

# RheinlandPfalz



ROBERT KOCH INSTITUT



## 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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Landesuntersuchungsamt The logo of the Landesuntersuchungsamt (LUA), featuring the letters 'L' and 'A' in black, with a red and white test tube icon to the right.

# Midwives in Germany

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- 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

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- 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

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- 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

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

# Questionnaire

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- 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

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- 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

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## XI. German Midwives' Association Congress

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



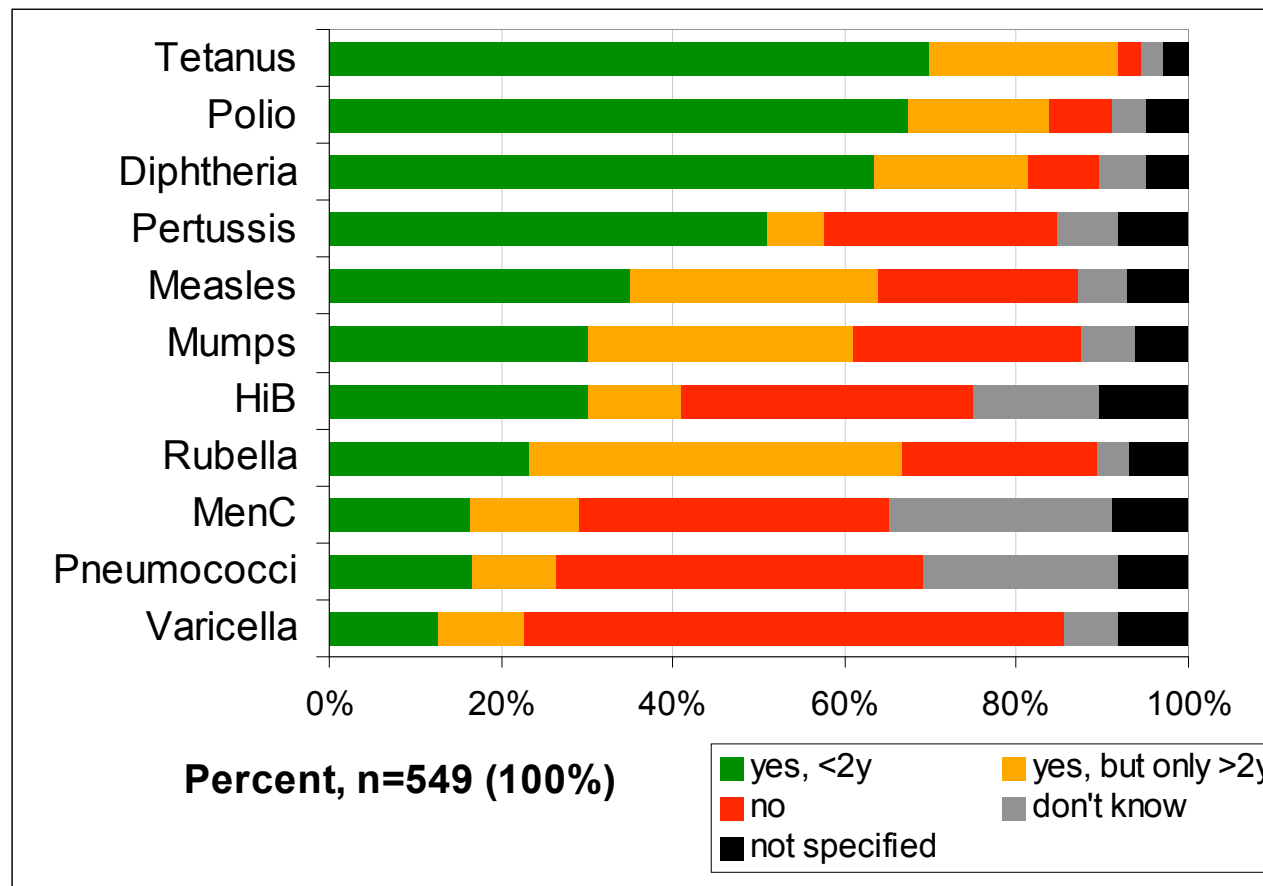
# Results

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- 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

