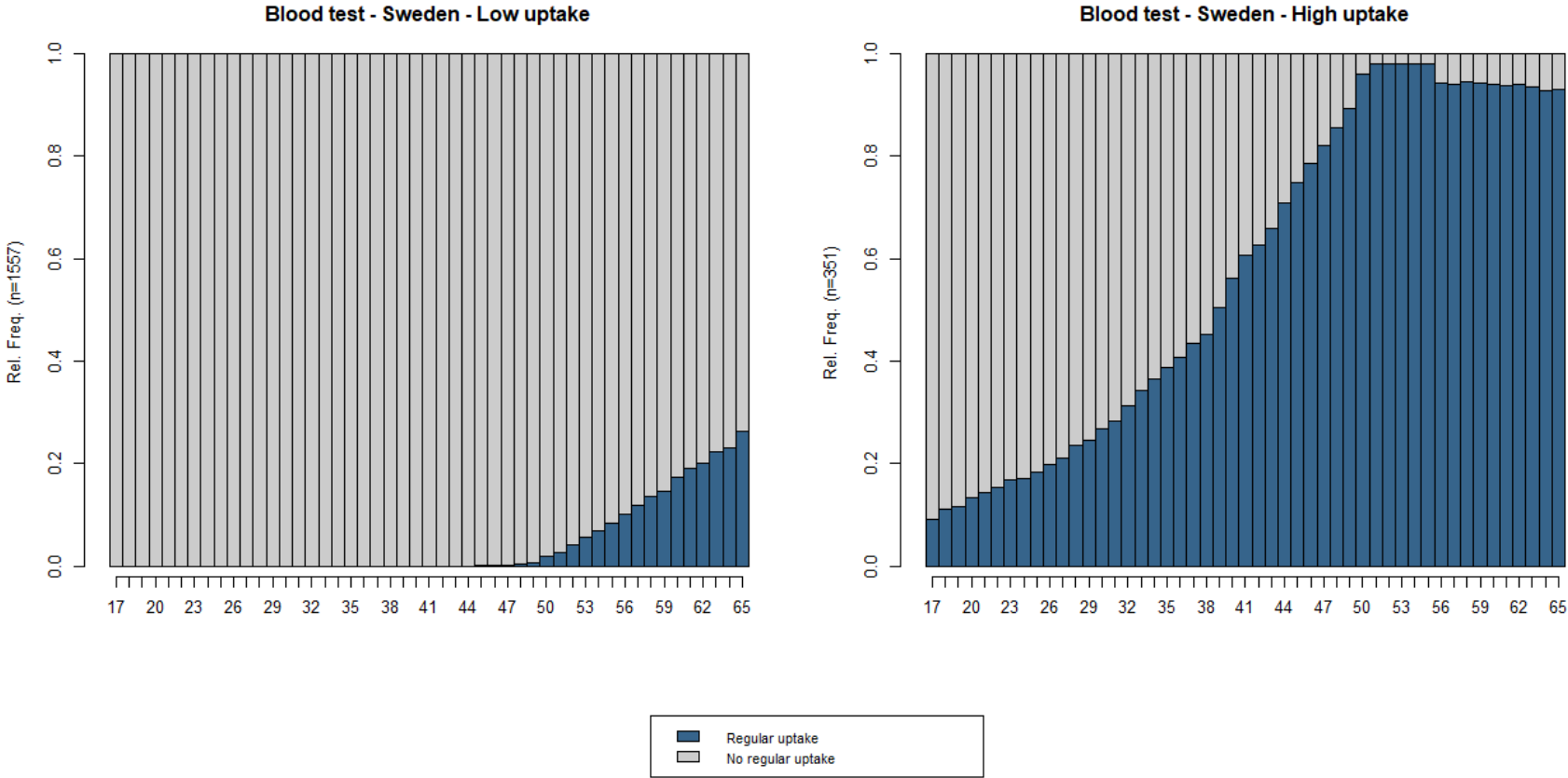


Figure S71 Routine healthcare uptake clusters – Sweden – Vision

