

USING BEHAVIOURAL SCIENCE IN DEPRESCRIBING RESEARCH SHARING EXPERIENCE AND LESSONS LEARNED FROM TWO RESEARCH PROJECTS

Anne SPINEWINE

Clinical Pharmacy and Pharmacoepidemiology Research Group (CLIP), Louvain Drug Research Institute, Brussels

CHU UCL Namur, Pharmacy Department, Godinne



The New York Times

Taking Multiple Medications?
You May Need to Scale Back.



Medication overuse

The use of a medication which is not (or no longer) clinically indicated, not effective for the targeted indication, or not aligned with the patient's treatment goals and preferences, and which has an unfavorable benefits-to-risks ratio.

**Frequent – Harmful – Societal
and environmental costs**

Deprescribing

The process of identifying and reducing or discontinuing medications in which existing or potential harms outweigh potential benefits within the context of an individual patient's care goals, function, values, and preferences.

(Scott IA et al., JAMA Intern Med 2015)

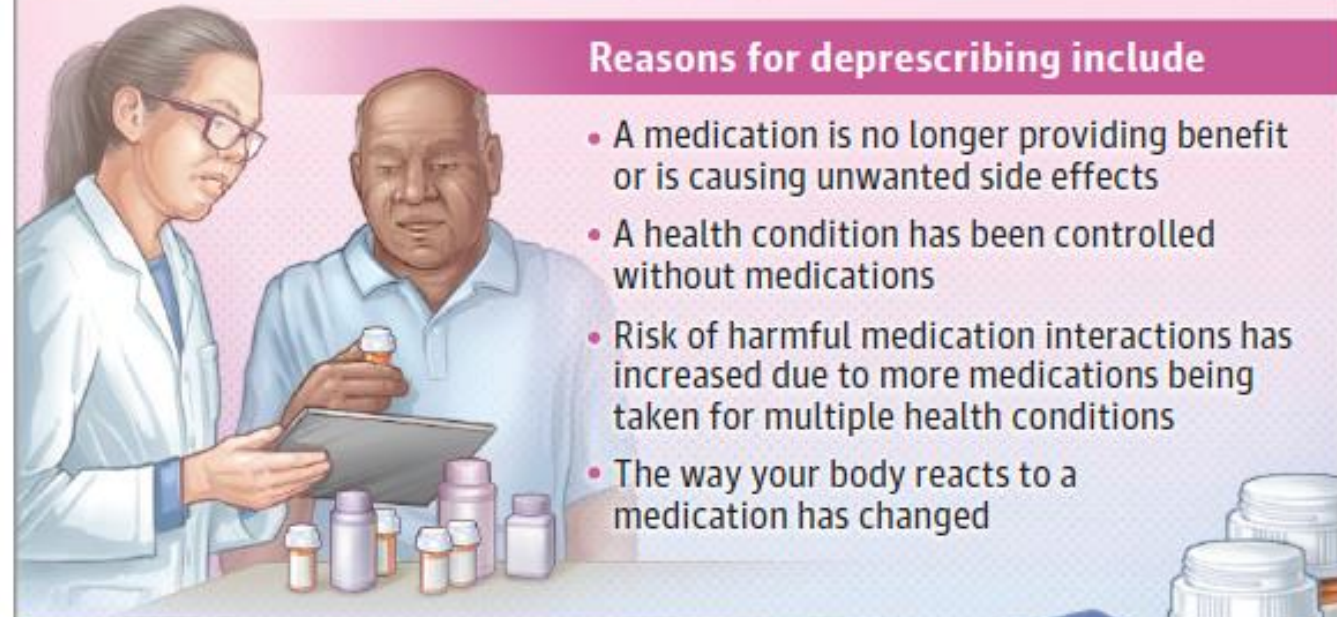
**Limited implementation
in routine practice**

What Should I Know About Medication Deprescribing?

Medication deprescribing occurs when you and your health care provider work together to stop unnecessary medications, vitamins, or supplements.