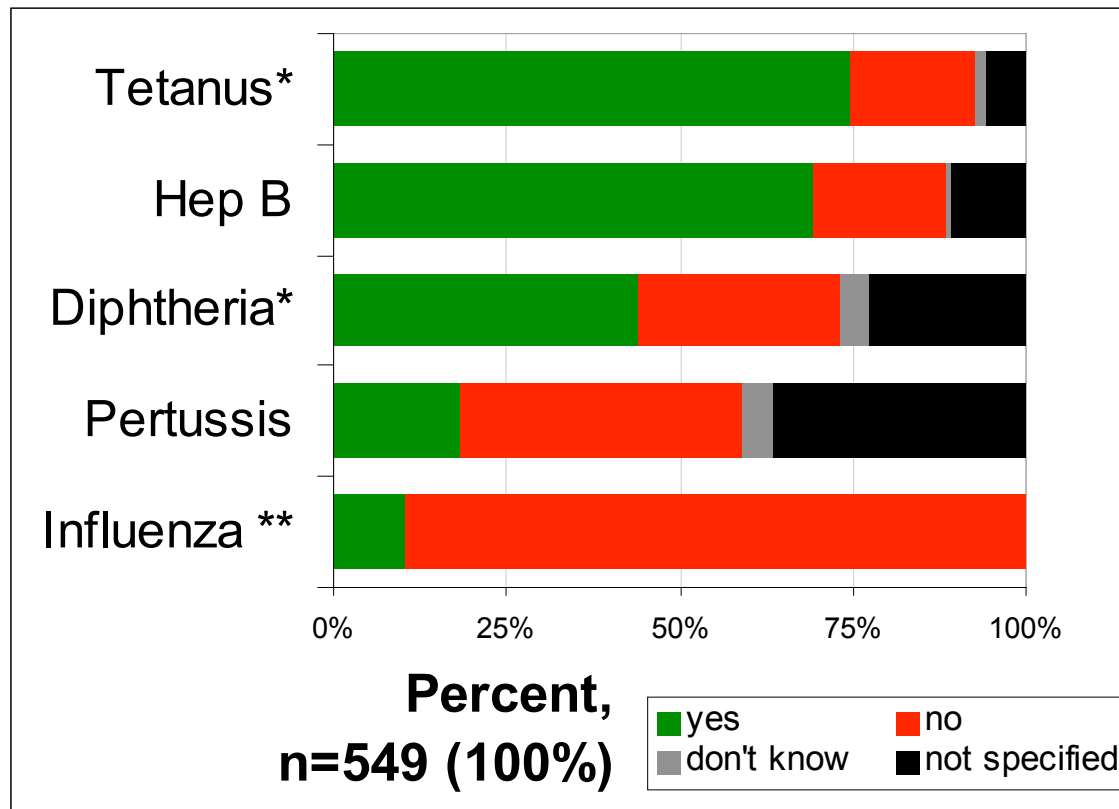
## Advocated vaccinations: more factors

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<b>Stratified by</b>	<b>Interpretation</b>
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 - 65.4)	0.03
	no		296	85		

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>	<b>5%</b>	<b>20%</b>	<b>3%</b>	<b>45%</b>	<b>27%</b>
<i>As many children as possible should be vaccinated to protect those who cannot be vaccinated. n=545</i>	<b>18%</b>	<b>29%</b>	<b>14%</b>	<b>26%</b>	<b>13%</b>
<i>Getting childhood diseases such as measles are important for the personal development of a child. n=542</i>	<b>17%</b>	<b>24%</b>	<b>10%</b>	<b>34%</b>	<b>14%</b>
<i>Measles can kill. n=541</i>	<b>2%</b>	<b>11%</b>	<b>11%</b>	<b>33%</b>	<b>41%</b>

# Measles vaccination advocacy by opinion on measles

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

Advocacy: vaccination completed by age two (STIKO)



# Discussion

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- 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

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- 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

