Marle Gemmeke

Dr. Ellen Koster
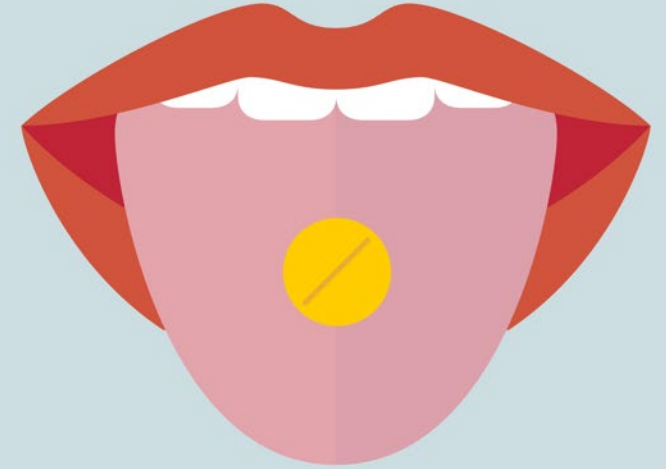
Prof. dr. Nathalie van der Velde

Prof. dr. Katja Taxis

Prof. dr. Marcel Bouvy

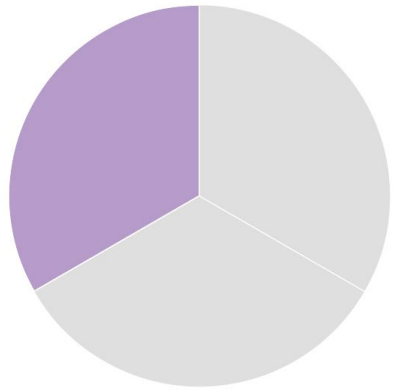# *Establishing a community pharmacy-based fall prevention service – an implementation study*

1/3 of all people aged over 65 will have a fall this year

Consequences of falls
- Bleeding
- Fractures
- Loss of independence
- Hospitalization
- Death
- …

Fall Death Rates in the U.S. INCREASED 30% FROM 2007 TO 2016 FOR OLDER ADULTS

If rates continue to rise, we can anticipate 7 FALL DEATHS EVERY HOUR BY 2030

Learn more at www.cdc.gov/HomeandRecreationalSafety.
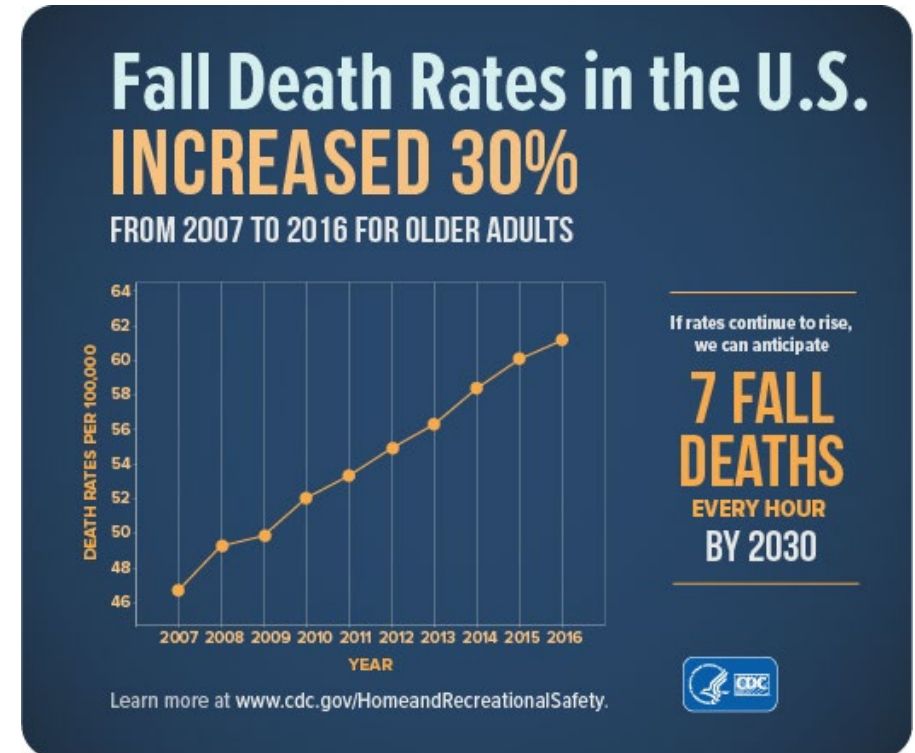
Preventing Falls

