

# Enhancing medication safety for patients:

During the transition from hospital to home



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# Disclosure

## **Relevant Financial Relationship**

None

## **Off-Label Investigational Uses**

None

# Self-assessment questions

**1. Medication-related problems affect more than 50% of patients one month after discharge**

True/false

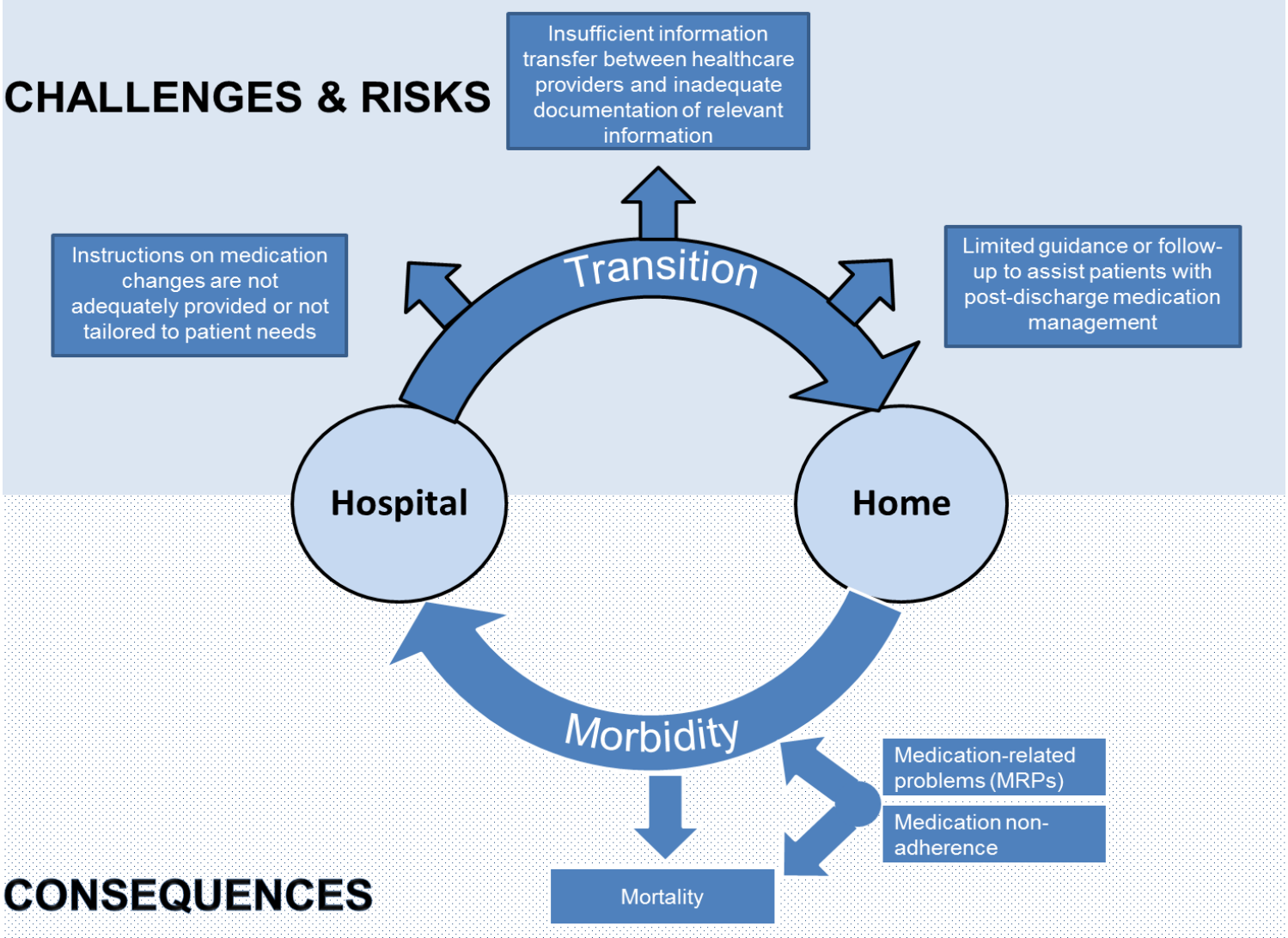
**2. Hospital readmissions are reduced by single-component medication-related interventions**

