

**DIGISOUL**

**CASA**

**CYBER SECURITY IN THE AGE  
OF LARGE-SCALE ADVERSARIES**

# Privacy Mental Models of Electronic Health Records A German Case Study

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# ELECTRONIC HEALTH RECORDS



# GERMAN HEALTH CARE



EHR available  
since 2021



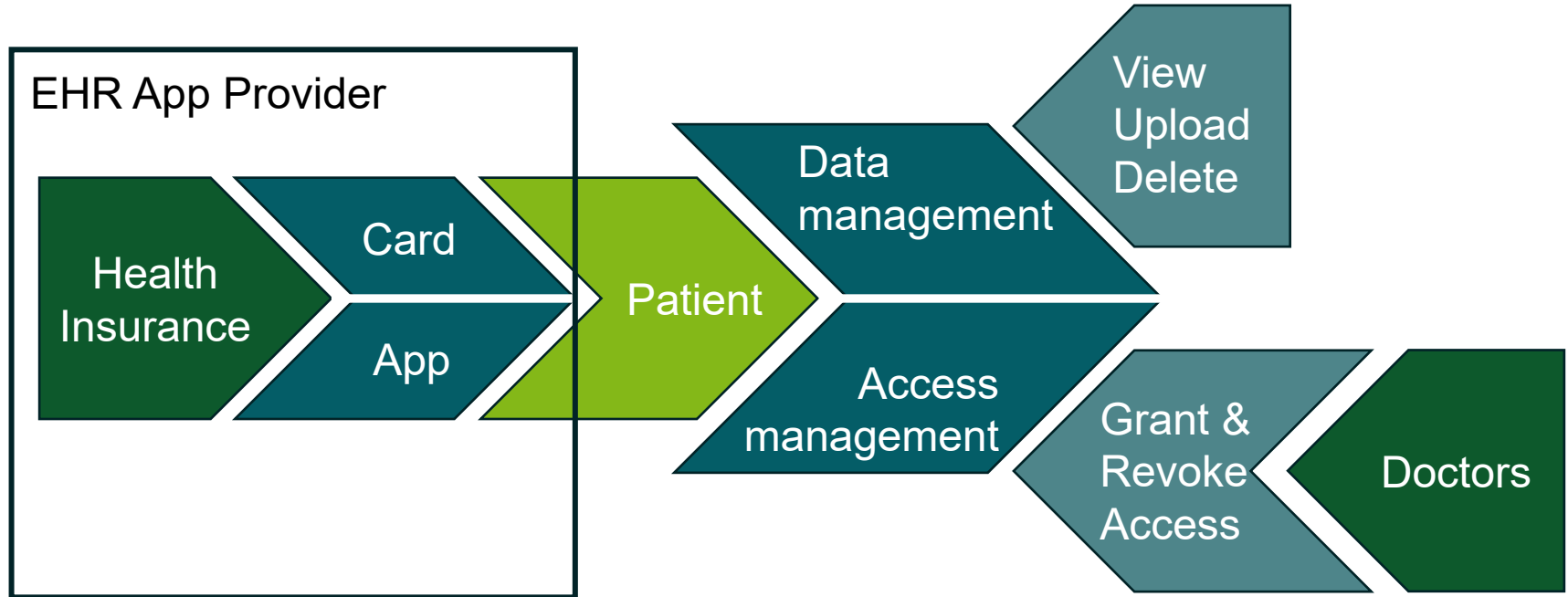
After a treatment,  
health insurances get

