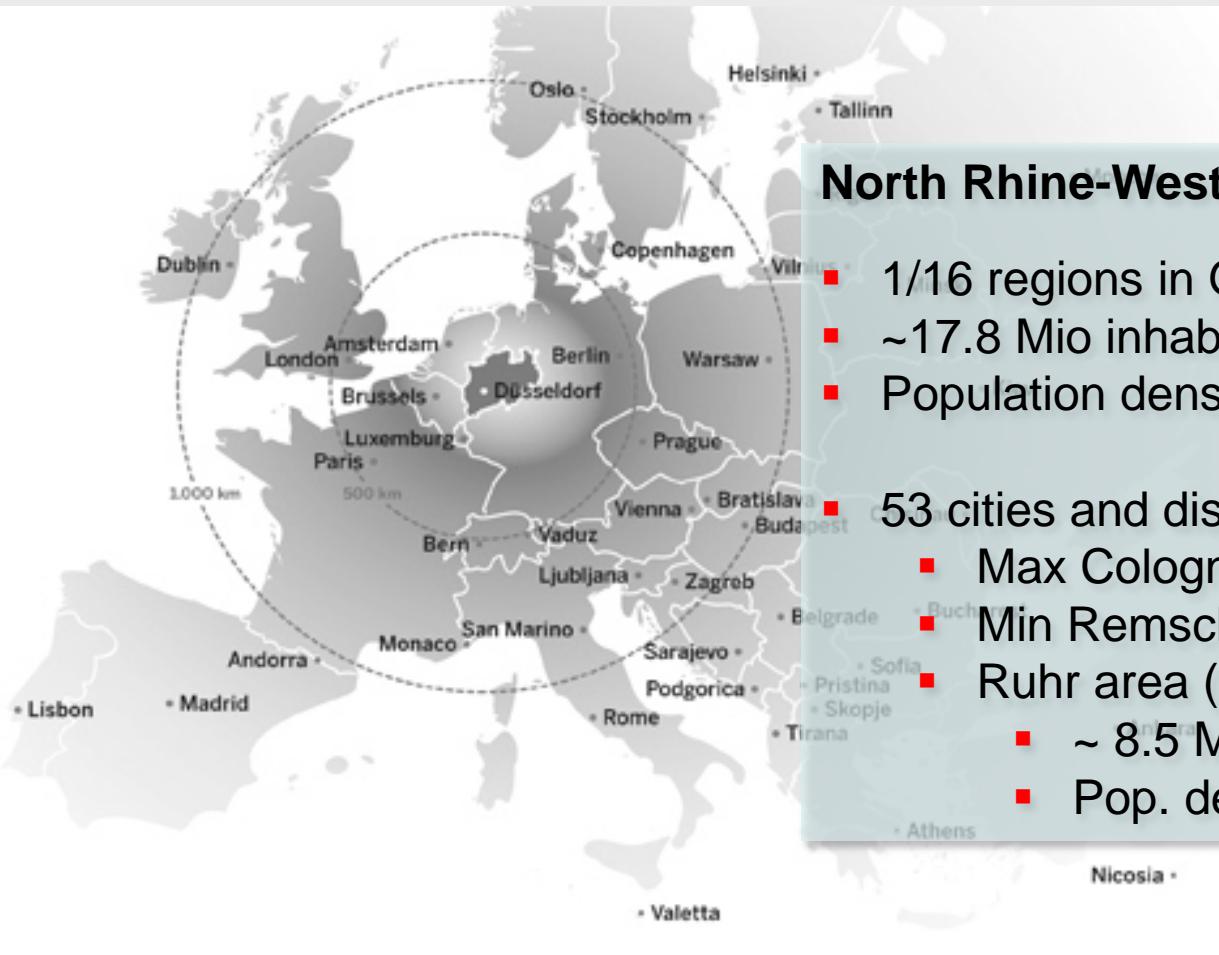




Public and environmental health information system in North Rhine-Westphalia

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Environment and Health Information System (ENHIS) in Estonia
29 January 2015



