

Clinical results of an inter-professional student-led medication review program

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I have no conflicts of interest to declare.



Are healthcare students capable of increasing the quality of complex clinical care?



What is already known?

- Interprofessional education
 - “getting to know each other” ¹
- Healthcare has complex clinical care situations
 - Healthcare education use simple repeated clinical situations
- Student-led clinics
 - Increase responsibility, authenticity and collaboration²

1. Reumerman, M., et al. European Journal of Clinical Pharmacology, 2020

2. Schutte, T., et al. BMC Medical Education, 2018



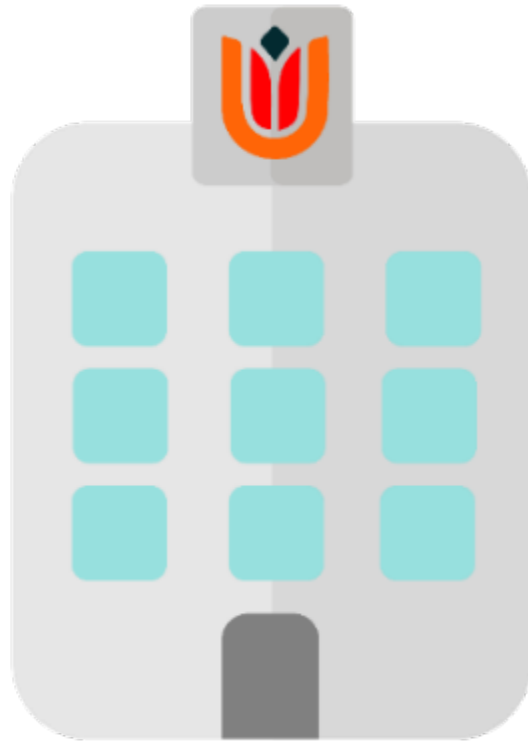
What this study adds?

- Inter-professional student-run mediation review program (ISP)
 - Student-run clinic in an interprofessional setting
- Student intervention in a complex clinical care situation
- Clinical evaluation of a student-led clinic on top of standard care