True/false

**3. The intensity of provided medication-related interventions is associated with the treatment effect on hospital readmissions**

True/false

# The transition from hospital to home



# Medication-related interventions

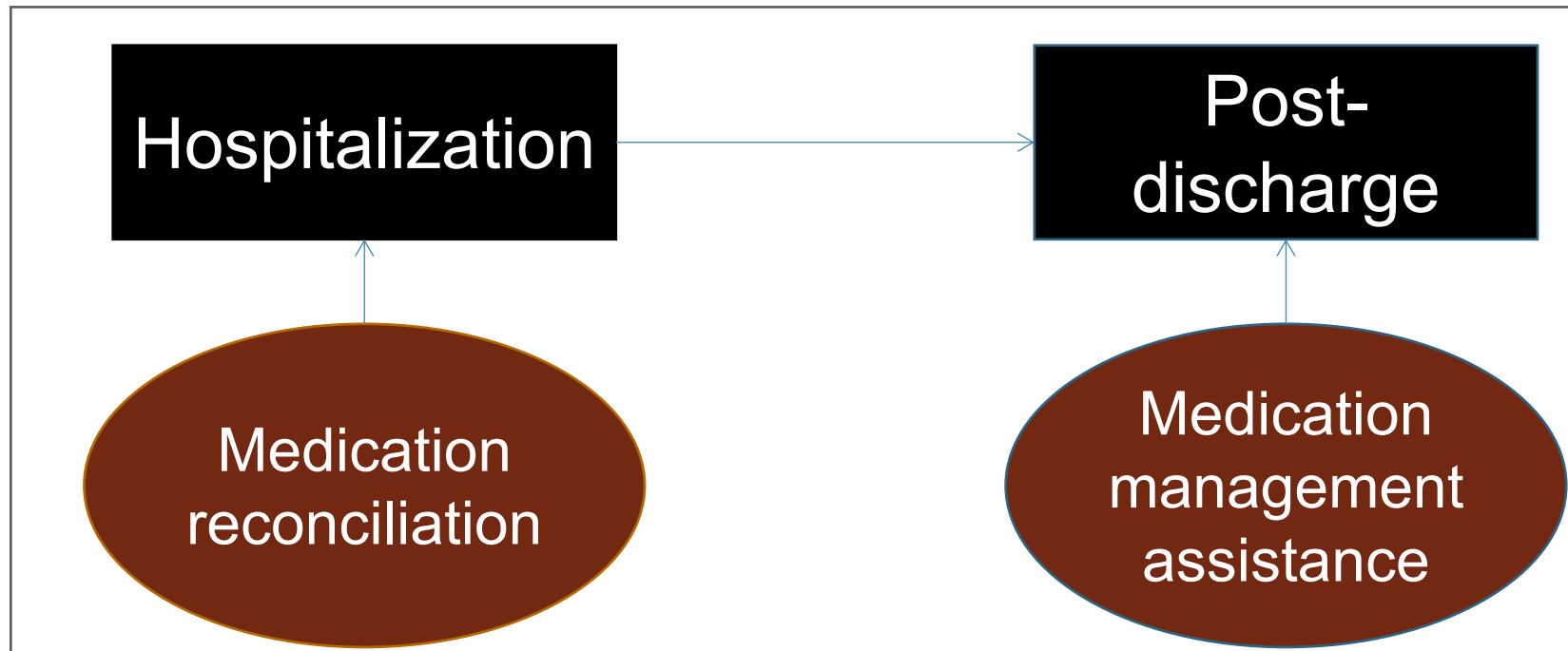
- **Approaches that seek to prevent harm often involve isolated interventions**
  - Evidence regarding clinical outcomes is equivocal



