Additional File 3: Multivariable analyses of associations with not advising vaccinations despite STIKO-recommendation in GPs and PAs separately.

		GP (n=774)								PA that are (partly) responsible for vaccination advices in their surgery (n= 456)							
		Did not advise any vaccination		**Did not advise Tetanus vaccination**		**Did not advise Influenza vaccination**		**Did not advise pneumococcal vaccination**		**Did not advise any vaccination**		**Did not advise Tetanus vaccination**		**Did not advise Influenza vaccination**		**Did not advise pneumococcal vaccination**	
	Variables	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**	**OR (95%CI)**	**p-value**
SD	Sex (Reference: female)			1.52 (0.88-2.64)	0.133					3.70 (0.84-16.40)	0.084			3.88 (0.70-21.38)	0.119		
SD	Practice in Western part of Germany (Reference: East)	2.81 (1.59-4.97)	**<0.001**	1.92 (0.89-4.14)	0.096	3.00 (1.37-6.55)	**0.006**	2.87 (1.48-5.55)	**0.002**								
SD	Amount of patients of at least 60 yrs < 50% (Reference: ≥50%)			2.15 (0.79-5.89)	0.143					2.19 (1.20-4.00)	**0.011**					4.05 (1.57-10.44)	**0.004**
SD	Amount of patients of ≥ 60 yrs (continuous variable)	0.99 (0.98-1.0)	0.117											0.97 (0.95-1.00)	0.023		
SD	Specialty*: No specialization*			0.21 (0.03-1.67)	0.14												
KL	Feels sufficiently informed regarding vaccinations for adults																
KL	*Yes (Reference)*			1 (ref)													
KL	*Neutral*			2.79 (1.16-6.69)	**0.022**												
KL	*No*			2.58 (0.51-13.15)	0.253												
Attitudes	Wants better information on changes of official recommendations																
Attitudes	*Yes (Reference)*																
Attitudes	*Neutral*									0.59 (0.25-1.40)	0.234					0.20 (0.04-1.05)	0.057
Attitudes	*No*									0.86 (0.31-2.41)	0.772					0.34 (0.06-2.00)	0.234
Attitudes	Trusts in official recommendations																
Attitudes	*Yes (Reference)*	1 (ref)				1 (ref)		1 (ref)									
Attitudes	*Neutral*	3.61 (1.56-8.32)	**0.003**			4.03 (1.54-10.57)	**0.005**	2.23 (0.93-5.34)	0.071	2.11 (0.84-5.29)	0.112			2.61 (0.63-10.83)	0.186		
Attitudes	*No*	19.30 (2.28-163.24)	**0.007**			26.81 (2.96-243.12)	**0.003**	14.39 (2.87-72.31)	**0.001**	1.59 (0.20-12.74)	0.664			0.44 (0.02-12.71)	0.630		
Attitudes	General objection of vaccinations																
Attitudes	*Yes (Reference)*			1 (ref)													
Attitudes	*Neutral*			0.70 (0.03-17.46)	0.83												
Attitudes	*No*			0.16 (0.02-1.51)	0.11												
Attitudes	Likes to counsel about vaccinations																
Attitudes	*Yes (Reference)*	1 (ref)				1 (ref)		1 (ref)									

Neutral	2.94 (1.56-5.54)	**0.001**			2.20 (0.96-5.04)	0.062	2.38 (1.24-4.56)	**0.009**								
No	1.02 (0.24-4.27)	0.976			0.20 (0.01-5.05)	0.33	0.91 (0.21-3.97)	0.896								
Benefit of officially recommended vaccines exceeds its potential harms																
Yes (Reference)					1 (ref)		1 (ref)									
Neutral					0.80 (0.26-2.47)	0.703	0.39 (0.14-1.13)	0.083								
No					0.11 (0.02-0.65)	**0.015**	0.75 (0.24-2.31)	0.612								
Benefit of officially recommended influenza vaccine exceeds its potential harms																
Yes (Reference)					1 (ref)											
Neutral					3.82 (1.82-8.00)	**<0.001**							0.53 (0.12-2.29)	0.395		
No					17.81 (5.47-58.02)	**<0.001**							5.05 (1.45-17.57)	**0.011**		
Benefit of officially recommended pneumococcal vaccine exceeds its potential harms																
Yes (Reference)	1 (ref)						1 (ref)									
Neutral	1.85 (0.99-3.44)	**0.054**					1.95 (1.00-3.80)	**0.049**							1.25 (0.34-4.58)	0.734
No	3.26 (1.30-8.14)	**0.012**					2.81 (1.10-7.17)	**0.031**							23.74 (4.47-126.13)	**<0.001**
Regarding vaccinations, patients should be informed by:																
General Practitioner	0.31 (0.10-0.94)	**0.038**														
Medical specialist					1.57 (0.90-2.72)	0.11										
Health insurance company			3.09 (1.26-7.56)	**0.013**												
Physician Assistants			2.38 (1.20-4.74)	**0.013**												
Self-help/support groups for vaccine-preventable diseases															2.46 (0.70-8.70)	0.162
Media					0.66 (0.38-1.13)	0.129										
Public authorities									0.43 (0.21-0.90)	**0.026**						
Financial compensation for vaccinating and counseling is sufficient																
Yes (Reference)					1 (ref)											
Neutral					0.33 (0.15-0.73)	**0.006**										

No					0.28 (0.14-0.54)	**<0.001**										
There is not enough time to give council about vaccinations																
Yes (Reference)																
Neutral											0.14 (0.02-1.19)	0.072			0.57 (0.18-1.84)	0.351
No											0.32 (0.09-1.12)	0.074			0.30 (0.10-0.93)	**0.037**
Not counseling routinely at regular intervals	2.86 (1.37-5.96)	**0.005**			3.10 (1.03-9.38)	**0.045**	5.32 (1.88-15.03)	**0.002**	2.19 (0.87-5.56)	0.098						
Not counseling at first contact with patient															0.27 (0.09-0.79)	**0.017**
Counseling due to injuries					3.22 (1.00-10.37)	0.05										
Not counseling due to travel plans															21.46 (4.28-104.74)	**<0.001**
Not counseling when indicated by recall-system			0.56 (0.32-0.99)	**0.047**							0.42 (0.13-1.29)	0.129			0.34 (0.13-0.89)	0.028
Counseling is done by (reference: GPs and PAs)																
only GPs			2.44 (1.20-4.96)	**0.014**												
only PAs			Does not apply													
Source of information regarding vaccines																
Conferences														2.67 (0.86-8.28)	0.089	
Continuous (online) training			1.75 (0.99-3.09)	0.055									3.53 (1.21-10.30)	**0.021**		
Pharmaceutical representative									0.56 (0.30-1.03)	0.064	0.33 (0.10-1.03)	0.057		0.47 (0.19-1.15)	0.098	
Professional journals			1.99 (1.01-3.94)	**0.048**	2.24 (1.15-4.37)	**0.018**	2.08 (1.20-3.59)	**0.009**			3.12 (0.96-10.15)	0.059			2.70 (1.03-7.09)	**0.043**
Professional association											3.00 (0.67-13.36)	0.150			6.90 (2.00-23.84)	**0.002**
Other source (not specified)					2.36 (1.11-5.05)	**0.026**			2.36 (0.96-5.77)	0.060						
Does not seek information at all														16.77 (0.56-499.53)	0.103	

Practices

All variables with p<0.2 included in final models, statistical significant Odds Ratios (p<0.05) are shown in bold. SD=Sociodemographic and practice-characteristics, KL=Knowledge