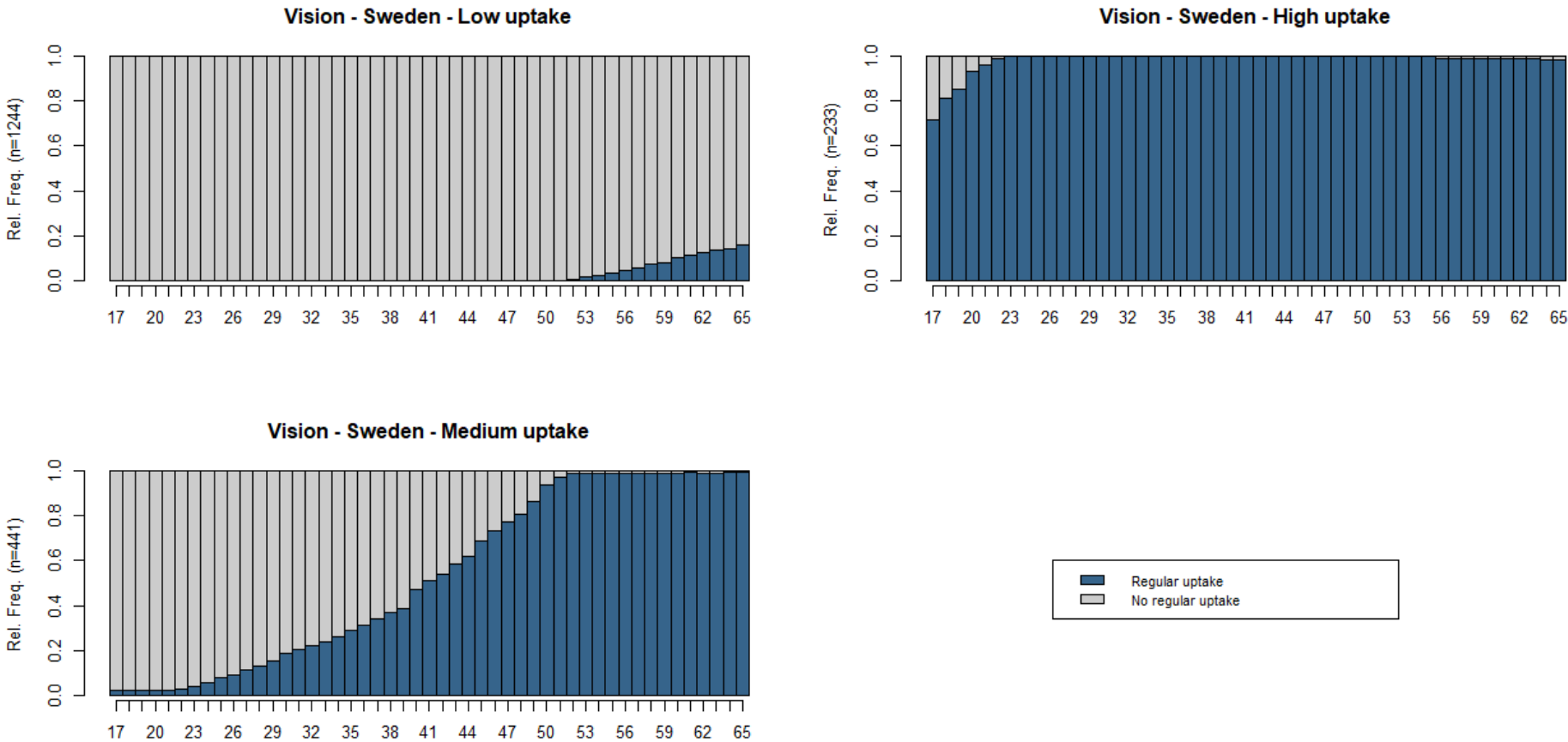


Figure S72 Routine healthcare uptake clusters – Sweden – Gynecology