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Memory clinic



- Assessment of cognitive status
- 4 patients per week



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Outpatient visit

Physician

Geriatric nurse

Neuropsychologist

Laboratory
testing

MRI / CT brain



Geriatric medicine department Amsterdam UMC

Outpatient visit

Physician

Geriatric nurse

Neuropsychologist

Laboratory testing

MRI / CT brain

Multidisciplinary meeting

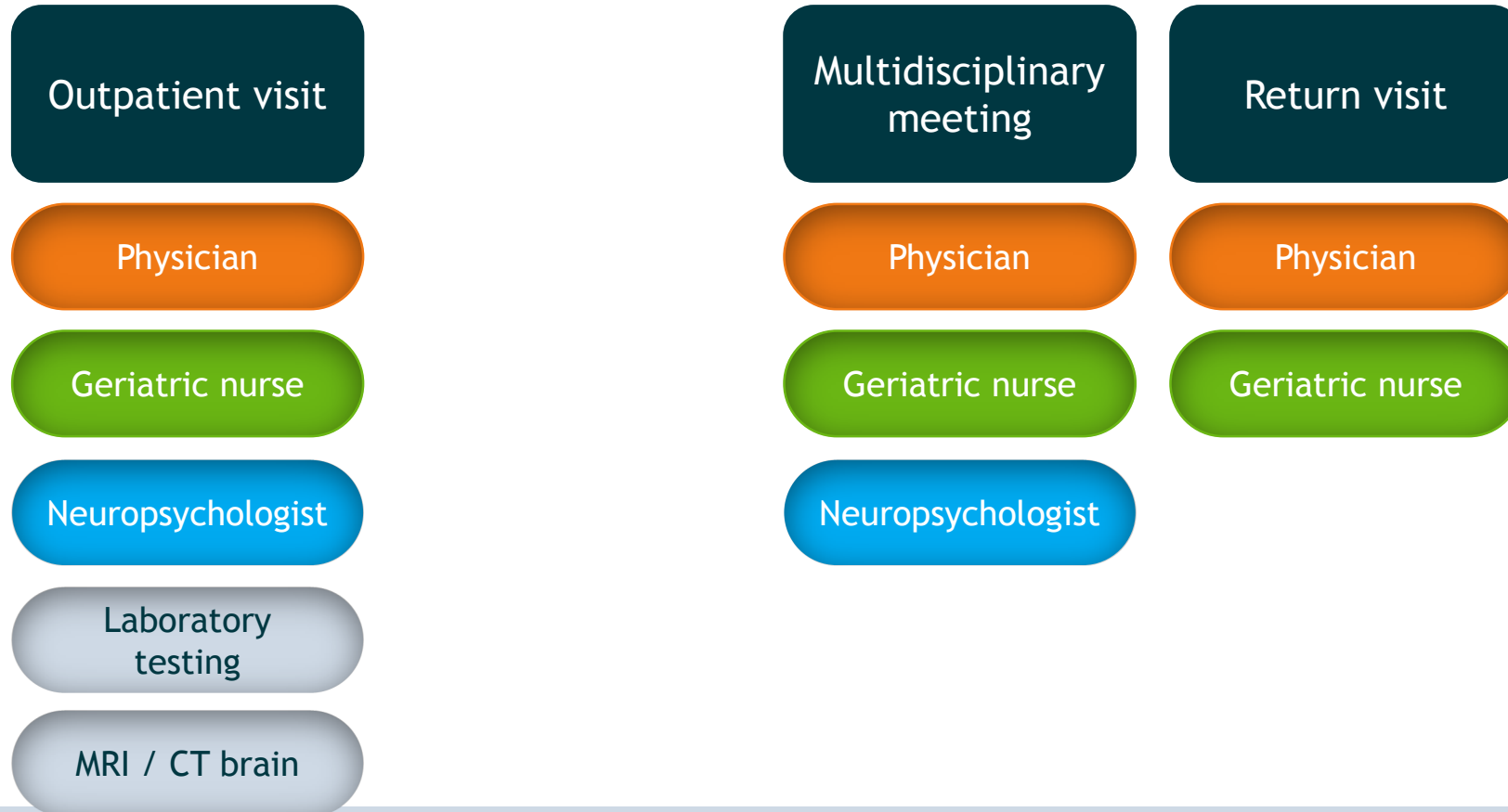
Physician

Geriatric nurse

Neuropsychologist

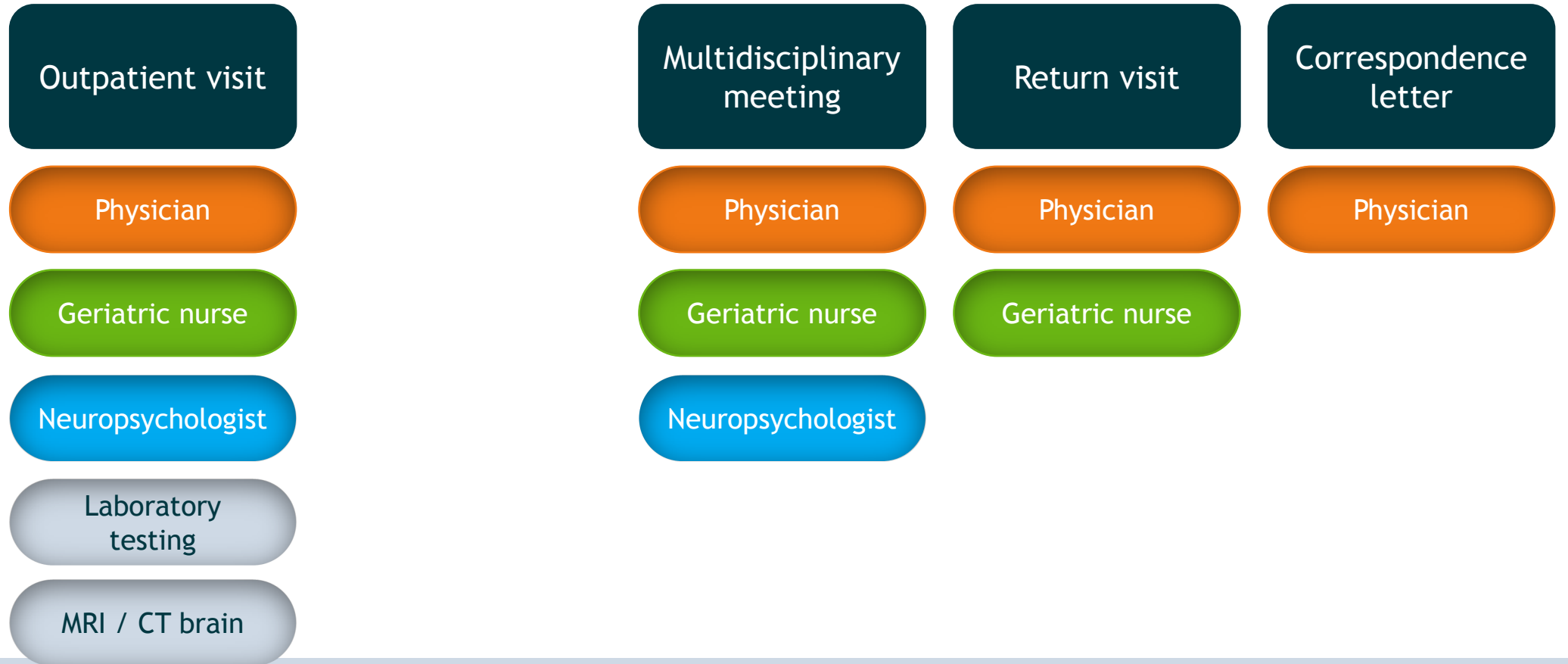


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Outpatient visit

