



Universität  
Basel

ZUGER Kantonsspital

# KIRSCH Guideline

## Research project presentation

**PD Dr. Markus Lampert**

Pharmaceutical Care Research Group

Departement Pharmazeutische Wissenschaften

# KIRSCH Guideline

**K**onsequente **I**mplementierung eines  
pha**R**mazeutischen Medikationsmanagements zur  
Erhöhung der Sicherheit an der **SCH**nittstelle  
Spitalaustritt

**Pharmaceutical Care Research Group, Universität Basel**

Prof. KE Hersberger, PD Dr. ML Lampert, Dr. F Böni,

Dr. TL Imfeld-Isenegger,

Dr. H Studer

**Zuger Kantonsspital**

MG Ceppi, C Rosen, Prof. Dr. med. M Bodmer

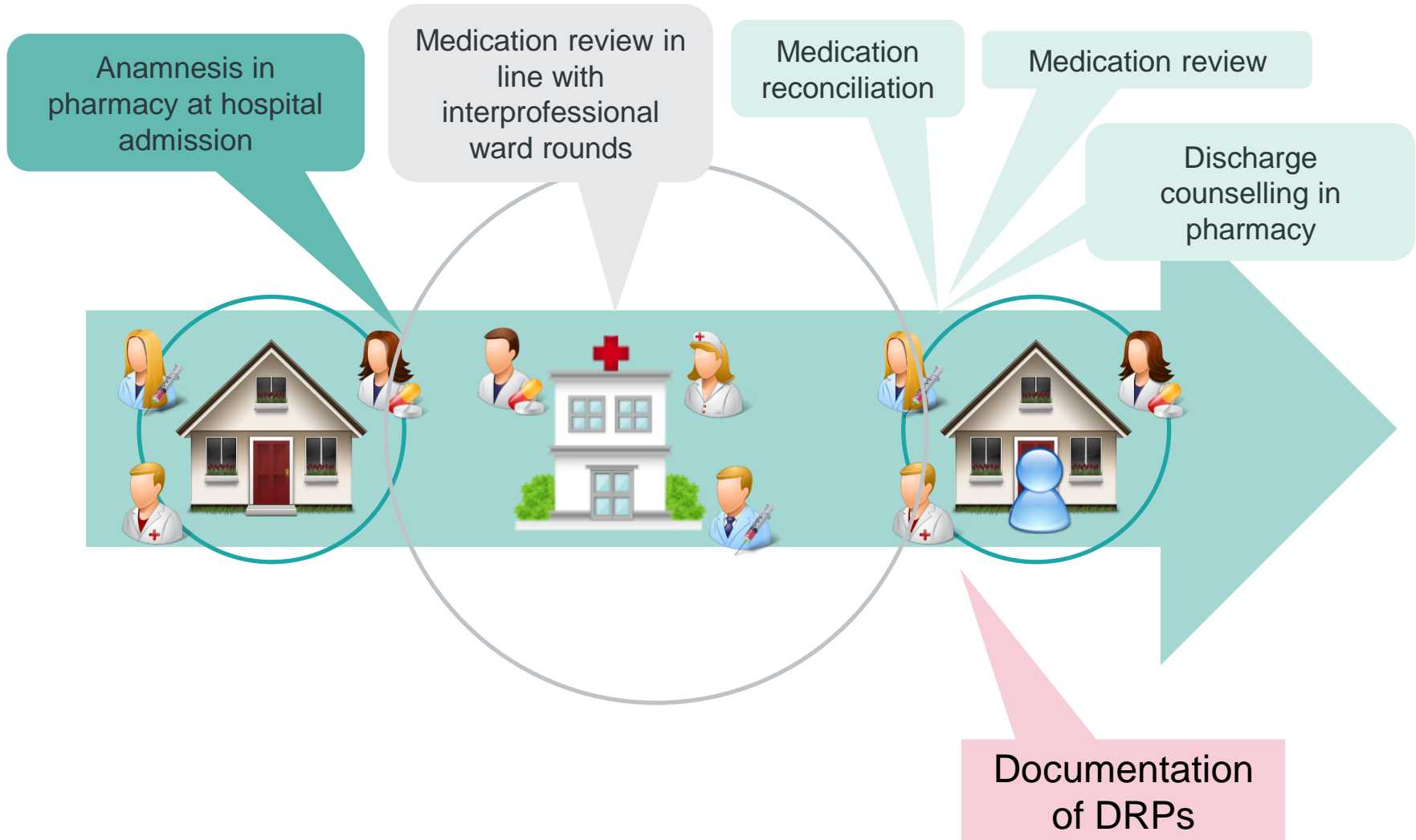
**Universität & Universitätsspital Zürich**