North Rhine-Westphalia

- 1/16 regions in Germany
- ~17.8 Mio inhabitants
- Population density: 523 inhabitants / km²

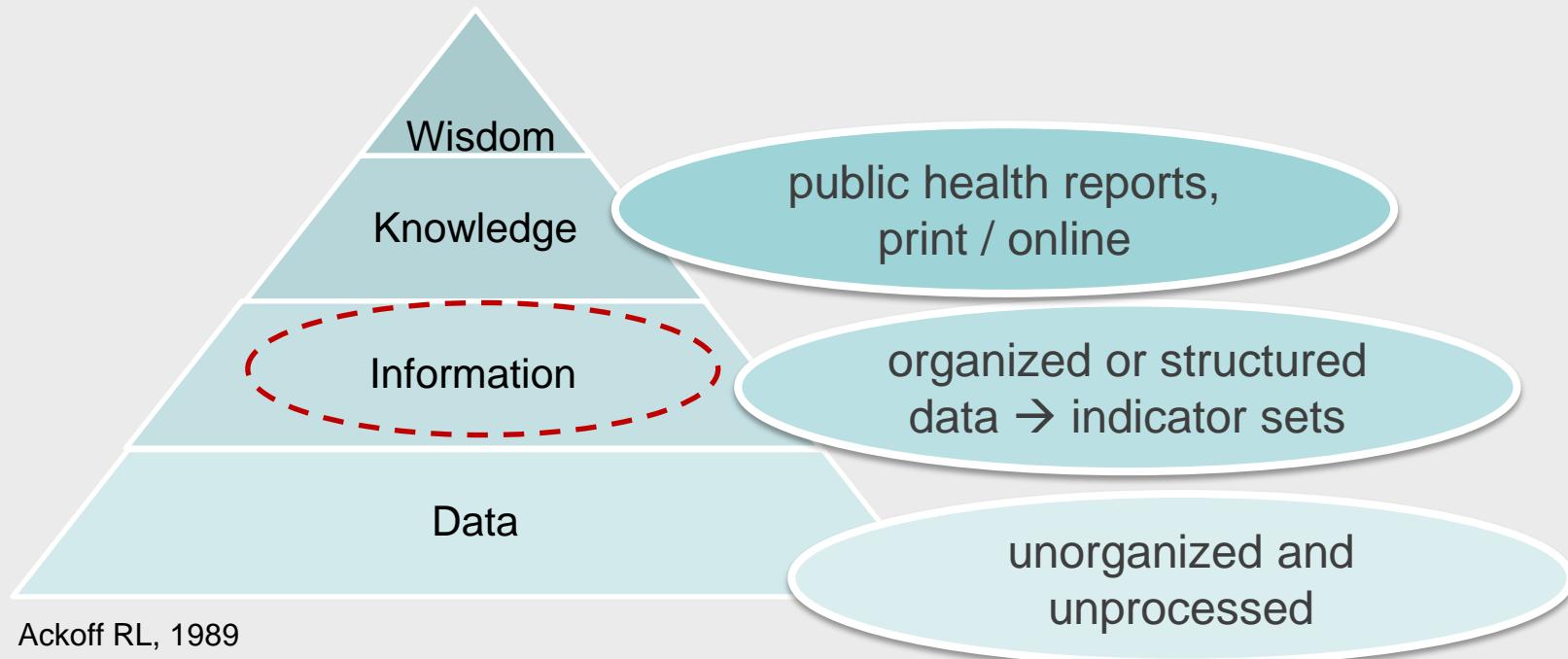
53 cities and districts

- Max Cologne: ~1 Mio inhabitants
- Min Remscheid: ~110,000 inhabitants
- Ruhr area (urban region)
 - ~ 8.5 Mio inhabitants
 - Pop. density: 1646 inhabitants / km²



What are we talking about?

