

## INTERPOLAR | INTERventional POLypharmacy – drug interActions – Risks

### REDUCING MEDICATION PROBLEMS AND IMPROVING MEDICATION SAFETY

Older people, in particular, often take multiple medications at the same time. This can lead to medication-related problems, such as drug interactions and side effects. The consequences can be additional diseases and the need for therapy. In the INTERPOLAR project, the four medical informatics consortia DIFUTURE, HiGHmed, MIRACUM and SMITH are working together on IT solutions to improve medication safety.

INTERPOLAR builds on the predecessor project POLAR. POLAR developed and applied methods to collect personal medication data from routine care and pharmacies. INTERPOLAR is now using the findings from POLAR for application in clinical practice.

### IDENTIFYING RISKY MEDICATION AND INTERVENING APPROPRIATELY

An algorithm developed by experts helps hospital pharmacists to identify patients with an increased risk of clinically relevant and controllable medication problems. This can speed up risk assessment in routine evaluation and focus medication analysis on at-risk patients. INTERPOLAR is using the IT infrastructure established as part of the Medical Informatics Initiative (MII) from 2018 to 2022 to implement the project. It is coordinated by the SMITH Consortium office.

The benefits of the developed solutions will be demonstrated in an intervention study at eight university hospitals. Accompanying studies will show that the IT-supported risk assessment significantly reduces the number

of medication problems. Another seven hospitals will test the INTERPOLAR setup outside of a classical study setting. The data collected will be used to optimize the algorithms, develop multivariate prediction models, and determine cause-and-effect relationships for adverse drug reactions. This will reduce the workload of ward pharmacists and provide more targeted care for patients.



### GOALS

- Automatically identify patients at increased risk for relevant medication-related problems.
- Demonstrate that IT support can reduce medication-related problems.
- Deploy hospital pharmacists in a targeted and resource-efficient manner.
- Investigate cause-and-effect relationships of medication-related problems using care data.
- Test the infrastructure established in the Medical Informatics Initiative and demonstrate its added value for clinical practice.

INTERPOLAR started on January 1, 2023 and is funded by the German Federal Ministry of Education and Research (BMBF) with more than eight million euros until December 31, 2026.

# INTERPOLAR



## Project Partners

### CONSORTIUM MANAGEMENT

#### Leipzig

- Leipzig University, SMITH Office

### CONSORTIUM PARTNERS

#### Aachen

- University Hospital RWTH Aachen

#### Bonn

- Rhenish Friedrich Wilhelm University of Bonn / University Hospital Bonn

#### Dresden

- TU Dresden – Faculty of Medicine Carl Gustav Carus

#### Erlangen

- FAU Erlangen / University Hospital Erlangen

#### Essen

- Essen University Hospital

#### Freiburg

- Albert-Ludwigs-Universität Freiburg – Faculty of Medicine

#### Gießen

- University Hospital of Gießen

#### Halle

- University Hospital Halle (Saale)

#### Hamburg

- University Medical Center Hamburg-Eppendorf

#### Heidelberg

- Heidelberg University Hospital

#### Jena

- Jena University Hospital

#### Kiel

- University Hospital Schleswig-Holstein, Campus Kiel

#### Leipzig

- Leipzig University Hospital

#### Mainz

- University Medical Center of the Johannes Gutenberg-University Mainz

#### München

- Ludwig Maximilian University Munich – Hospital

#### Witten

- Witten/Herdecke University

### ASSOCIATED PARTNER

#### Berlin

- The Federal Association of German Hospital Pharmacists

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