Multifactorial fall prevention interventions e.g., including medication review

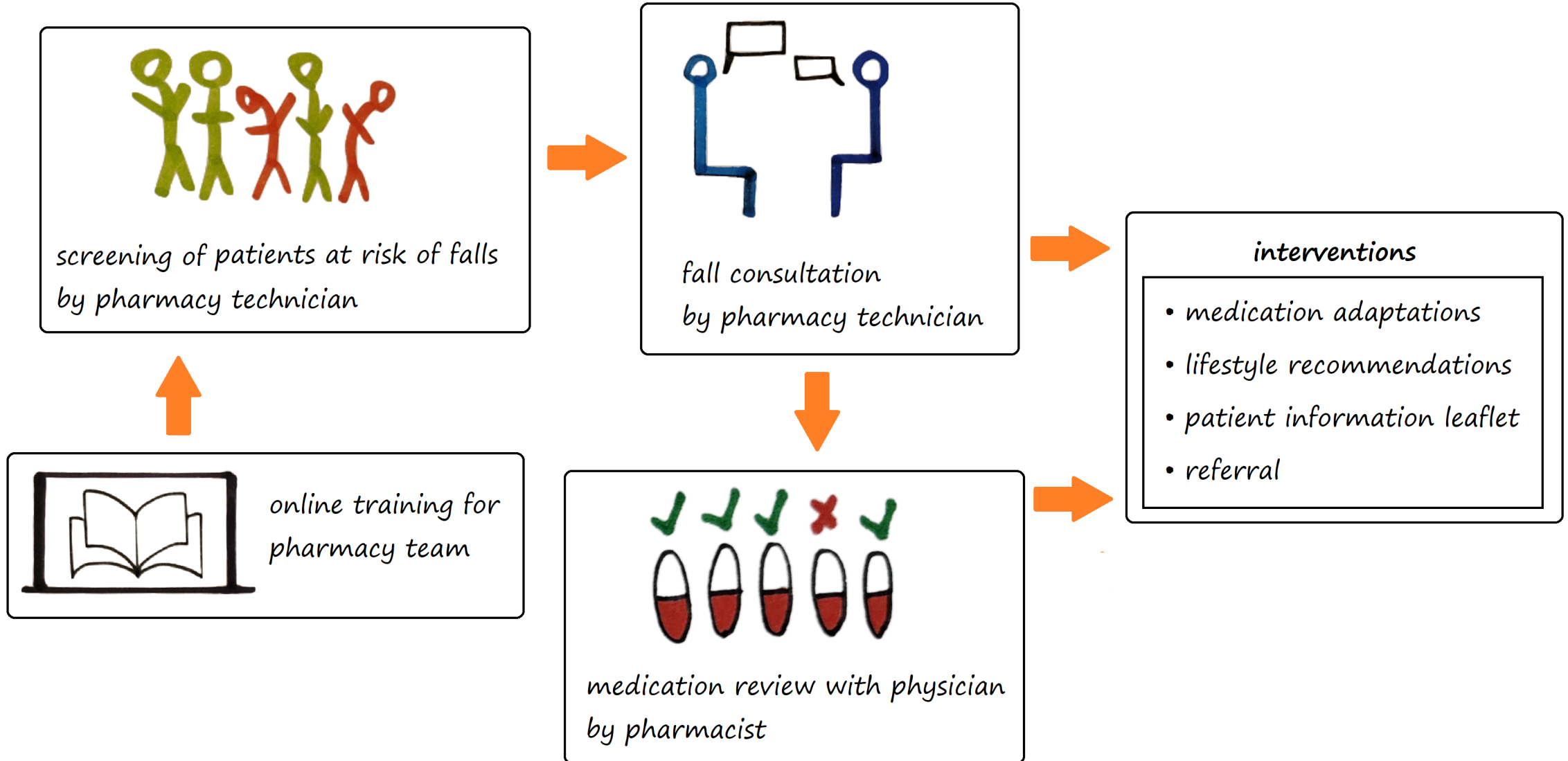**Community pharmacists'** role / responsibilities?

AIM

Implementation and evaluation of a pharmacy-led fall prevention service

Focusing on

- How do patients experience a fall prevention service?

- What are pharmacists' barriers and facilitators?

- How can pharmacists be more involved?

