

Rheinland-Pfalz



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PAE



Survey on the Vaccination Status of Midwives and on their Knowledge, Attitudes and Behaviour regarding Vaccination, Germany 2007

ESCAIDE 2008, Berlin

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Midwives in Germany

- Midwives support parents during pregnancy, delivery and in the first months after birth of their child (statutory standard)
- Access to parents
- Midwives often seen as trusted, independent consultant on child health issues
- Ca. 18,000 MW, 16,000 (88%) organised in professional association “Bund Deutscher Hebammen” (BDH)

Vaccination in Germany

- National recommendations by the German standing committee on vaccination (STIKO)
- Recommended vaccinations are NOT mandatory
- Health insurance covers STIKO-recommended vaccinations
- Responsibility of vaccination advocacy lies primarily with medical doctors
- Limited data on vaccination coverage of healthcare workers, esp. for midwives

Aims and Objectives

- Describe awareness, attitudes and practices of midwives regarding vaccination
- Measure vaccination status of midwives

in order to

- Work with BDH to improve vaccination coverage in Germany

Survey

- Cross sectional study
- Sampling
 - convenience sample
 - no access to sampling frame/ addresses
 - visitors of XI. German Midwives' Association Congress of BDH, May 07

Questionnaire

- Demography
- Place of training
- Further training
- Opinion on vaccination related statements
- Vaccination status of midwives (tetanus, diphtheria, pertussis, hepatitis b, influenza)
- Advocacy of routine childhood vaccinations

Methods: Analysis

- Descriptive analysis
- Prevalence ratios of advocated childhood vaccinations stratified by
 - place of training (East-West)
 - vaccination status of midwives
 - type of further training
 - opinion on vaccination related statements

Response

XI. German Midwives' Association Congress

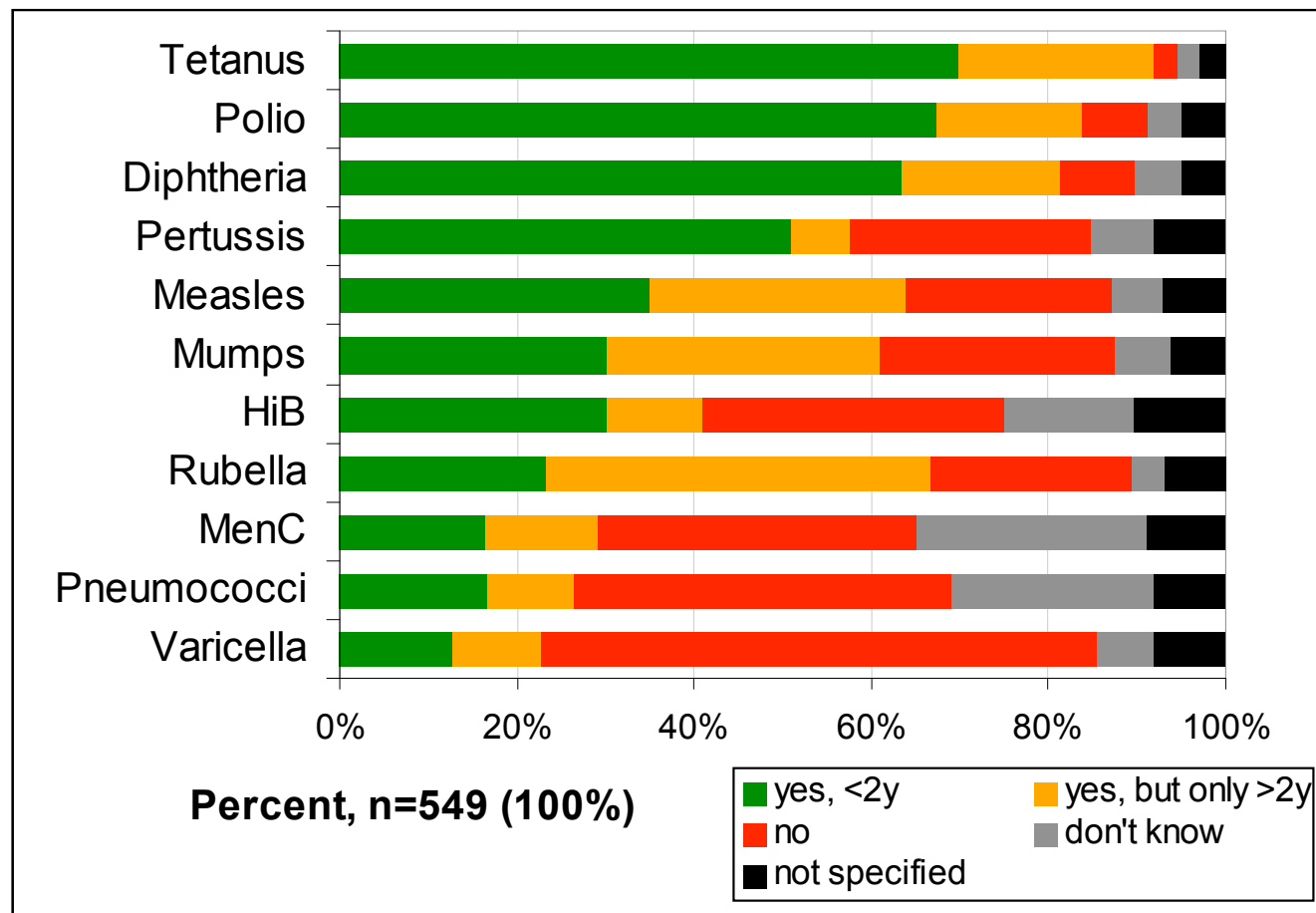
- 2300 participants
- 1200 questionnaires distributed
- 552 (46%) questionnaires returned (549 valid)