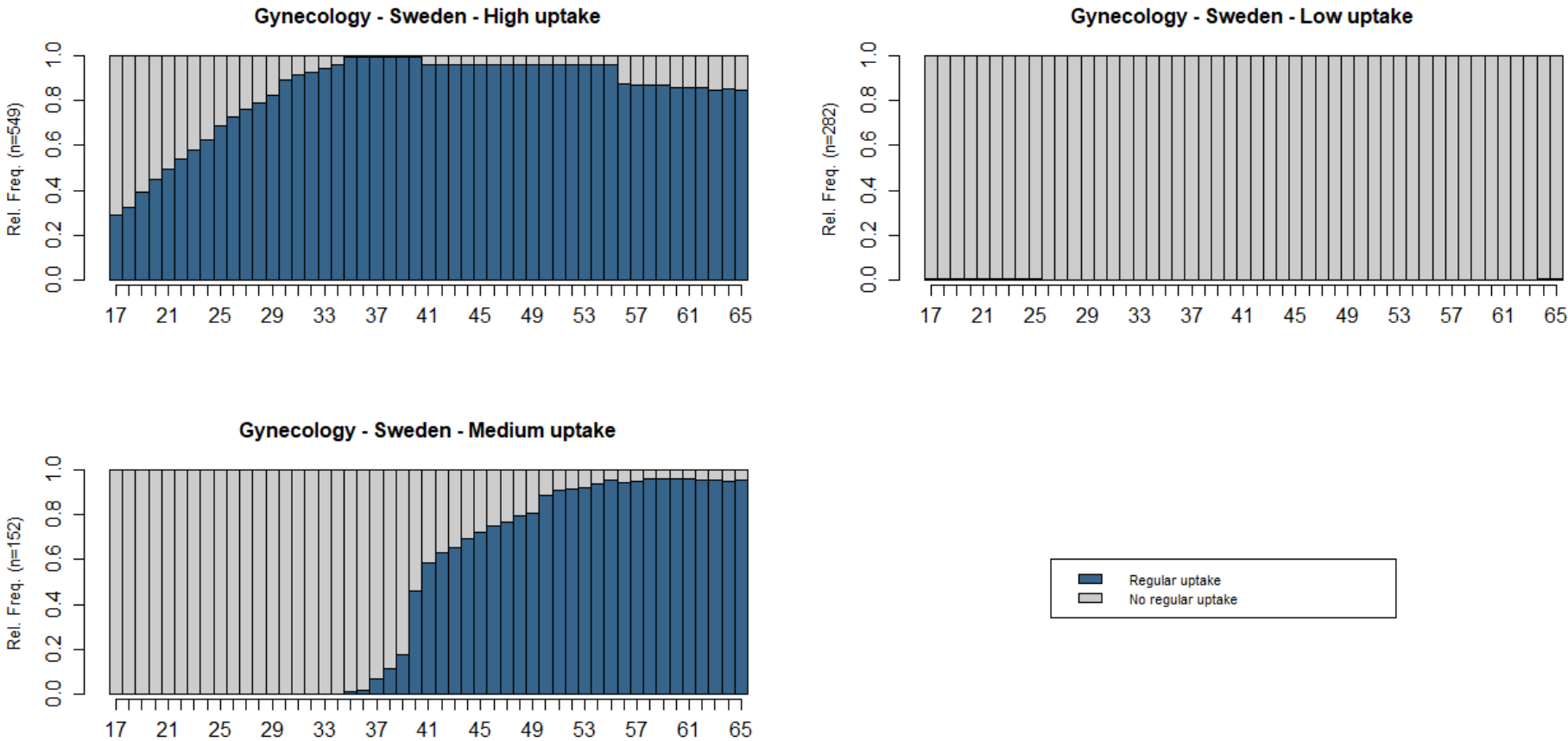


Figure S73 Routine healthcare uptake clusters – Sweden – Mammography