Fall prevention service

screening of patients at risk of falls by pharmacy technician

fall consultation by pharmacy technician

online training for pharmacy team

medication review with physician by pharmacist

interventions

- medication adaptations
- lifestyle recommendations
- patient information leaflet
- referral

Methods

Quantitative outcomes

Outcomes

- Number of recommendations

- Number of referrals

- Number of medication adaptations

- Time investments

One-month follow-up

- Changes in scores on a knowledge test

- Changes in fall anxiety (short FES-I)

Qualitative outcomes

Pharmacists' barriers and facilitators

- Interviews with pharmacists
  - prior to implementation
  - after implementation

Patients' experiences

- Telephone interviews with patients

Consolidated Framework for Implementation Research				
Intervention characteristics	Outer setting	Inner setting	Characteristics of individuals	Process

Results

- 9 pharmacies

- 91 *patients enrolled* fall consultation

- Mean duration consultation : 42.1 min (sd = 18.8)

- Proposed medication adaptations: 41 patients
- Medication adapted: 32 patients

- Referrals: 23 patients

Patient characteristics
Age (median): 78 years
Sex: 53% male
Medication use, number (median) = 10

Number of recommendations	
Home environment	39
Footwear	38
Mobility/exercise	36
Vision/hearing	26
Incontinence	10
Nutrition	8

Universiteit Utrecht
Farmaco-epidemiologie
en Klinische Farmacologie

Results – Fear of falling / fall prevention knowledge

Short FES-I (N = 85)	Time	Mean (sd)
	Baseline	10.8 (4.4)
	Follow-up	11.6 (4.0)
	Paired t-test	**Value**
	P-value	0.047*
Knowledge test (N = 47)	**Time**	**Mean (sd)**
	Score at baseline (%)	66.3 (15.5)
	Score at follow-up (%)	66.8 (15.2)
	Paired t-test	**Value**
	P-value	0.86

Pharmacist interviews

- Content needs to match pharmacists' expertise

- Wish for an abbreviated version of the fall consultation

"The drug is only part of the story. As pharmacists we overestimate the contribution of drug use to falls. [...]"
59-year-old pharmacist, Pharmacy 7

"We started to align our actions more with other health care providers. By this, these other health care providers are increasingly realizing that medication use could negatively affect patients' fall risk. And we know that we can also refer patients to the physiotherapists here."
31-year-old pharmacist, Pharmacy 9

- Some pharmacists regretted that they had not collaborated more

Pharmacist interviews

- Pharmacists had expected a higher response

- Increased awareness among participants

"Older patients think falls are a natural part of ageing and believe it is normal, or they disagree with that they fall. Because they fell because of their dog, or because of a stone, or something else."
36-year-old pharmacist, Pharmacy 10

"We have a lot of experience with deprescribing and medication withdrawal. We have been doing this for years."
46-year-old pharmacist, Pharmacy 8

- Workload / lack of time

- Experience with deprescribing / projects

Pharmacist interviews

"We definitely showed that a pharmacy technician is able to perform such consultations very well."
46-year-old pharmacist, Pharmacy 8

Pharmacy technicians participated who had

- Interest in the service
  - Empathy
- Communication skills
- Sufficient knowledge

Strategies
- Informing team
- Scheduling project
- Coaching pharmacy technicians
- Making them responsible

"It works quite well to schedule half a day per week for fall consultations, and prior to the project you are able to estimate which time periods are most convenient."
28-year-old pharmacist, Pharmacy 4

Utrecht University   Pharmacoepidemiology and Clinical Pharmacology

Patient interviews

- Reassurance of medications being necessary, safe, and tailored personal needs and conditions

"I am using less now. […] I think that if I would not have participated in the fall prevention service, I would still have been using the same medications."
Pharmacy 3, Patient 10, 85-year-old man

"I just never think about such things as falls. I am happy and physically healthy."
Pharmacy 2, Patient 1, 88-year-old man

- Most patients had not changed their behaviour

Patient interviews

- Patients became more aware of fall risk and risks of medication use

"*I started thinking about it and I came to the conclusion that I need to pay attention to fall prevention for myself.*"
Pharmacy 9, Patient 1, 74-year-old woman

"*Well, I am also almost 82 years, and I thought: 'when would that happen to me?' That's why I was 100% motivated to participate.*"
Pharmacy 3, Patient 25, 81-year-old man

- Motivation to participate differed e.g., interest in fall prevention or deprescribing