Doctor  
ID

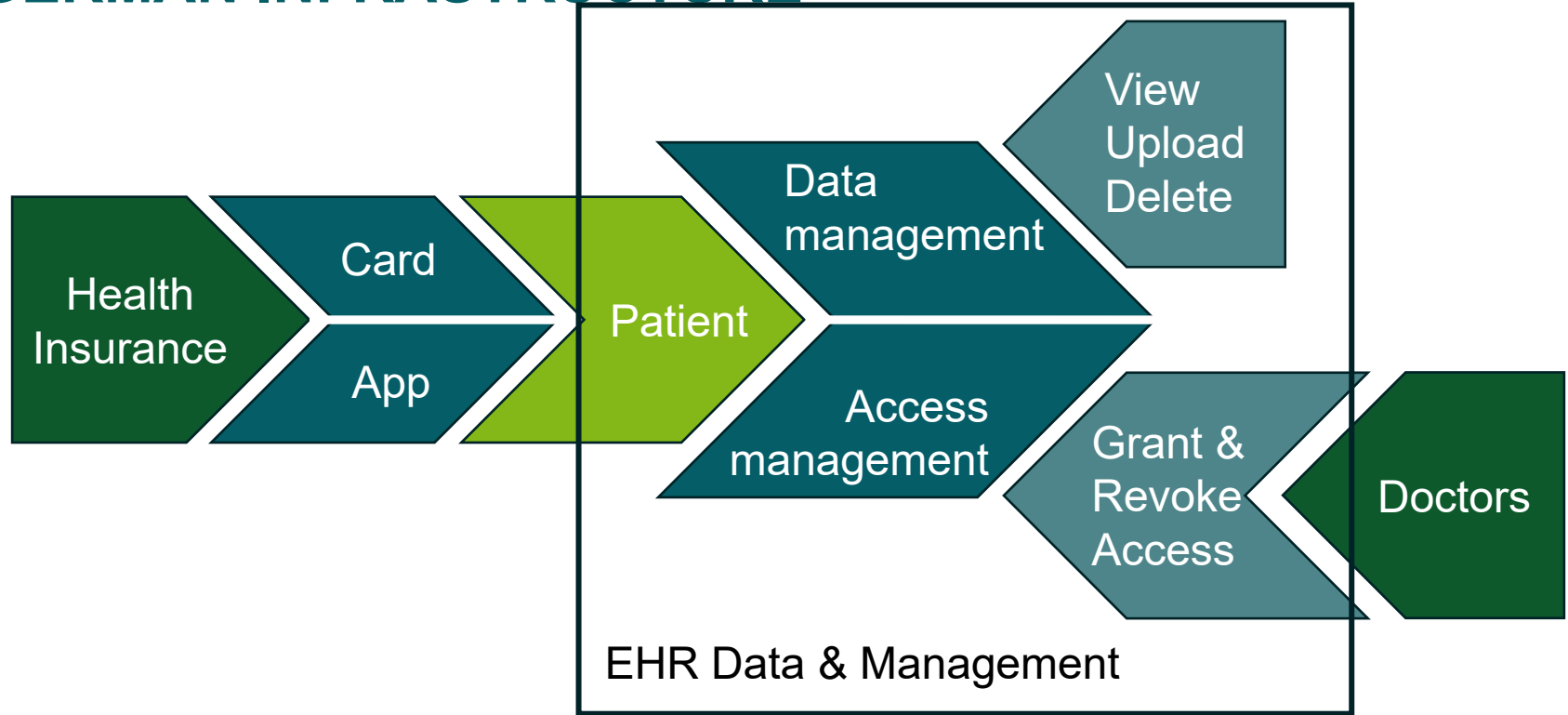
Billing  
code

Patient  
data

# GERMAN INFRASTRUCTURE



# GERMAN INFRASTRUCTURE



# RESEARCH QUESTIONS



RQ1: Which **mental models** do patients have regarding EHRs?



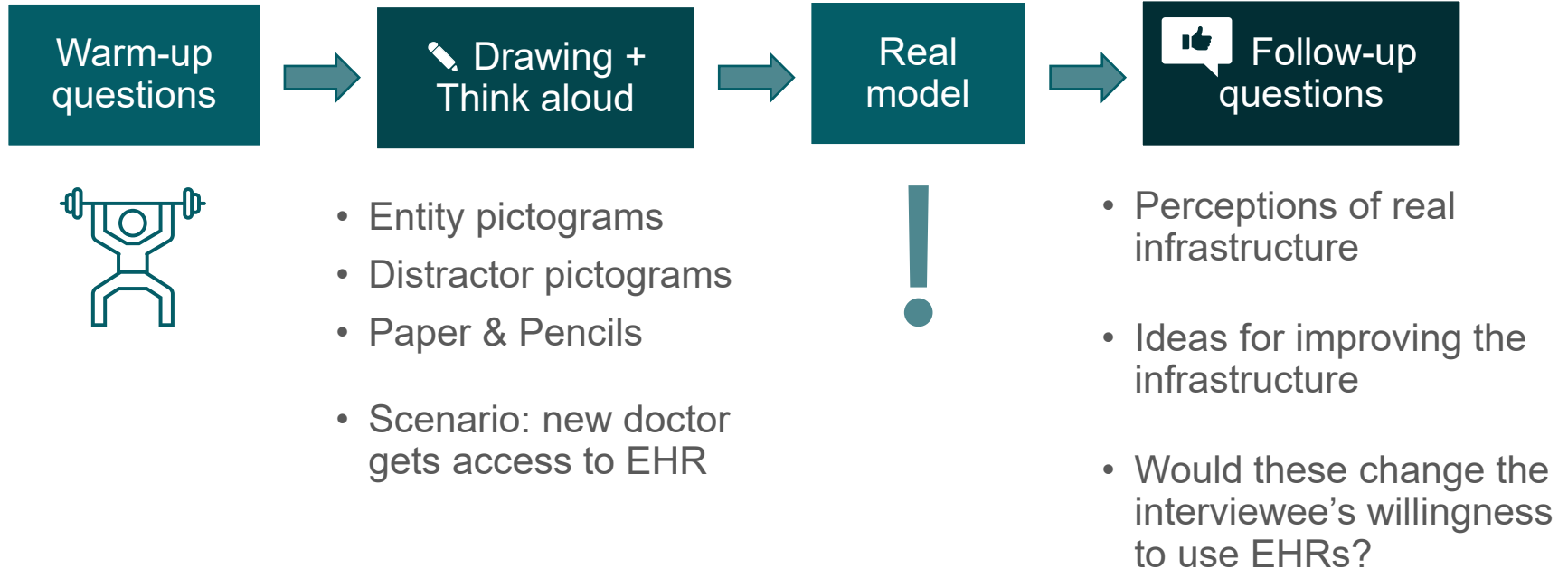
RQ2: What are patients' **misconceptions** of the EHR?