Deprescribing is safe under supervision of a health care provider who can guide you through stopping medications immediately or decreasing dosage slowly to prevent withdrawal effects.



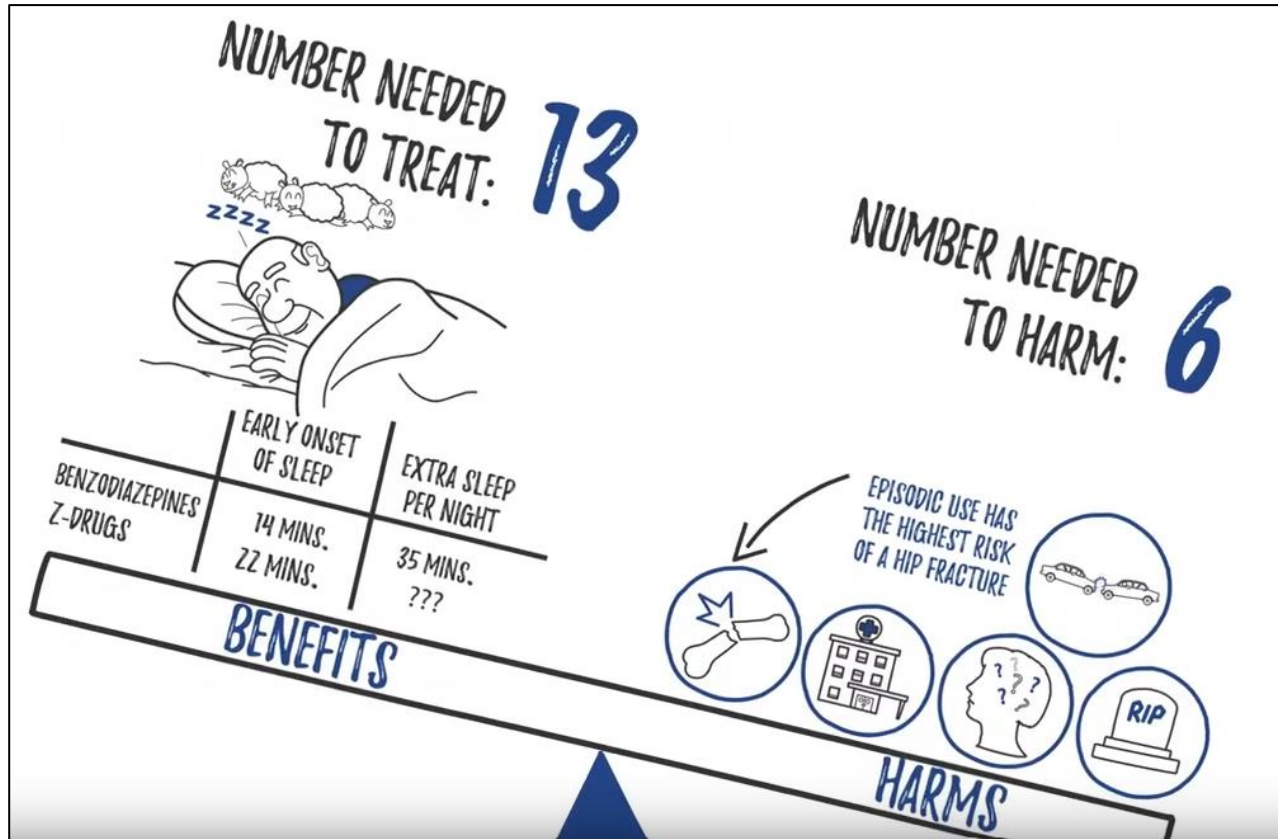
Reasons for deprescribing include

- A medication is no longer providing benefit or is causing unwanted side effects
- A health condition has been controlled without medications
- Risk of harmful medication interactions has increased due to more medications being taken for multiple health conditions
- The way your body reacts to a medication has changed

Other benefits of deprescribing include

- ✓ Decreasing the number of pills you take every day
- ✓ Lowering the overall cost of your daily medications

BENZODIAZEPINE RECEPTOR AGONISTS (BZRAs)



Canadian Deprescribing Network

- One of the most frequently prescribed classes of harmful medications
(Ma, Sleep 2023; Borrelli, JAGS 2024)
- One of the 3 overuse practices measured by OECD
- Incur significant adverse effects and costs, especially in older adults.