- Positive contact experience with the pharmacy technician

"*She listened well; the questions were clear. I did not think: 'what do you mean?' It was all very well*"
Pharmacy 3, Patient 3, 75-year-old woman

Utrecht University
Pharmacoepidemiology and Clinical Pharmacology

Conclusions

Patients and pharmacists are positive about the fall prevention service

Medication adapted of approximately one third of patients
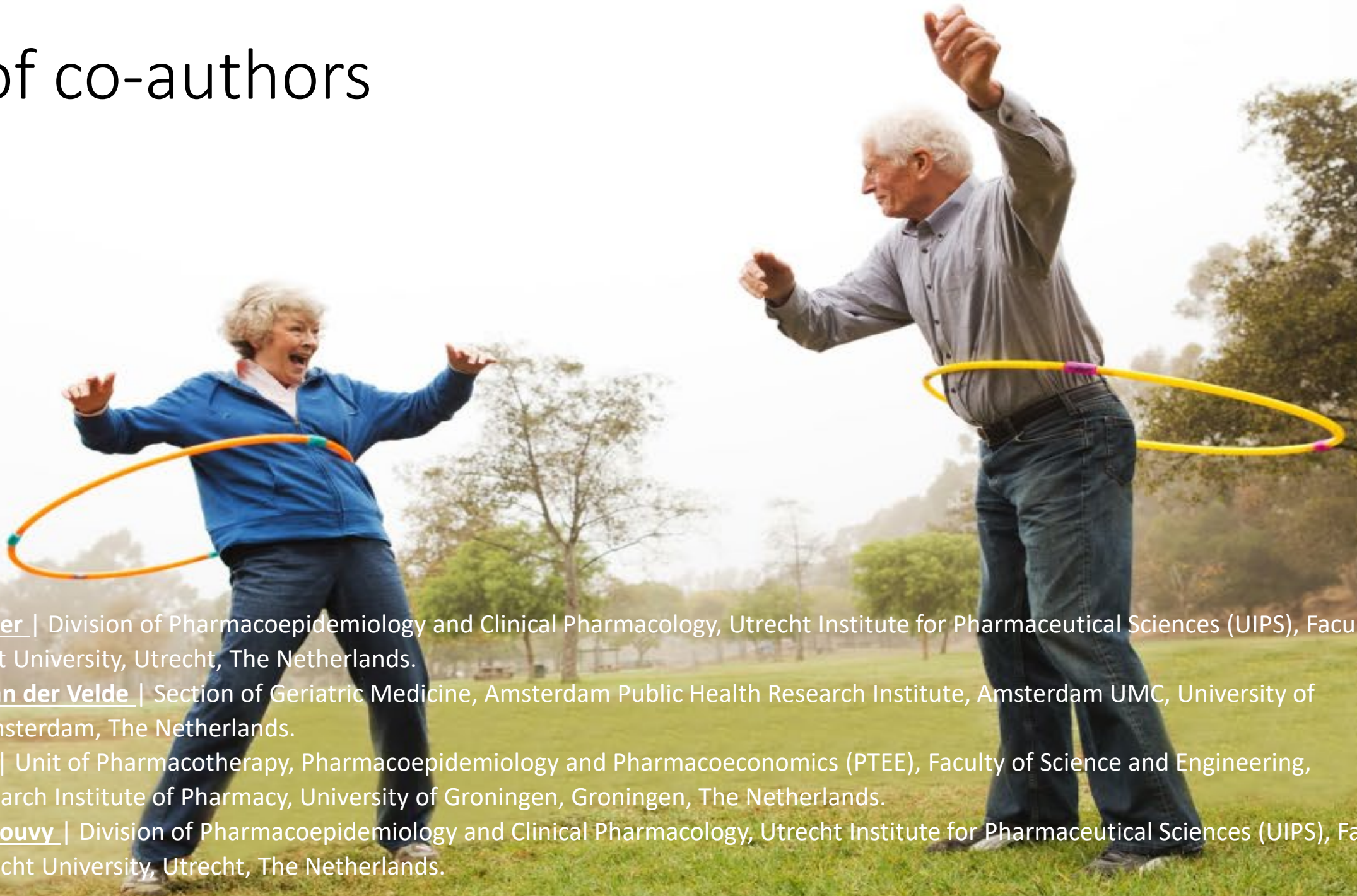
Limited behavioural change

Time intensive

Recommendations for practice:
- More referrals and collaboration

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