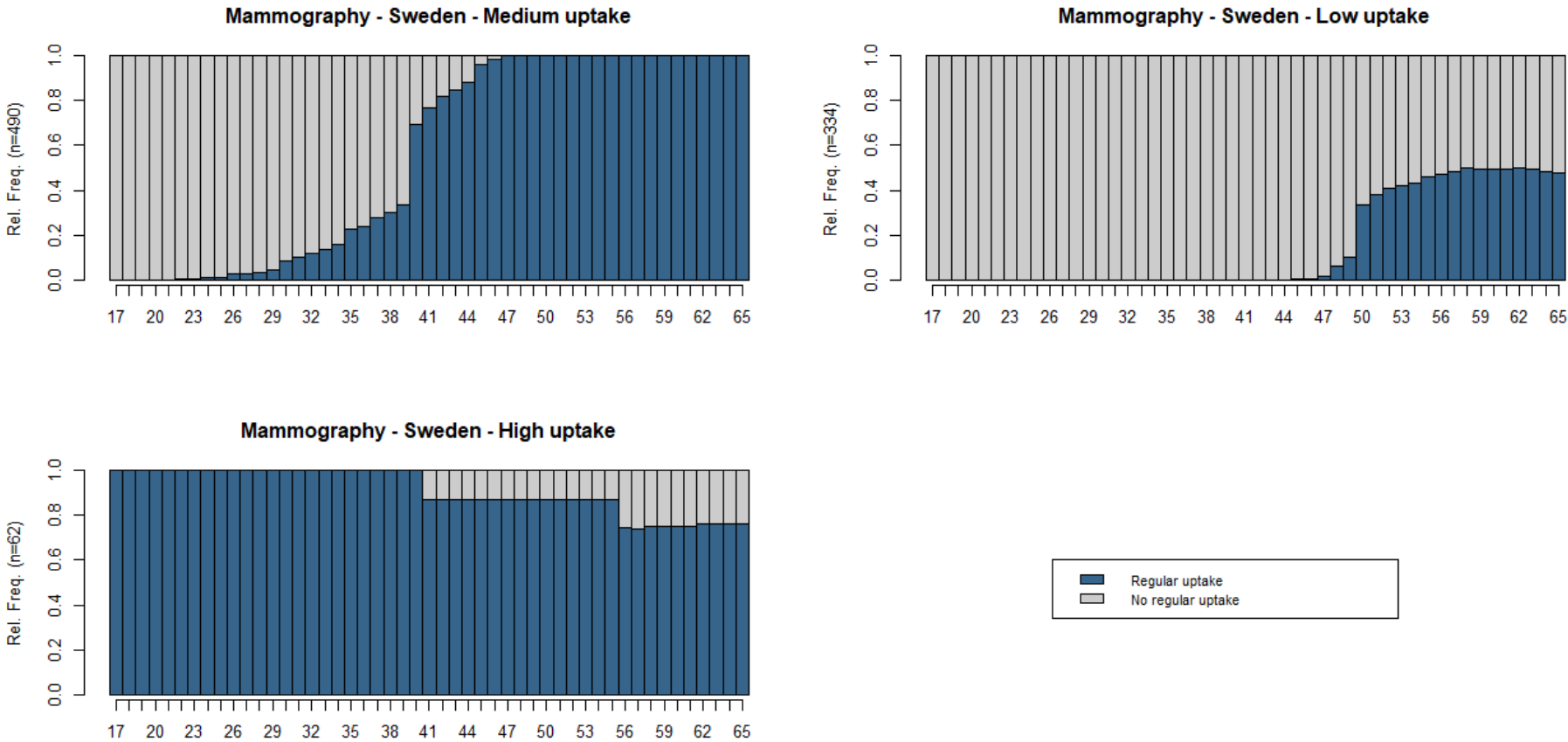


Figure S74 Routine healthcare uptake clusters – Switzerland – Blood pressure