DEPRESCRIBING BZRAs

NURSING HOME



Perrine EVRARD

AMBULATORY



Catherine PETEIN

HOSPITAL



FX SIBILLE



Deprescribing in older adults
through an Implementation Science approach
Actions de Recherche Concertées (ARC) - 2022-2027



T Chevallereau, M Jaeken, S Van den Broucke (IPSY)

BEHAVIOURAL /
IMPLEMENTATION SCIENTISTS

BE-SAFE



Implementing a patient-centred and evidence-based
intervention to reduce BZRA use to improve patient
SAFETY - **Horizon Europe 2022-2027**




J Grimshaw, J Presseau, A Patey (OHRI, Ottawa)

Key references

RESEARCH AND REPORTING METHODOLOGY

De-implementing wisely: developing the evidence base to reduce low-value care

Jeremy M Grimshaw ,^{1,2} Andrea M Patey ,¹ Kyle R Kirkham,^{3,4} Amanda Hall ,⁵ Shawn K Dowling ,⁶ Nicolas Rodondi ,^{7,8} Moriah Ellen ,^{9,10,11} Tijn Kool ,¹² Simone A van Dulmen ,¹² Eve A Kerr,^{13,14} Stefanie Linklater ,¹ Wendy Levinson,^{15,16} R Sacha Bhatia^{17,18}

BMJ Qual Saf 2019

- Theoretical Domains Framework

Michie S, *Qual Saf Health Care* 2005 ; Cane J, *Impl Science* 2012 ; Atkins L, *Impl Science* 2017

- The Theory and Techniques Tool

Michie, 2013, *Ann Behav Med* 2013;

<https://theoryandtechniquetool.humanbehaviourchange.org/tool>

RESEARCH METHODS AND REPORTING

A new framework for developing and evaluating complex interventions: update of Medical Research Council guidance

Kathryn Skivington,¹ Lynsay Matthews,¹ Sharon Anne Simpson,¹ Peter Craig,¹ Janis Baird,² Jane M Blazeby,³ Kathleen Anne Boyd,⁴ Neil Craig,⁵ David P French,⁶ Emma McIntosh,⁴ Mark Petticrew,⁷ Jo Rycroft-Malone,⁸ Martin White,⁹ Laurence Moore¹

BMJ 2021

RESEARCH METHODS AND REPORTING

Designing and undertaking randomised implementation trials: guide for researchers

Luke Wolfenden,^{1,2} Robbie Foy,³ Justin Pesseau,^{4,5} Jeremy M Grimshaw,^{4,6} Noah M Ivers,^{7,8,9,10} Byron J Powell,¹¹ Monica Taljaard,^{4,5} John Wiggers,^{1,2} Rachel Sutherland,^{1,2} Nicole Nathan,² Christopher M Williams,^{1,2,12} Melanie Kingsland,^{1,2} Andrew Milat,^{1,2} Rebecca K Hodder,^{1,2} Sze Lin Yoong¹³

BMJ 2019

52,4% of NHRs are BZRA users



Perrine EVRARD

Targeted Behaviours :



General practitioners

- Deprescribe BZRA, through slow tapering
- When visiting Patients institutionalized in a nursing home and under BZRA prescription
- Involvement of residents in the decision process



Other Healthcare professionals

- Support the deprescribing process of BZRA in the institution:
 - Support to the General Practitioner
 - Support to NHR and their family

52,4% of NHRs are BZRA users



General practitioners

- Knowledge and skills gaps
- BZRA refilling happens automatically
- Competing priorities
- Social pressure to prescribe
- Environmental issues

- TDF domains**
- Knowledge
 - Skills
 - Social professional role and identity
 - Beliefs about capabilities
 - Beliefs about consequences
 - Goals
 - Memory, attention and decision process
 - Environmental context and resources
 - Social influences