PE Beeler

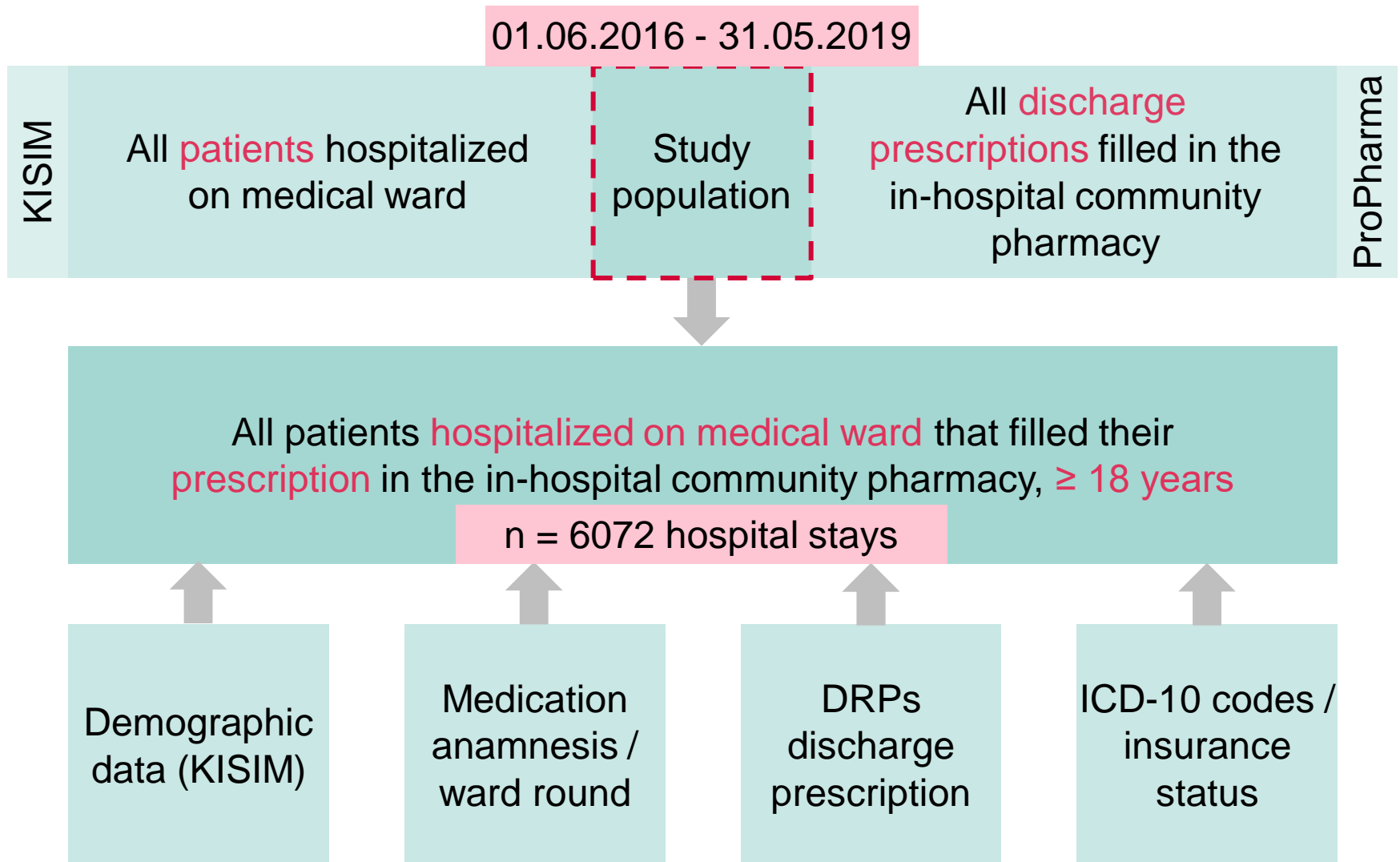
# Goal: KIRSCH Guideline

➡ Development of a guideline for a **systematic medication reconciliation** followed by a **medication review** in the hospital in order to optimize the medication management at hospital discharge

# Situation at the cantonal hospital in Zug



# Study population



# Subprojects of retrospective data analyses

1

- Characterization of DRPs

2

- Differentiating between DRPs detectable and resolvable by different types of medication reviews

3

- Analyzing the effect of pharmaceutical interventions previous to discharge

4

- Performing a subgroup analysis of the relevance of DRPs

5

- Supplementing the GSASA classification system with elements that arise specifically in line with medication reconciliation