DIKW-Hierarchy





Indicators for public health reporting in Germany

- Since 1992 defined in the „Regional indicator-set for public health reporting“
- 350 indicators, about 80 indicators in NRW are available on district/city level
- Topics
 - Population
 - Health & Disease
 - Health Behaviour
 - Health & Environment
 - Health care services
 - Health care utilization
 - Workforce & Training
 - Health care spending & costs





Overview indicators in NRW on regional level

Topic	indicators	available on city/district level
2 Population	30	17
3 Health & Disease	144	27
4 Health Behaviour	21	2
5 Health & Environment	14	5
6 Health care services	29	10
7 Health care utilization	40	11
8 Workforce	33	7
9 Training	4	--
10 Health care spending	28	--
11 Health care costs	8	--
Total	351	79



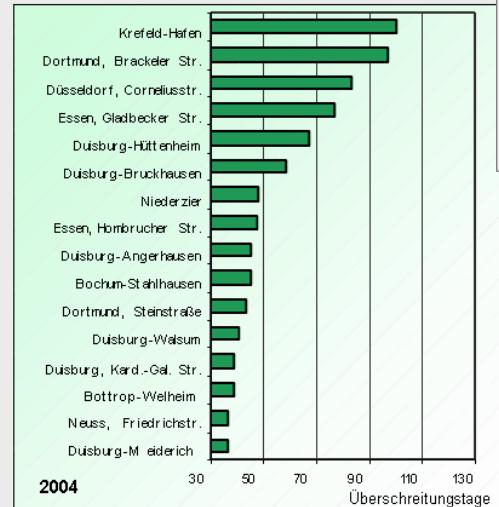
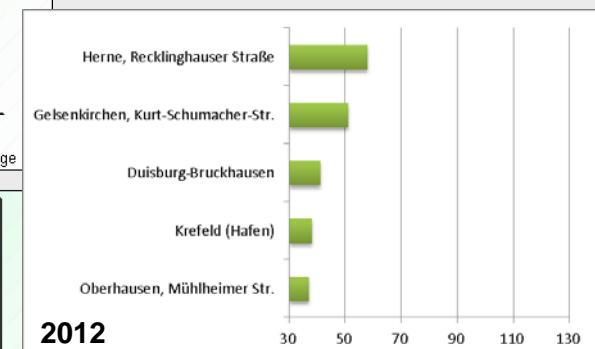
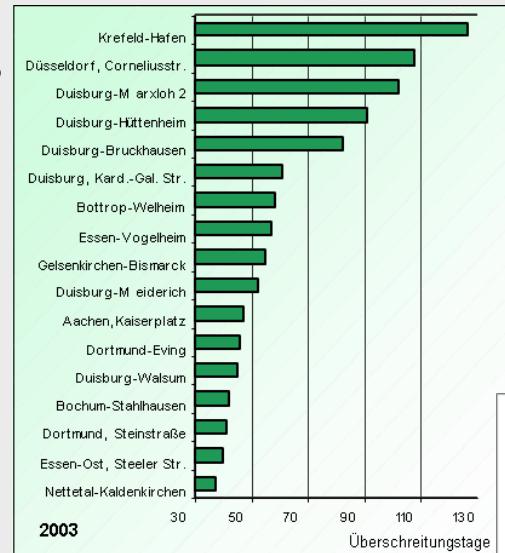
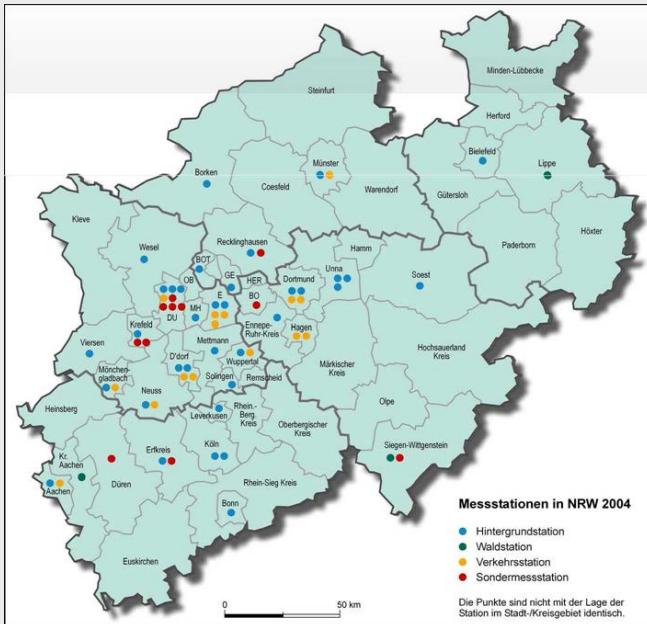
Focus: Environmental Health Indicators