Memory, attention and decision process	Knowledge	Skills	Social, professional role and identity	Reinforcement	Emotion	Patients' characteristics	BZRA prescribing patterns
				Orange			
				Orange		Blue	Blue
Orange	Orange	Orange	Orange	Orange			
Orange		Orange	Orange	Orange	Orange		
Orange	Orange			Orange	Blue	Blue	Blue

or enabler per setting and per stakeholders. Legend: Orange=Barrier, General Practitioners, NHRs=Nursing home residents

52,4% of NHRs are BZRA users



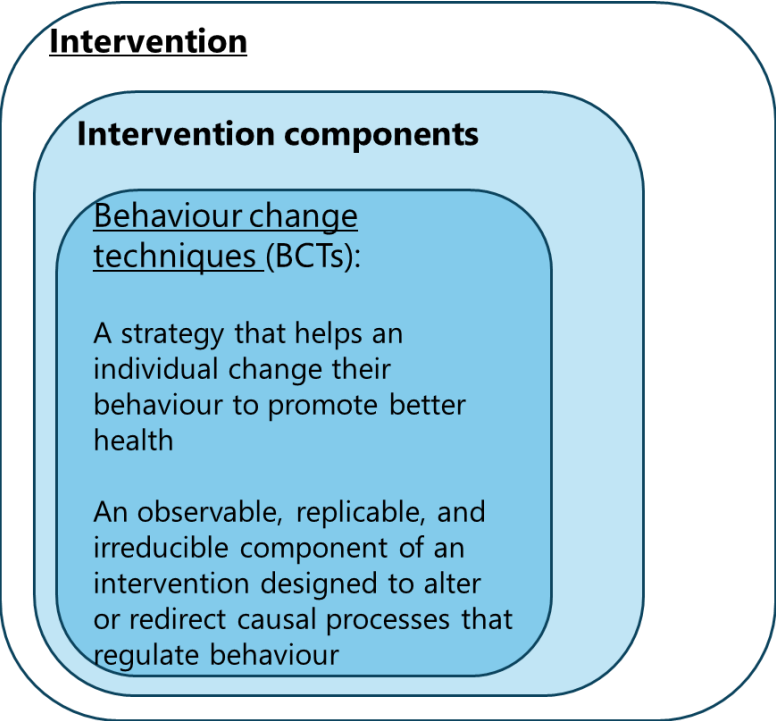
General practitioners



Other Healthcare professionals

- Knowledge and skills gaps
- BZRA refilling happens automatically
- Competing priorities
- Social pressure to prescribe
- Environmental issues