RQ3: Which **risks** do patients perceive in the EHR context?

# METHOD

Semi-structured interviews (N=21)



# RESULTS - MENTAL MODELS

RQ1: Which mental models do patients have regarding EHRs?

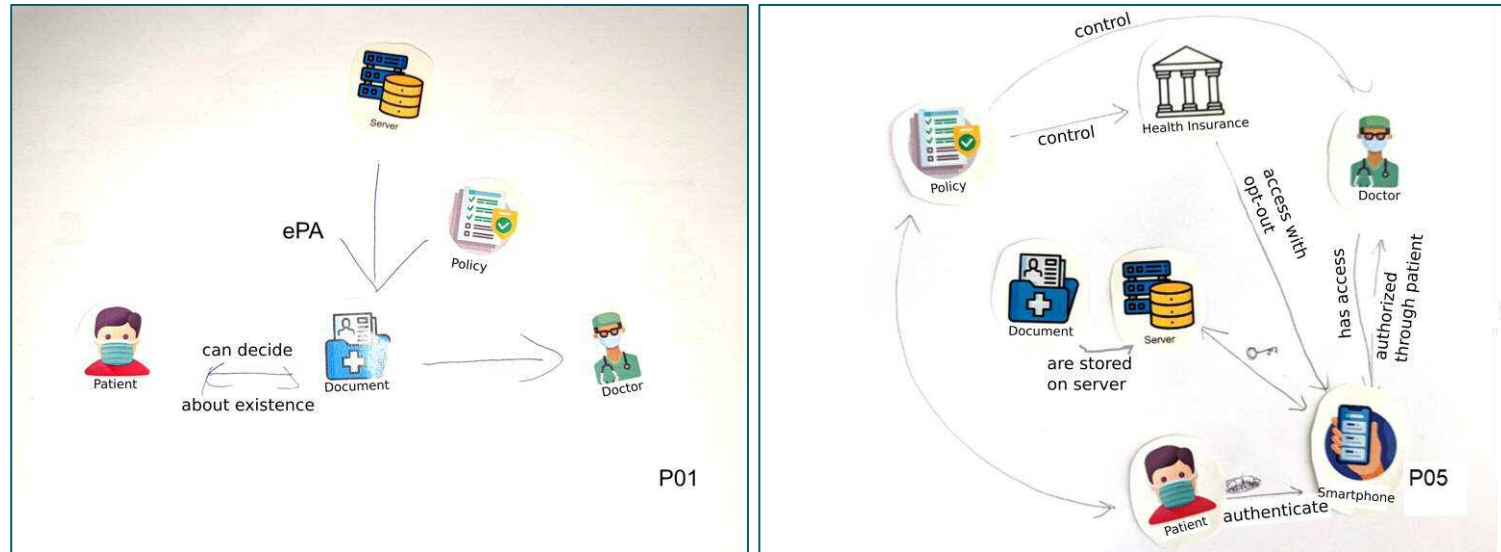


Fig.2: Exemplary results (drawing exercise)



# RESULTS - GAPS & MISCONCEPTIONS

RQ2: What are patients' misconceptions of the EHR?

*„Doctors have full control.“*

*„EHRs in Germany are not available.“*



*„Health insurance have all-access.“*

*„Emergency access is available.“*

# RESULTS - PERCEIVED RISKS

RQ3: Which **risks** do patients perceive in the EHR context?



## Perceived Risk 1: Role of Health Insurance

Fear of increased contribution rates



Privacy towards health insurance is essential

P17: ***“The health insurance and access to the data, I think that’s kind of pretty difficult. [...] You might be categorized differently in terms of contributions, [...] I think that’s very, very tricky if they had access to [the EHRs].”***

# RESULTS - PERCEIVED RISKS

RQ3: Which **risks** do patients perceive in the EHR context?



## Perceived Risk 2: Role of Patients

**+** Scope of control by patients

**-** Fear of mindless deletion

P5: "I really like that the patients can **authorize doctors**. They can also use the app to revoke that."

P13: "I just don't know whether it should be possible to **delete these things as a patient, which I see a bit critically**. I think it is important to archive such sensitive data."

# Thank you for your Attention!

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Insurances Should Not Provide Apps

Provide Emergency Access

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OF LARGE-SCALE ADVERSARIES

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Bundesministerium  
für Bildung  
und Forschung



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