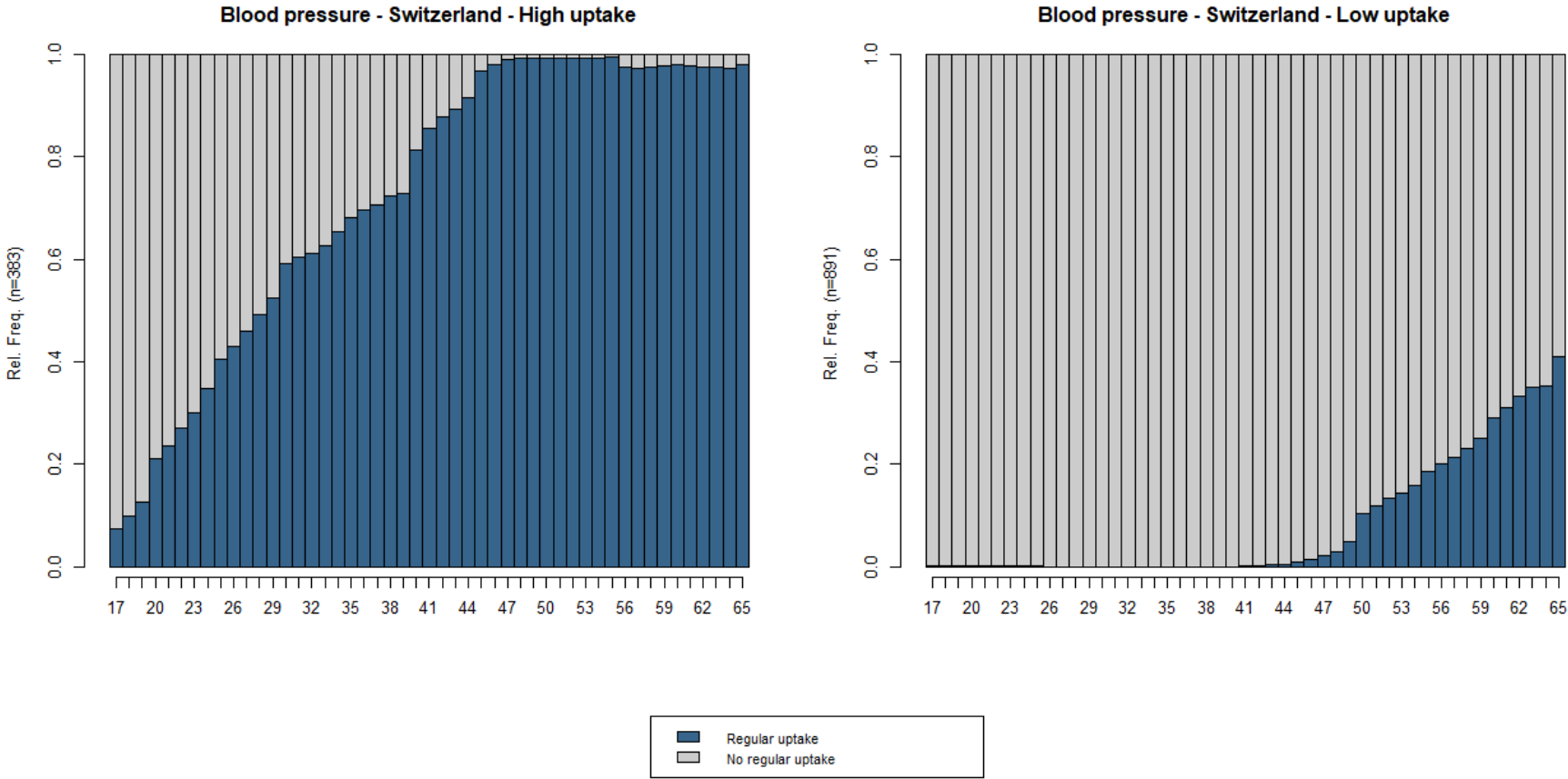


Figure S75 Routine healthcare uptake clusters – Switzerland – Blood test