9 Behaviour Change Techniques (BCTs) selected



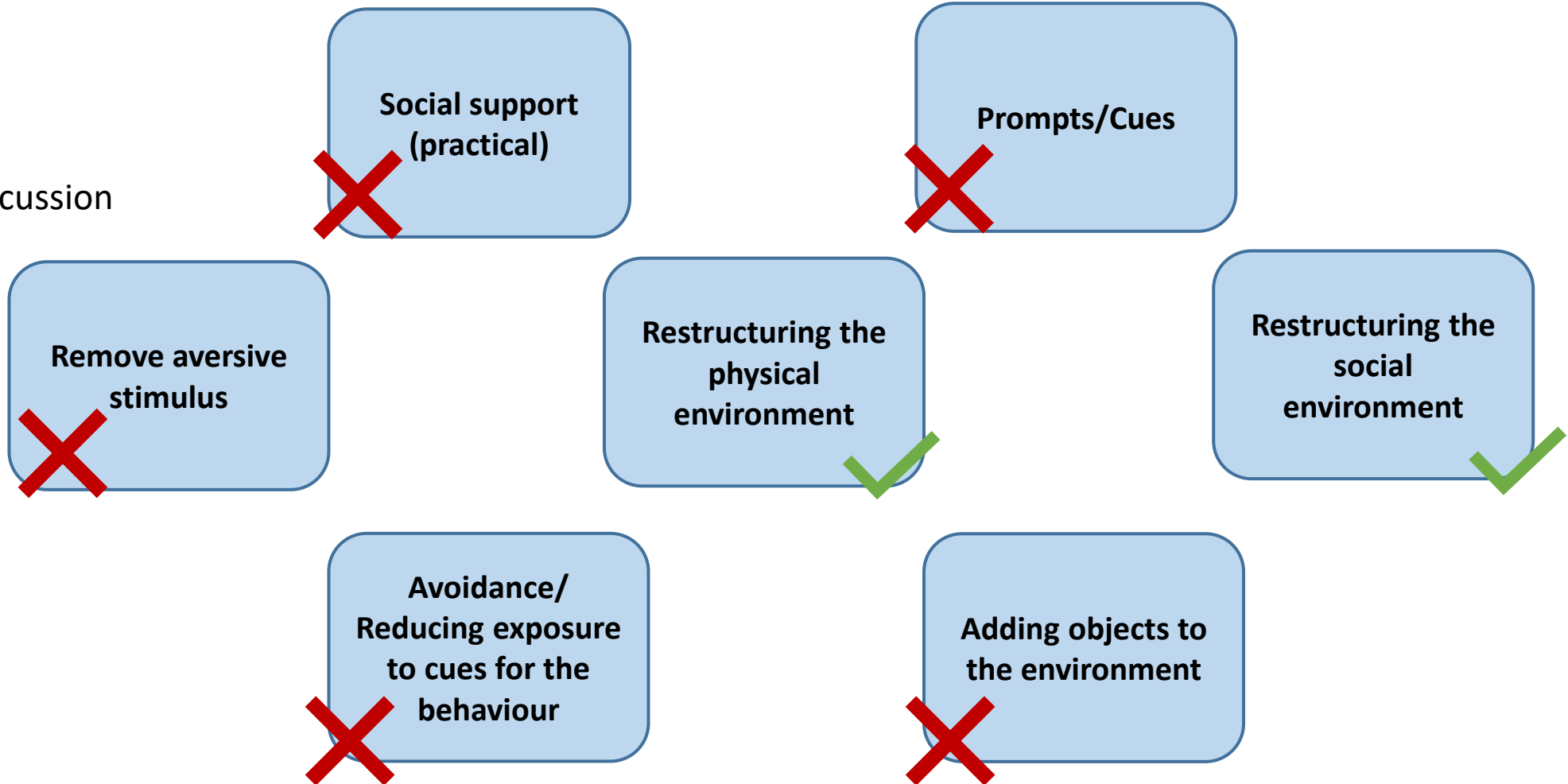
- Final list of BCTs (9)**
- Instruction on how to perform the behaviour
 - Information about health consequences
 - Problems solving
 - Pros and cons
 - Graded tasks
 - Goals setting (behaviour)
 - Restructuring physical environment
 - Restructuring social environment
 - Social comparison

Example:

TDF Environmental context and resources

1. List of BCTs (Theory and Techniques Tool)
2. Exclusion of unethical, unacceptable or unaffordable BCTs
3. Prioritisation through survey
4. Final selection through group discussion