Multidisciplinary meeting

Return visit

Correspondence letter

Two patients

Usual care

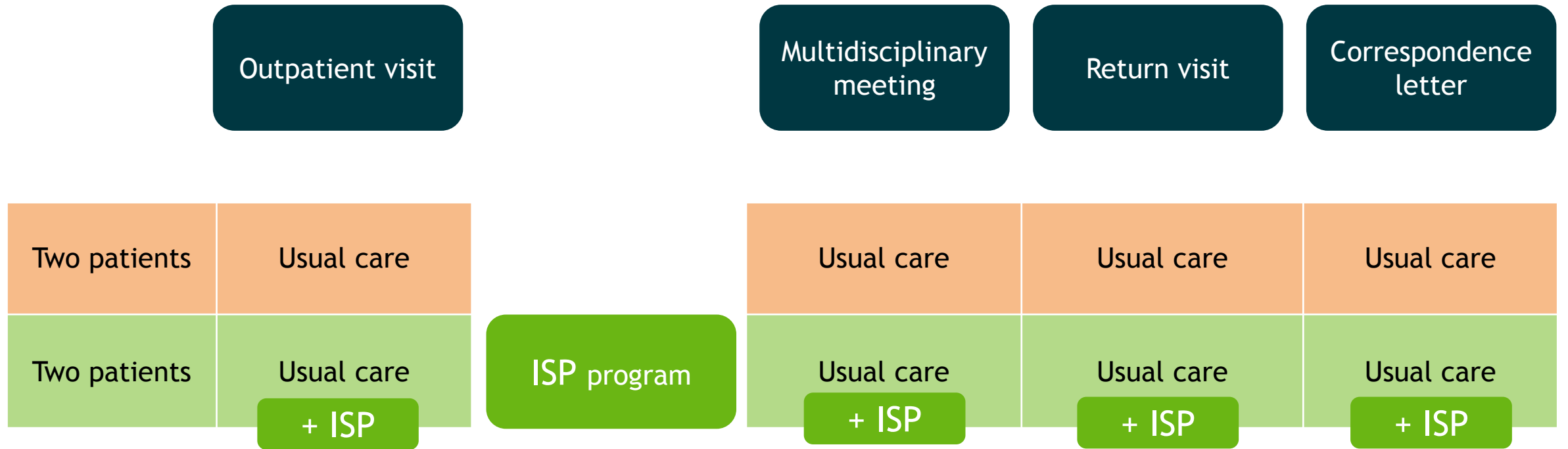
Usual care

Usual care

Usual care



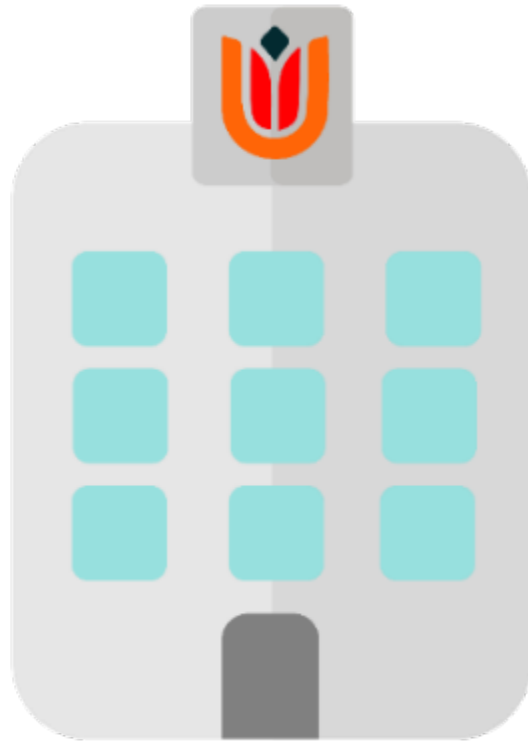
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Inter-professional student-run mediation review program (ISP)

Memory clinic



- Medication history interview
- Structured medication review
- Preliminary discussion
- Multidisciplinary meeting
- Return visit



ISP team



Physician Assistant &
Advanced nursing practice



Medicine
Bachelor & Master



Pharmacy
Master



Study aim



Does the addition of ISP to usual care improve medication optimization?