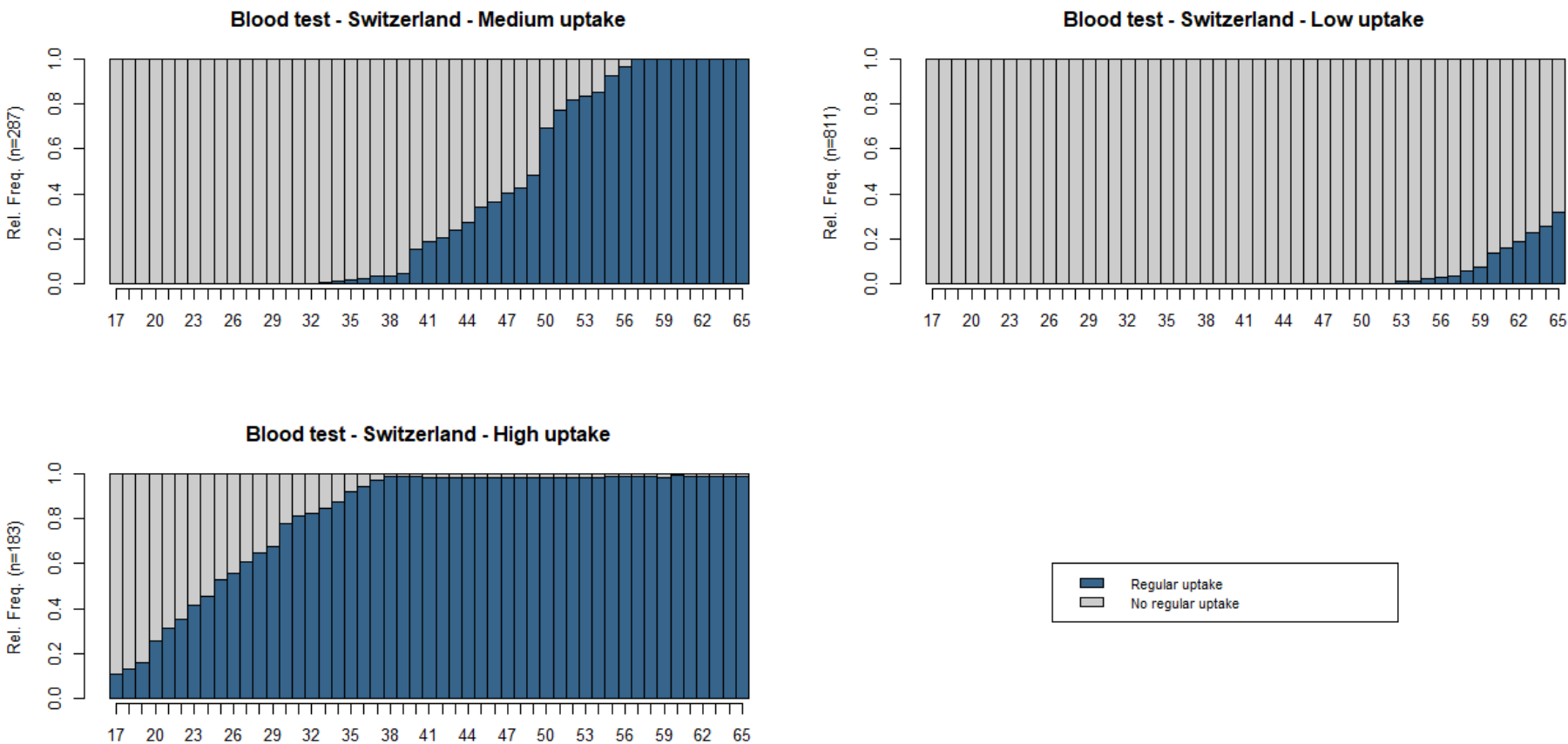


Figure S76 Routine healthcare uptake clusters – Switzerland – Vision