Group Discussion



52,4% of NHRs are BZRA users



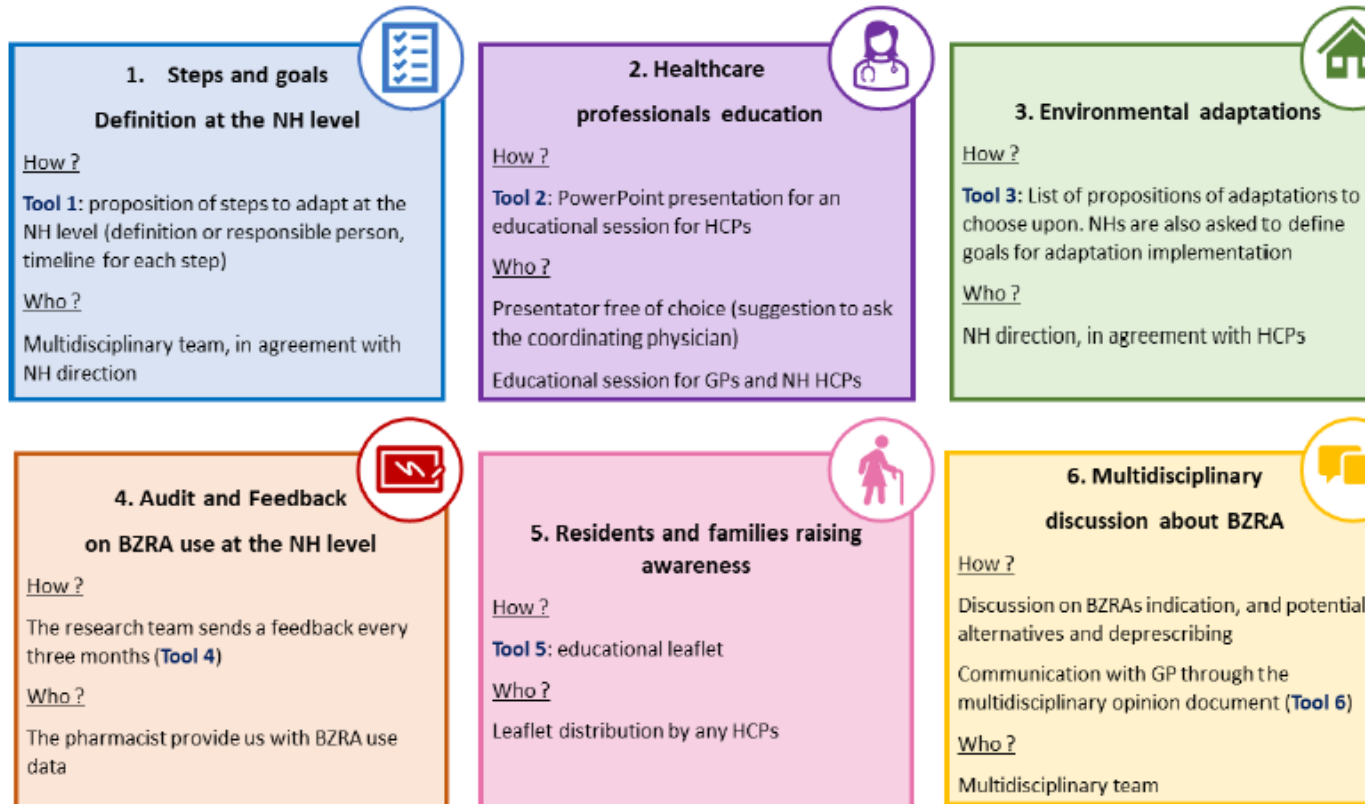
9 Behaviour Change Techniques (BCTS) operationalised in a 6-component intervention