# Combined medication-related interventions

- Interventions delivered both during hospitalization and post-discharge

## Example



# Systematic review and meta-analysis

## Hospital readmissions $\leq 30$ days

- Nine prospective studies

## Included 5,196 patients

- 47 to 77 years (weighted mean for age: 59 years)
- Acute coronary syndrome, diabetes mellitus, heart failure

## Five studies with an interprofessional collaboration

- Pharmacist – Nurse
- Pharmacist – Physician
- Pharmacist – Nurse – Physician
- Physician – Nurse

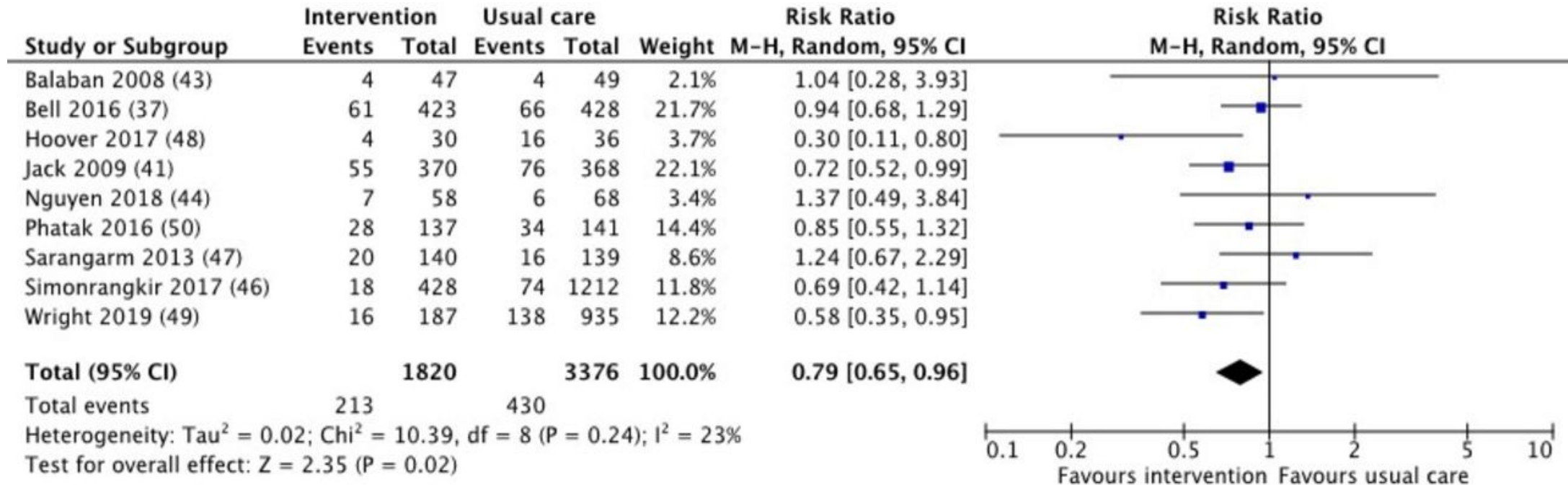
# Systematic review and meta-analysis

Study (Author, Year)	Medication-related intervention in-hospital						Medication-related intervention following discharge						Intensity score
	Education		Pharmaco- therapy		Information transfer		Education		Pharmaco- therapy		Information transfer		
	O	W	MRec	MRev	O	W	O	W	MRec	MRev	O	W	
Balaban, 2008		1				1		1				1	4
Bell, 2016	1	1	1					1					4
Hoover, 2017	2	1	2					3					8
Jack, 2009	1	1	1			1		1			1		6
Nguyen, 2018	1	1						1					3
Phatak, 2016	1	1	1					2			1		6
Sarangarm, 2013	1		1					1					3
Simonrangkir, 2017	1	1	1			1		1					5
Wright, 2019			1			1		3	1		1		7