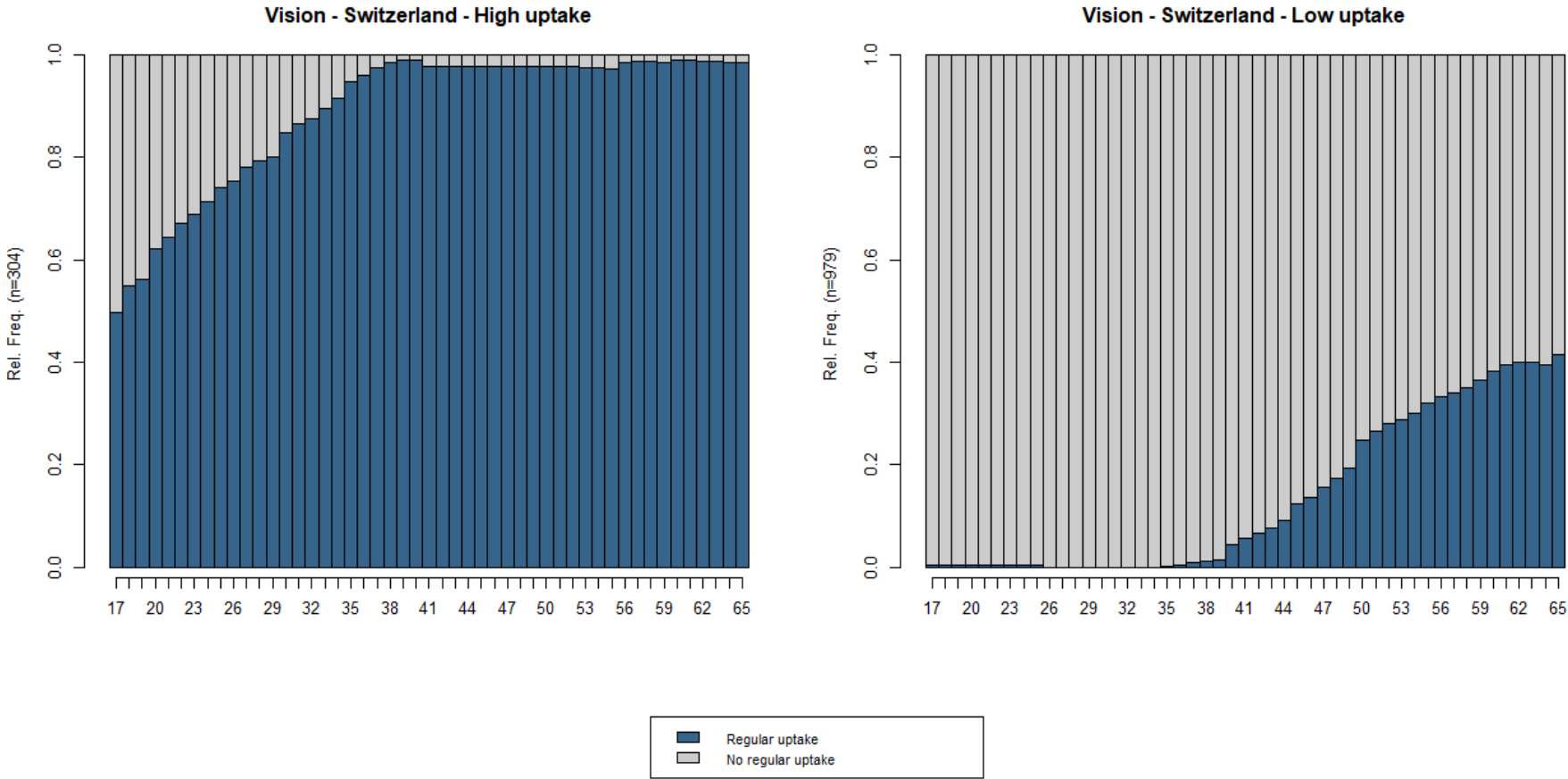


Figure S77 Routine healthcare uptake clusters – Switzerland – Gynecology