- Air quality
 - Nitrogen dioxide
 - Sulphur dioxide
 - PM10
 - Ozone
 - Benzol
- Drinking water quality
 - Nitrate and pesticides
 - Lead, copper and trihalomethans
 - Escherichia coli and Enterococcus
- Annoyance (subjective) noise
- Chemicals in cow milk / human milk
 - Dioxine
 - PCB
- Working conditions (selected factors)
- Notifiable accidents at process plants – injured and killed persons
- Bathing water quality



Short report on PM10 pollution

Number of days with PM10 levels
 $> 50\mu\text{g}/\text{m}^3$
(monitoring stations with > 35 days
with exceeding PM10 levels)





Access to indicators

The screenshots show the following pages:

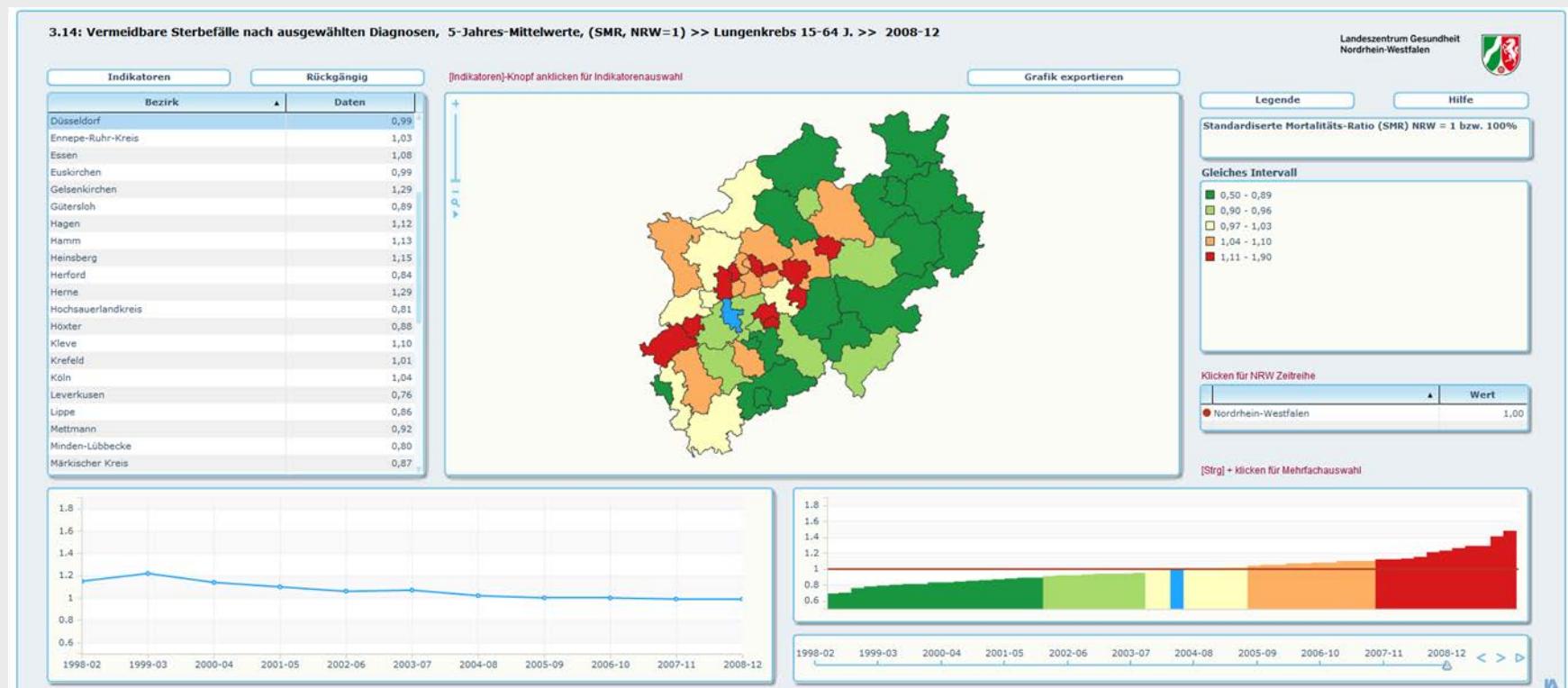
- Indikatoren der Länder-Gesundheitsberichterstattung**: A search results page for "Indikatoren der Länder-Gesundheitsberichterstattung". It includes a sidebar with navigation links like "GE-SÜDWESTLICHE VERSORGUNG, WIRTSCHAFT, CAMPUS", "ÖFFENTLICHES GE-SÜDWESTLICHE", and "SERVICE".
- Themenfeld 5: Gesundheitsrisiken aus der natürlichen und technischen Umwelt**: A search results page for "Themenfeld 5: Gesundheitsrisiken aus der natürlichen und technischen Umwelt". It includes a sidebar with navigation links like "GE-SÜDWESTLICHE VERSORGUNG, WIRTSCHAFT, CAMPUS", "ÖFFENTLICHES GE-SÜDWESTLICHE", and "SERVICE".
- Themenfeld 5: Gesundheitsrisiken aus der Umwelt**: A search results page for "Themenfeld 5: Gesundheitsrisiken aus der Umwelt". It includes a sidebar with navigation links like "GE-SÜDWESTLICHE VERSORGUNG, WIRTSCHAFT, CAMPUS", "ÖFFENTLICHES GE-SÜDWESTLICHE", and "SERVICE".