Results

- Median age 38 years (19–68)
- Median professional experience 13 years (0–46)
- 368 (67%) midwives advise parents on vaccination
- Respondants geographically representative of BDH membership per state
- Age distribution of BDH members unknown, no comparison with survey

Childhood vaccinations advocated by midwives

- Advocacy: vaccination completed by age two (STIKO)



Advocated vaccinations by Alternative Medicine Training

Vaccination advocacy	no AM	AM	PR (95%CI)	p-value
Polio	80%	68%	1.2 (1.1 - 1.3)	<0.01
HiB	49%	32%	1.6 (1.2 - 2.0)	<0.01
Hepatitis B	12%	6%	2.1 (1.1 - 3.9)	0.02
Measles	45%	35%	1.3 (1.0 - 1.6)	0.03
Mumps	39%	30%	1.3 (1.0 - 1.7)	0.04
Rubella	30%	22%	1.4 (1.0 - 1.8)	0.05
Varicella	20%	11%	1.8 (1.2 - 2.9)	0.01
Pneumococci	30%	20%	1.5 (1.0 - 2.1)	0.03

**„Midwives with AM training are less
likely to advocate vaccinations“**

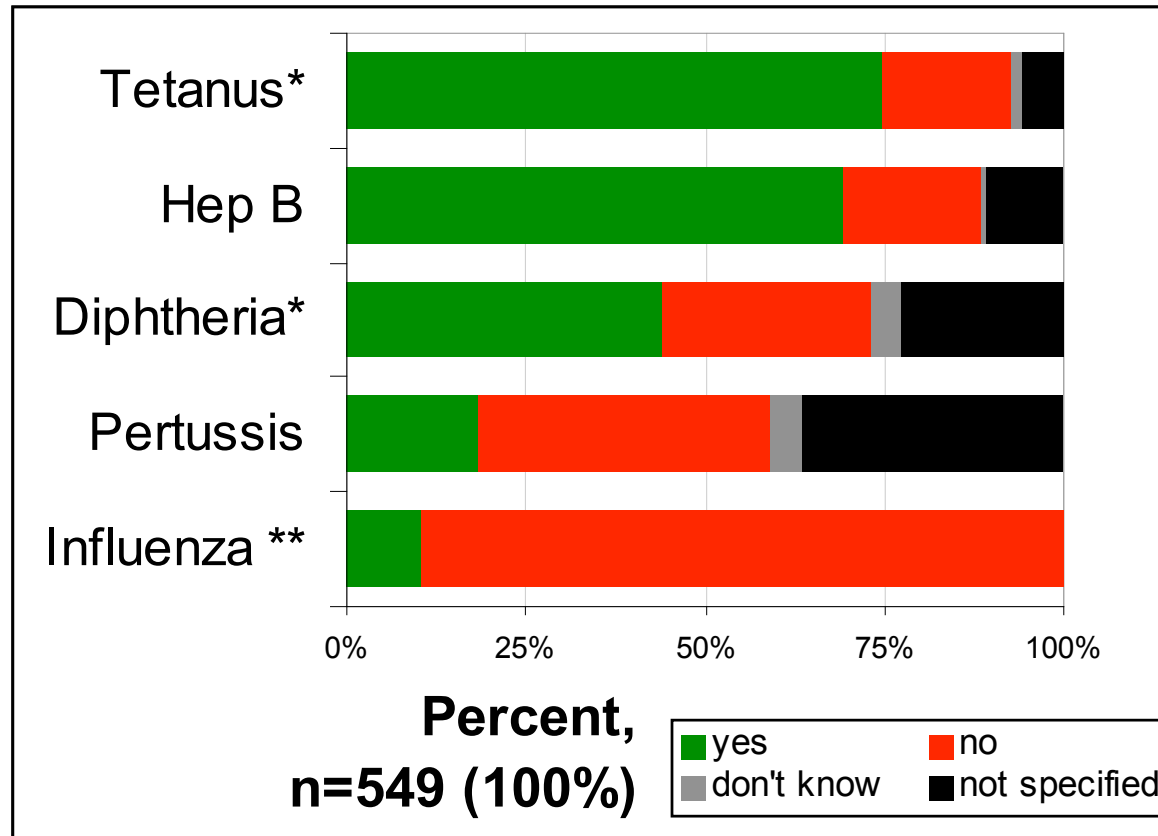
Results: Midwives 2007, Germany

Advocated vaccinations: more factors

Stratified by	Interpretation
Training in AM	Midwives with AM training are less likely to advocate vaccinations
Counselling parents	Midwives who counsel parents are less likely to advocate vaccinations
Place of training	Midwives who were trained in the west are less likely to advocate vaccinations
Training in vaccinology	Midwives with vaccinology training are less likely to advocate vaccinations (sic!)

Advocacy: vaccination completed by age two (STIKO)

Midwives' Vaccinations (of last 10 years)



*STIKO recommendation (once per 10y)

**vaccination received during season 2006/07

Results: Midwives 2007, Germany