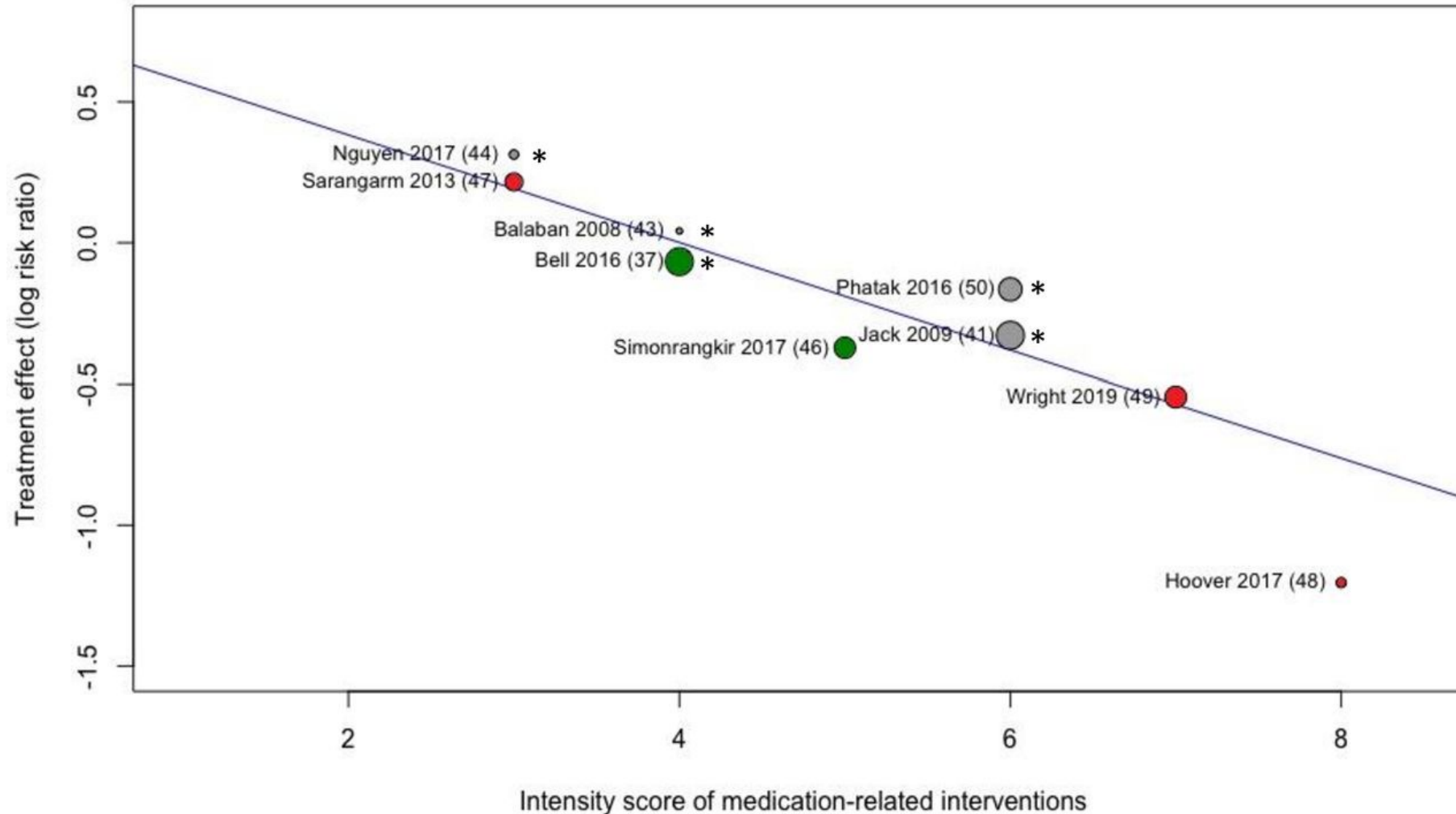
O: oral consultation; W: written information; MRec: medication reconciliation; MRev: medication review.



# Systematic review and meta-analysis



# Systematic review and meta-analysis



# Take-home messages

- Effective transitional care is most likely to be achieved by combining in-hospital and out-of-hospital interventions
- Combined medication-related interventions reduce the proportion of patients readmitted to the hospital  $\leq 30$  days
- The magnitude of the treatment effect appears to increase with higher intervention intensities



# Acknowledgements

## Research team

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**Thank you for your attention**