- indicators are online available
- each indicator is presented as html or Excel table
- for some indicators maps or interesting graphs are available
- standardized metadata are provided for each indicator



Tools – graphical display of indicators

- Spatial distribution and time series





Tools – graphical display of indicators

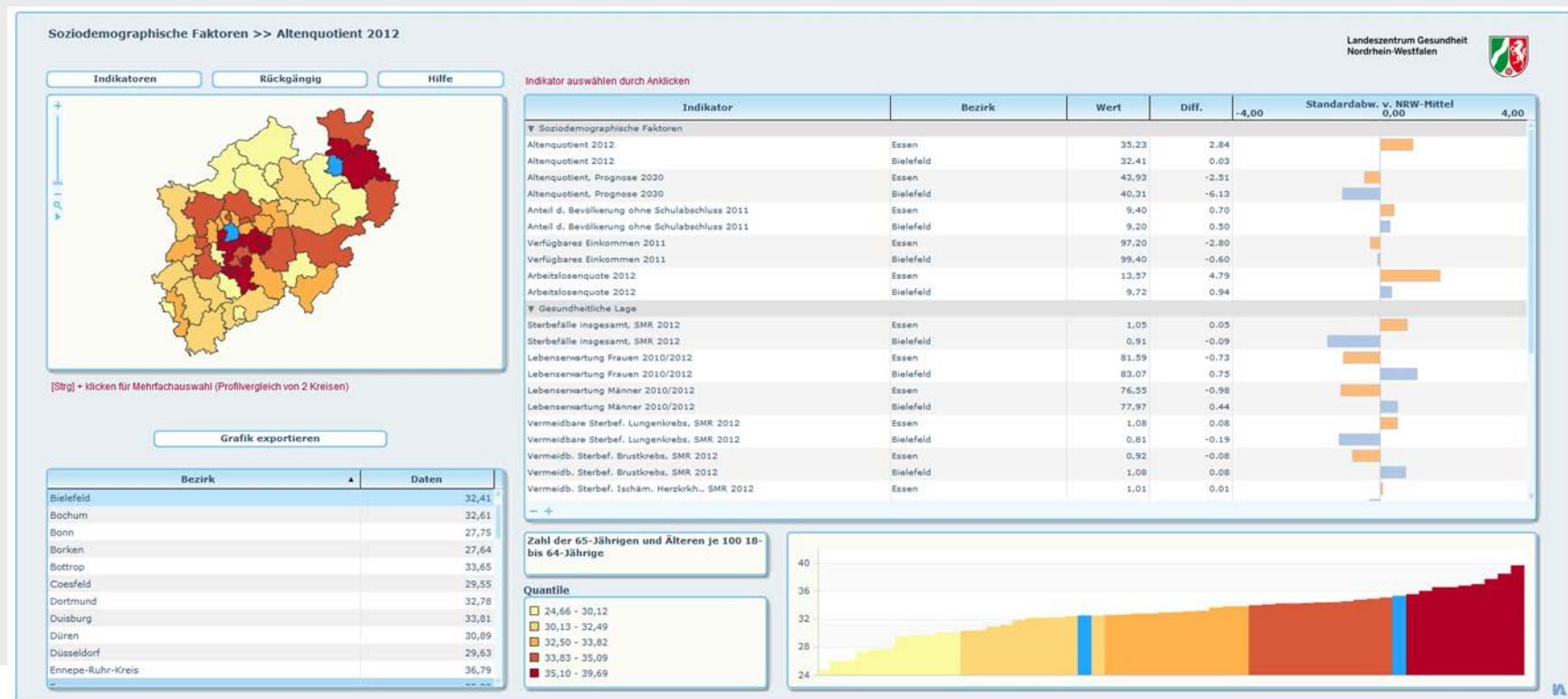
- Spatial distribution and time series
- Correlation analysis





Tools – graphical display of indicators

- Spatial distribution and time series
- Correlation analysis
- Comparison of general and child health profiles of two cities / districts





Tools – graphical display of indicators