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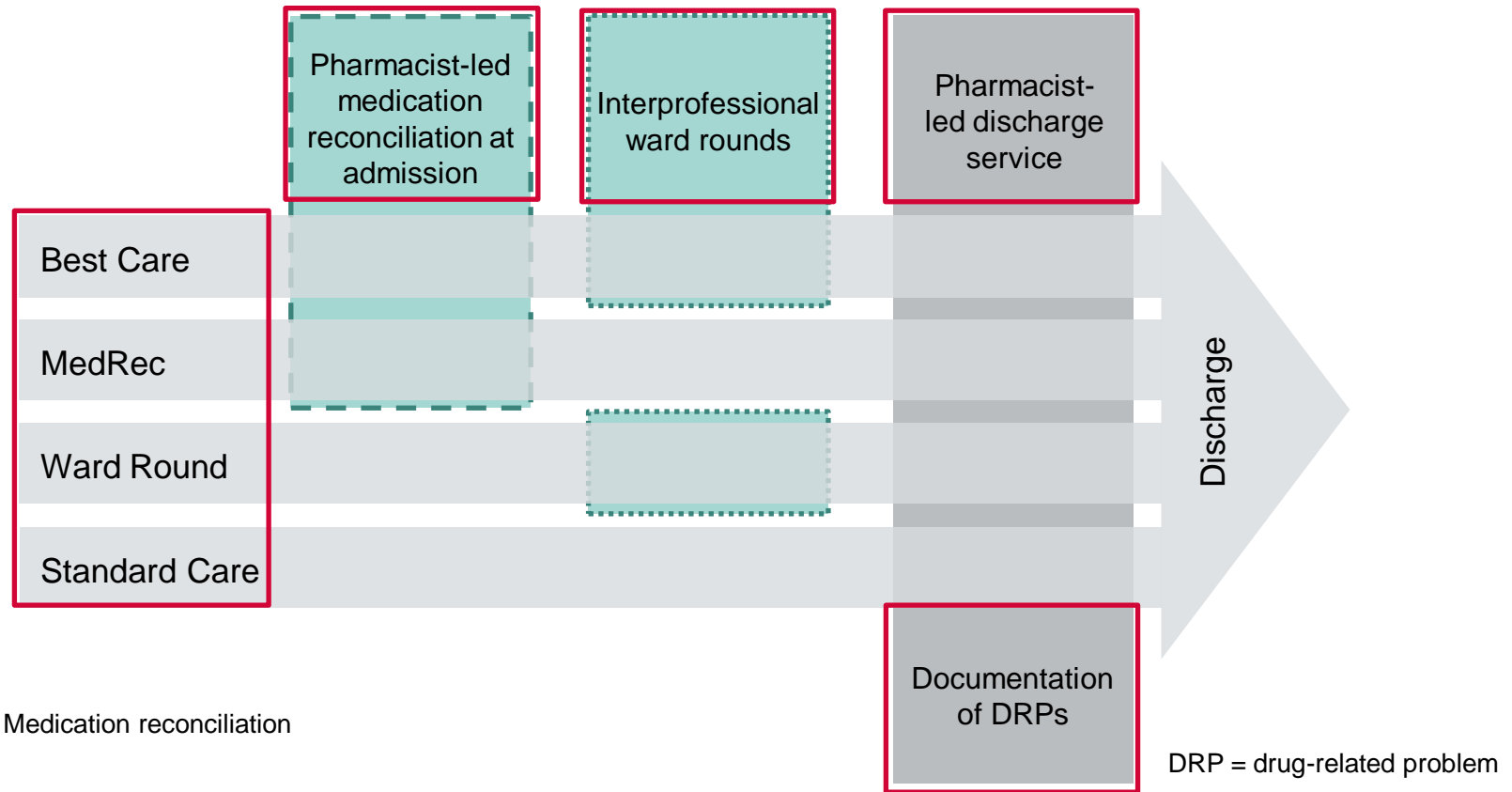
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# Impact of pharmacist-led services on DRPs at discharge