Patient inclusion



December 2018 - March 2020



N = 200



All patients, allocated by time slot in a cross-over design



Informed consent



Medication assessment



- Independent review panel analyzing medication list in medical file
- 2 clinical pharmacologists, blinded assessment
- According to 2nd version of START/STOPP criteria¹
- Number of START/STOPP criteria



START/STOPP criteria

START

Antihypertensive drugs if systolic blood pressure is increased.

STOPP

Sedatives in patients with a history of falls or falling tendency.



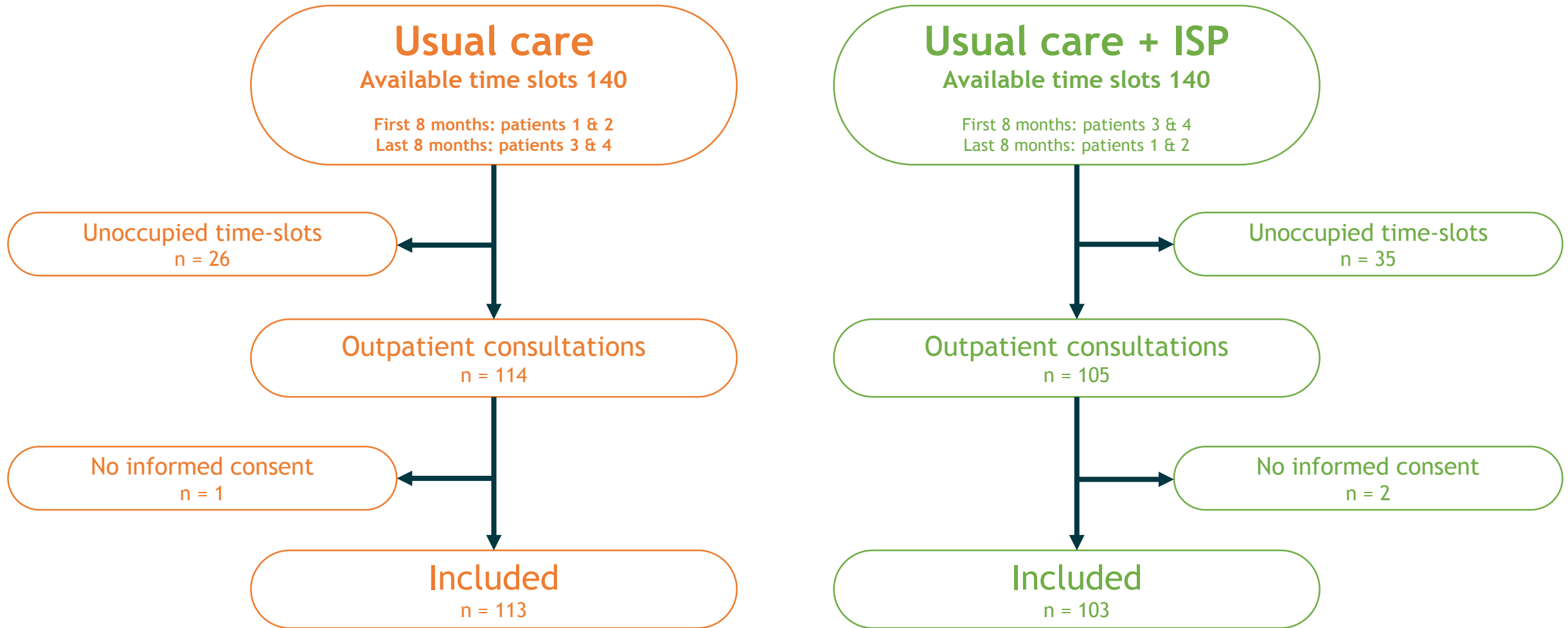
Outcomes



Number of identified START - STOPP items in correspondence letter.