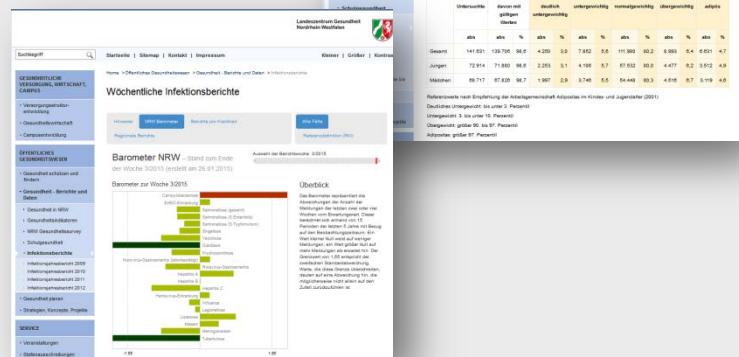
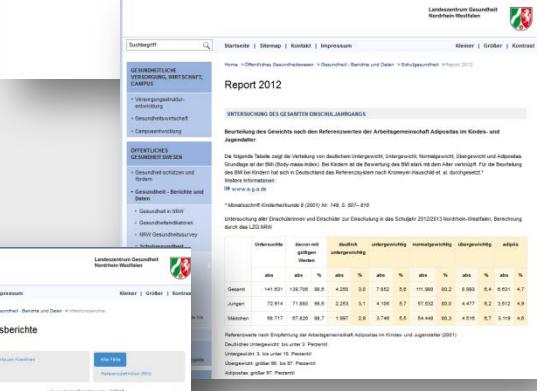
- Spatial distribution and time series
- Correlation analysis
- Comparison of general & child health profiles of two cities / districts
- Funnel plots





Other material

- NRW public health **reporting** strategy, regional public health reports, database for public health reports on city / district level
- Information on **child health** from the annual school-entry screening
- Information on **infectious diseases**
- Information on the results of the **annual health interview survey**





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health data | monitoring | reporting | forecasting | health services