General practitioners



Other Healthcare professionals



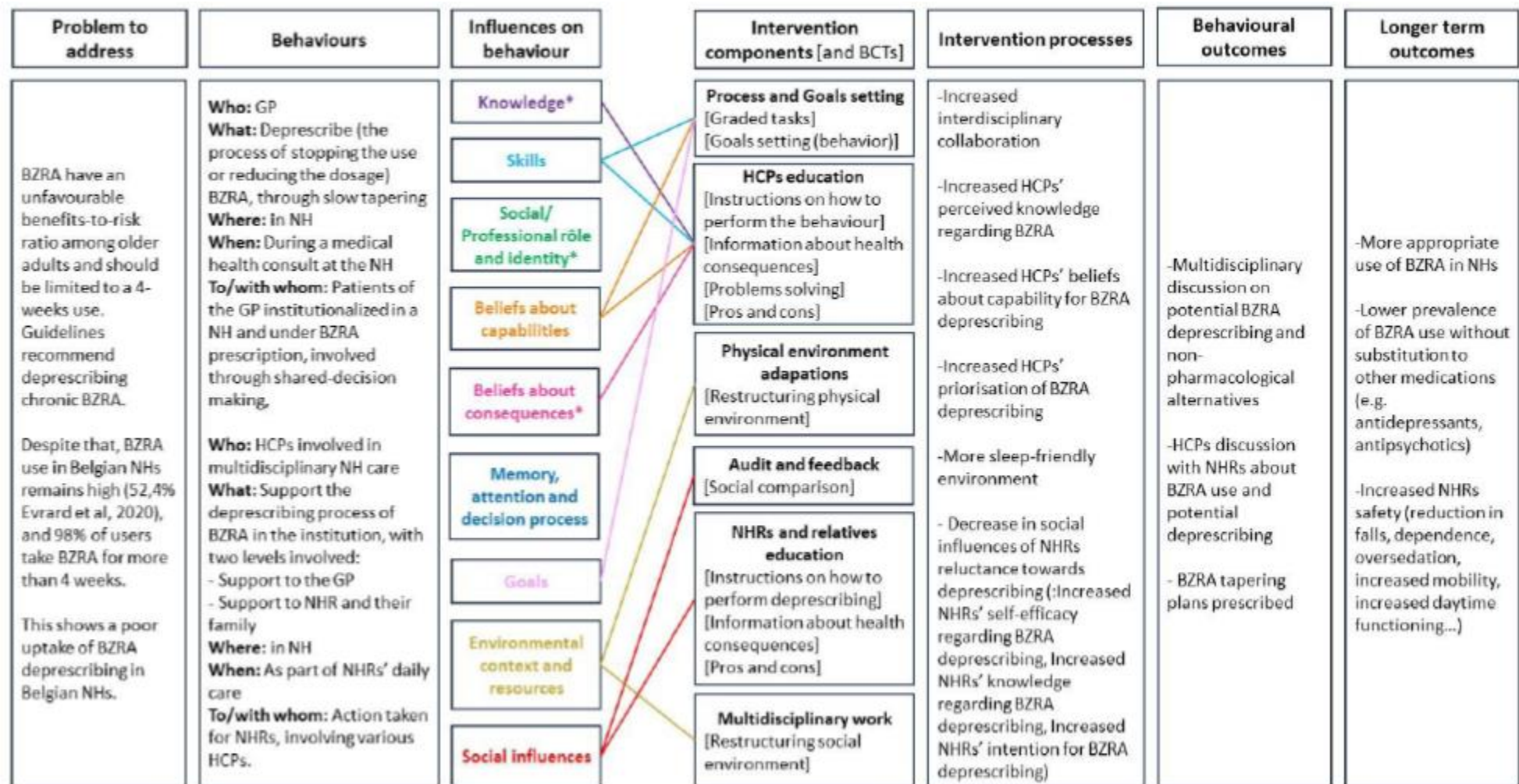


Figure 1: Programme theory of the END-IT NH intervention

Notes: BCT – Behaviour change technique, BZRA – Benzodiazepine Receptor Agonists, GP – General practitioner, HCP – Healthcare professional, NH – Nursing home, NHR – Nursing home resident

*: These domains were identified as most relevant only for HCPs other than general practitioners

52,4% of NHRs are BZRA users



STRENGTHS AND LIMITATIONS OF THIS STUDY

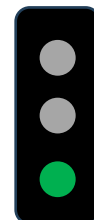
- ⇒ This study evaluates the feasibility of an intervention that has been developed with insights from implementation science and stakeholders' involvement.
- ⇒ Having this feasibility study stage will enhance the probability of success of the intervention in a future larger-scale trial and is likely to save resources.
- ⇒ This feasibility study encompasses different dimensions of feasibility, at intervention and study design levels.
- ⇒ Nursing homes (NHs) will be recruited voluntarily, and this may select NHs with extra motivation for benzodiazepine receptor agonists deprescribing.