# Recommendation

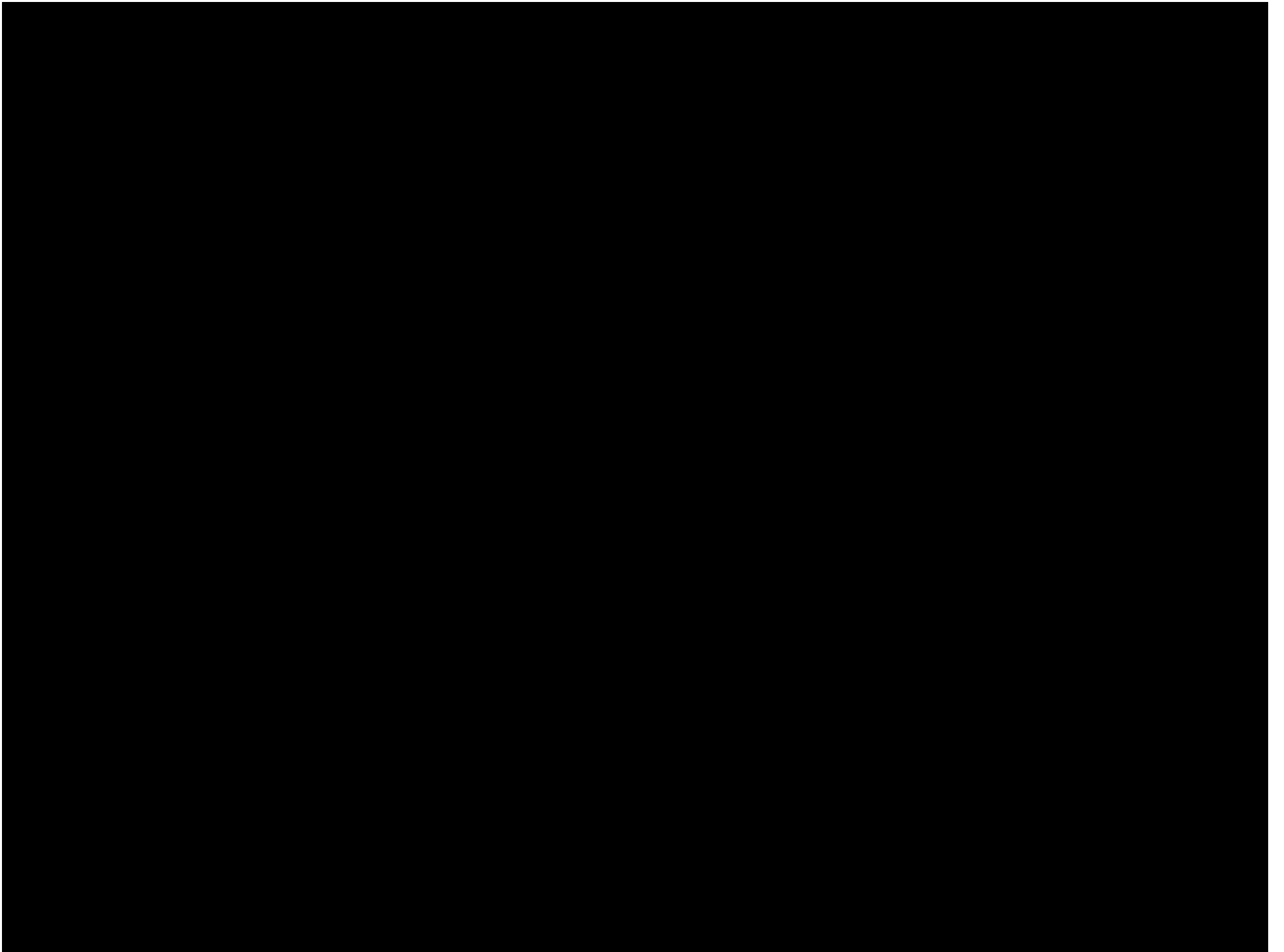
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- promote vaccination of midwives
  - pre-employment medical-examination
  - catch-up campaigns
- offer training in vaccinology and infectious diseases
  - add epidemiology, treatment, prevention of infectious diseases to curriculum
  - emphasise population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

# Acknowledgements

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



# Further training in last 2 years

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<b>n = 549</b>	<b>Total</b>	<b>Percent</b>
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