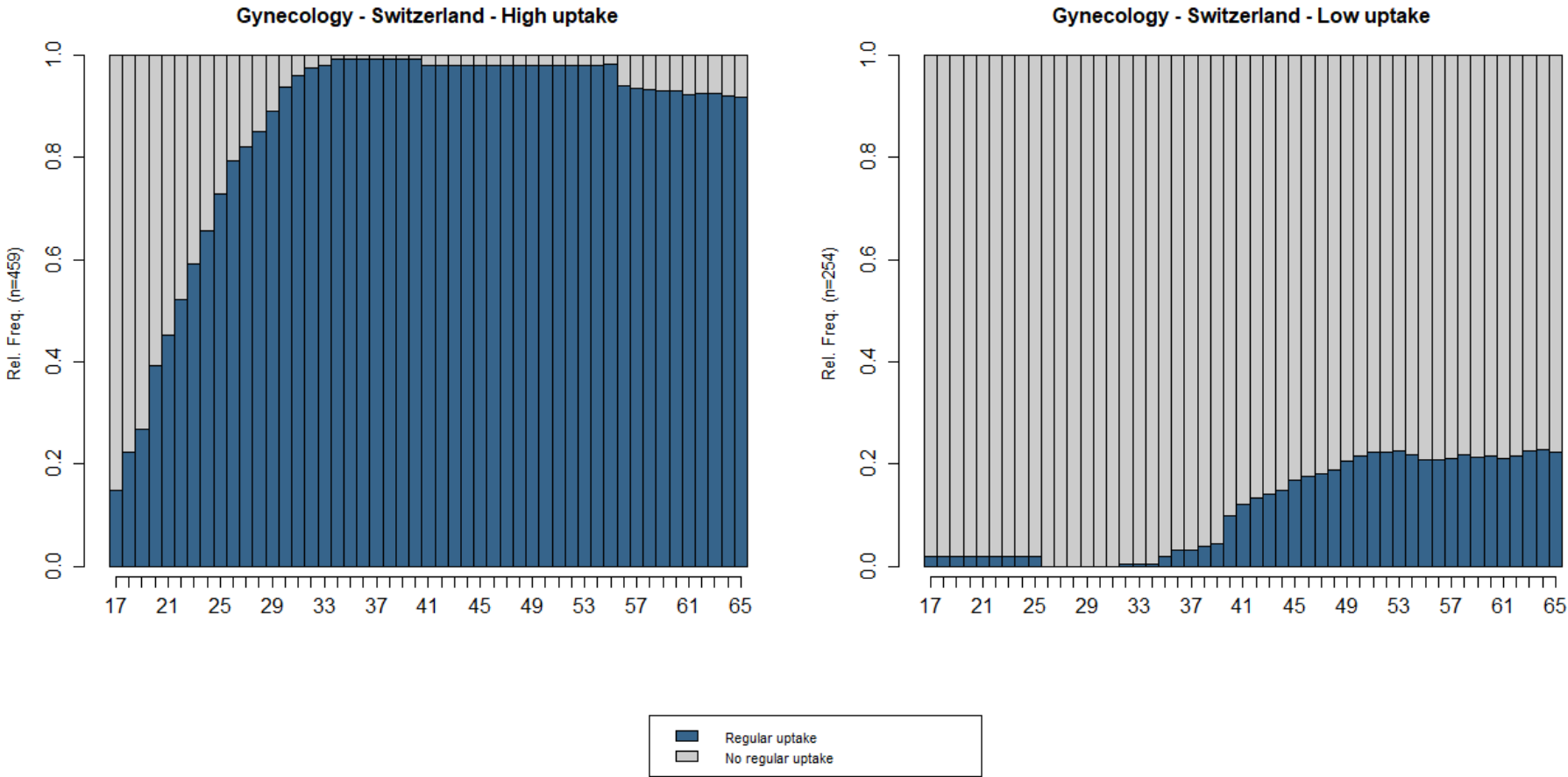


Figure S78 Routine healthcare uptake clusters – Switzerland – Mammography