FEASIBILITY

- **Implementation of the intervention** tested in 4 NHs, 45 NHRs
- **Feasible**, but would require refinements before larger scale implementation



- Intervention implementation
 - Contextual differences between NHs?
 - Potential refinements of intervention components

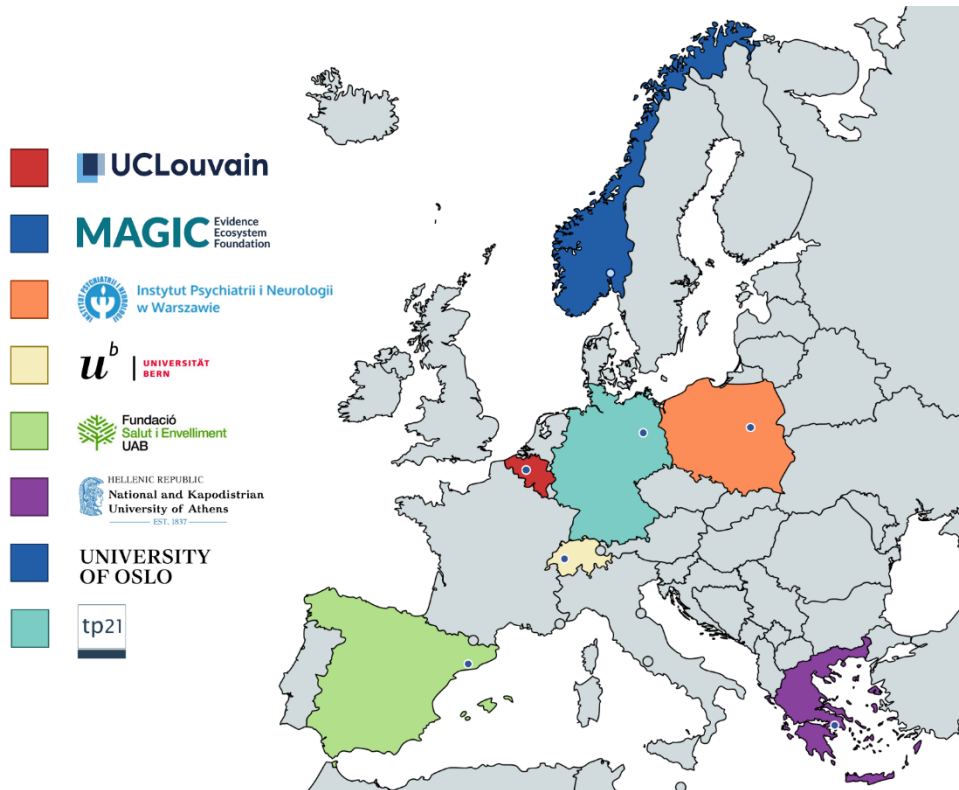


- Intervention responsiveness

BE-SAFE



Implementing a patient-centred and evidence-based intervention to reduce **BE**nzodiazepine and sedative-hypnotic (BSH) use to improve patient **SAFE**ty and quality of care.



BE-SAFE: Key tasks

- Care trajectories and barriers
- Clinical guideline (MAGIC)
- Intervention development
 - Physicians
 - Patients and caregivers
- Cluster RCT, 470 patients (2024 – 2027)
- Process evaluation and case studies

- Patient Partnership Advisory Council (PAC)



Barriers to BZRA deprescribing – theory-based surveys

240 hospital physicians from 6 European countries (Shapoval et al., under review)

TDF-based Domains and Items : examples of major barriers
Skills
I have been trained to engage patients about deprescribing their BZRA.
Beliefs about capabilities
I am confident that I can deprescribe BZRA in older adults with sleep problems even when I have limited time.
Goals
My patients often have other health problems that are usually more important for me to address than the BZRA deprescribing.
Emotions
I feel frustrated with all the challenges of the BZRA deprescribing in older adults with sleep problems.
Environmental context and resources
In the department or institution where I work, we have set goals (or policies) that encourage BZRA deprescribing;
Social influence, patients
Most of my older patients taking a BZRA for sleep problems or their relatives are reluctant to deprescribe their BZRA.

Multivariable regression

- 5 TDF domains significantly associated with intention to deprescribe
- 3 TDF domains significantly associate with self-reported routine BZRA deprescribing

Thank you for your attention

anne.spinewine@uclouvain.be