## Methods





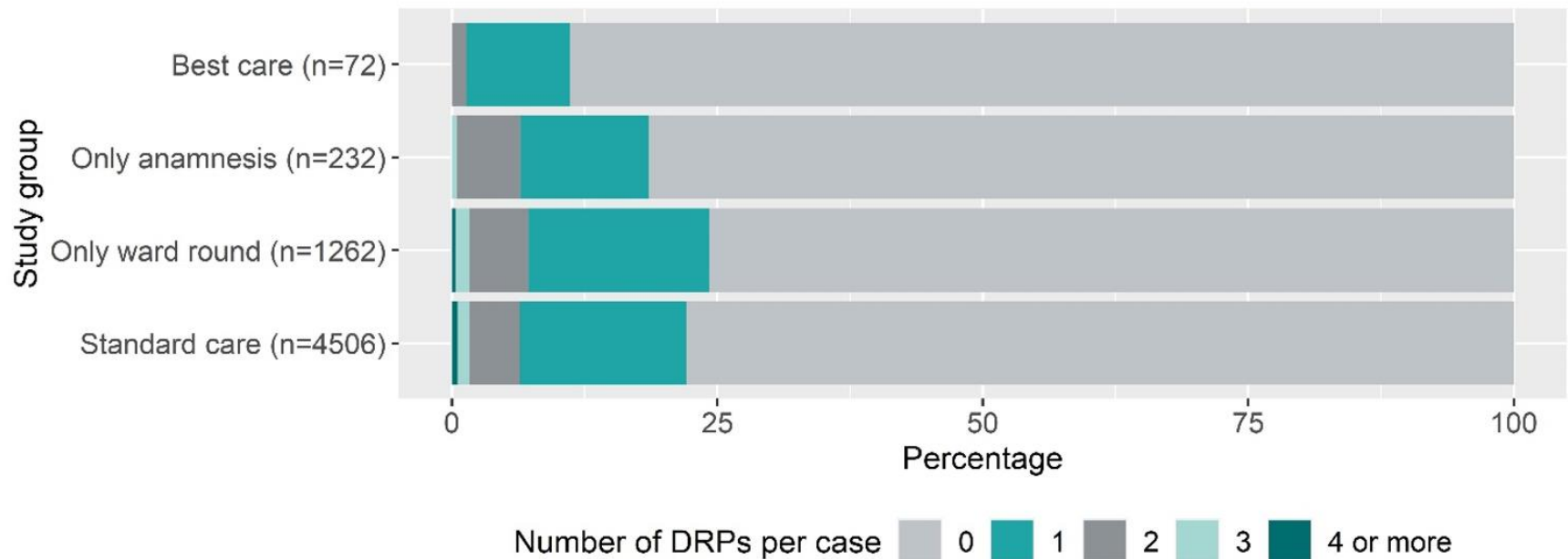
# Impact of pharmacist-led services on DRPs at discharge

## Results – Study population

		<b>Study population</b> <b>(n=6072)</b>	
<b>Age at discharge</b> , median [IQR]		75 [61, 83]	
<b>Female</b> , n (%)		3012 (49.6)	
<b>Planned admission</b> , n (%)		592 (9.7)	
<b>Length of stay (in days)</b> , median [IQR]		4.6 [2.9, 7.5]	
<b>Number of medicines at admission</b> , median [IQR]		5 [3, 9]	
<b>Number of medicines at discharge</b> , median [IQR]		7 [4, 10]	
<b>Number of <u>Elixhauser</u> comorbidities</b> [19,20], median [IQR]		2 [1, 4]	
<b>Study groups</b>			
<b>Best Care</b> <b>(n=72)</b>	<b><u>MedRec</u></b> <b>(n=232)</b>	<b>Ward Round</b> <b>(n=1262)</b>	<b>Standard Care</b> <b>(n=4506)</b>

# Impact of pharmacist-led services on DRPs at discharge

## Results – Number of DRPs at Discharge



# Impact of pharmacist-led services on DRPs at discharge

## Results – Regression Analysis

### Poisson regression model

for the number of DRPs at discharge

Study group	Relative risk (95% CI)
Standard Care	<b>1.00 [Reference]</b>
Best Care	<b>0.33 (0.16, 0.65)</b>
<u>MedRec</u>	<b>0.75 (0.54, 1.03)</b>
Ward Round	<b>0.96 (0.85, 1.08)</b>

Independent variables: study group, age at discharge, gender, type of admission, length of stay, number of medicines at discharge and insurance status

# Impact of pharmacist-led services on DRPs at discharge

## Conclusion

Association with a **reduction of the number of DRPs** on the discharge prescription through:

- **Pharmacist-led medication reconciliation** at hospital admission and
- **Interprofessional ward rounds** during the stay

# Impact of pharmacist-led services on DRPs at discharge

## Strengths and Limitations



### Strengths

- Large sample size with over 6000 hospital stays
- Based on routinely collected data



### Limitations

- Single center
- Sample sizes of the study groups differed substantially



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**Thank you**  
for your attention.