Advocated childhood vaccinations by midwife's own vaccination

Vaccination advocacy			Midwife vaccinated	Midwife not vacc.	PR (95%CI)	p-value
	Tetanus	yes	314	49	1.5 (1.2 - 1.8)	<0.01
	no	78	42			
Dipht.	yes	196	69	1.6 (1.2 – 2.0)	<0.01	
	no	36	65			
Pertussis	yes	84	89	1.8 (1.5 - 2.1)	<0.01	
	no	13	94			
Hep B	yes	35	1	9.1 (1.3 -	0.03	
	no	296	85	65.4)		

Advocacy: vaccination completed by age two (STIKO)

(Dis)Agreement on vaccinations (selection)

	strongly disagree	rather disagree	no opinion	rather agree	strongly agree
Statement					
<i>Vaccines protect effectively against infectious diseases. n=542</i>	5%	20%	3%	45%	27%
<i>As many children as possible should be vaccinated to protect those who cannot be vaccinated. n=545</i>	18%	29%	14%	26%	13%
<i>Getting childhood diseases such as measles are important for the personal development of a child. n=542</i>	17%	24%	10%	34%	14%
<i>Measles can kill. n=541</i>	2%	11%	11%	33%	41%

Measles vaccination advocacy by opinion on measles

Vaccination advocacy		<i>“Measles important for personal development“</i>			
		agree	disagree	PR (95%CI)	p-value
	Measles yes	31	144	0.2 (0.1 – 0.3)	<0.01
	no	186	68		
		<i>“Measles can kill“</i>			
		agree	disagree	PR (95%CI)	p-value
	Measles yes	161	14	2.0 (1.2 – 3.2)	0.03
	no	203	49		

Advocacy: vaccination completed by age two (STIKO)

Discussion

- Vaccination seen as:
 - instrument for preventing infections ✓
 - improvement for individual health ✓
 - ...but not contribution to population health ✗
- Advocacy of vaccination depends on:
 - place of training, regional tradition
 - being vaccinated
 - training in AM
 - counselling parents

Limitations

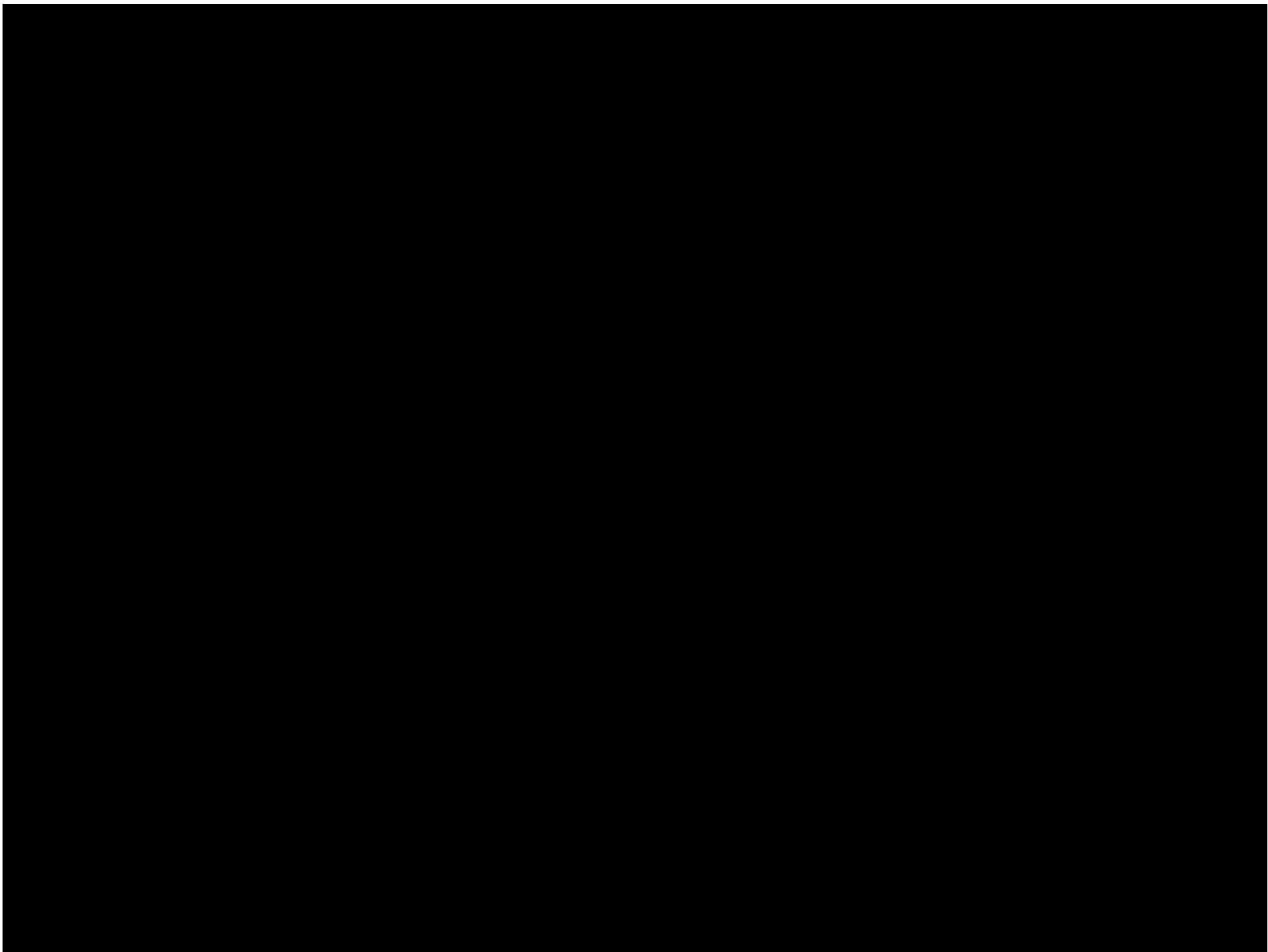
- Cross sectional study, low causality
- Difficult generalisability
 - convenience sample
 - response rate: 24% of congress visitors (participation bias)
- Vaccination status not confirmed by inspection of international certificate of vaccination
- No external reference group (beware of scapegoating!)

Recommendation

- promote vaccination of midwives
 - pre-employment medical-examination
 - catch-up campaigns
- offer training in vaccinology and infectious diseases
 - add epidemiology, treatment, prevention of infectious diseases to curriculum
 - emphasise population health effects
 - integrate benefit of vaccination in belief system of midwives

Acknowledgements

- Yvonne Deleré, Miriam Wiese-Posselt
- BDH: Ms Albrecht, Ms Höfer, Ms Kerlen-Petri



(Dis)Agreement on vaccinations (Likert)

	strongly disagree	rather disagree	no opinion	rather agree	strongly agree
Statement					
Vaccines contain too many additives. n=545	2%	11%	32%	31%	23%
The public needs more information about vaccinations' side effects and complications. n=545	3%	9%	4%	32%	51%
Combination vaccines are too much of a burden on infant's immune systems. n=547	3%	15%	7%	42%	31%

Further training in last 2 years

n = 549	Total	Percent
other training	394	71%
obstetrics	388	70%
alternative medicine	297	54%
psychosocial counselling	182	33%
vaccination	114	21%
no FT in last 2y	18	3%

multiple answers possible

Endorsed vaccinations by East - West

Vaccination endormsm.	Education in East-G.	Education in West-G.	Prevalence ratio (PR, 95%CI)	p-value
Pertussis	75%	55%	1,4 (1,2 - 1,6)	<0,001
Mumps	43%	32%	1,4 (1,0 - 1,8)	0,039