Effectuated medication changes 3 months after the outpatient visit.





Patient characteristics

		Usual care Number of patients: 113	Usual care + ISP Number of patients: 103
Age (yrs), median (IQR)		82 (72 - 95)	80 (69 - 97)
Sex, male		51%	50%
Number of drugs, median (IQR)		6 (4 - 9)	6 (4 - 8)
Diagnosis	No cognitive disorder	24%	24%
	Mild cognitive impairment	23%	26%
	Dementia	53%	50%



START / STOPP items

Usual care	
Number of patients: 113	
Total items	%
268	

Usual care + ISP	
Number of patients: 103	
Total items	%
230	

Review panel



START / STOPP items

Review panel
Physician

Usual care Number of patients: 113	
Total items	%
268	
42 / 268	16%

Usual care + ISP Number of patients: 103	
Total items	%
230	
38 / 230	17%



START / STOPP items

Review panel
Physician
ISP-team

Usual care Number of patients: 113	
Total items	%
268	
42 / 268	16%
-	

Usual care + ISP Number of patients: 103	
Total items	%
230	
38 / 230	17%
201 / 230	87%



START / STOPP items

Usual care Number of patients: 113	
Total items	%
268	
42 / 268	16%
-	
...	
79 / 268	29%

Usual care + ISP Number of patients: 103	
Total items	%
230	
38 / 230	17%
201 / 230	87%
...	
142 / 230	62%

Review panel
Physician
ISP-team
(Multi-disciplinary meeting)
Correspondence letter



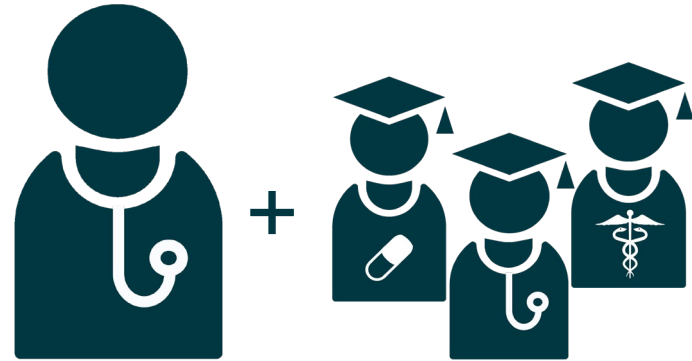
START / STOPP items in correspondence letter

Usual care
Number of patients: 113



29%
79 / 268

Usual care + ISP
Number of patients: 103



62%
142 / 230



START / STOPP items in correspondence letter

Usual care
Number of patients: 113



29%
79 / 268

> 200%

Usual care + ISP
Number of patients: 103



62%
142 / 230



Physician complicance

Correspondence letter to GP

Changes after 1 month

Usual care Number of patients: 113	
Total items	%
79	
45 / 79	57%

Usual care + ISP Number of patients: 103	
Total items	%
142	
88 / 142	62%



Physician complicance

Usual care Number of patients: 113	
Total items	%
79	
45 / 79	57%
52 / 79	66%

Usual care + ISP Number of patients: 103	
Total items	%
142	
88 / 142	62%
101 / 142	71%

Correspondence letter to GP
Changes after 1 month (Telephone call by ISP)
Changes after 3 month



START / STOPP items after 3 month

Usual care
(n = 113)



19%
52 / 268

> 200%

Usual care + ISP
(n = 103)



44%
101 / 230



Conclusion

The addition of ISP to usual care is associated with a doubling of effectuated START/STOPP criteria.

Healthcare students are capable of increasing the quality of complex clinical care!



Conclusion

The addition of ISP to usual care is associated with a doubling of effectuated START/STOPP criteria.

Healthcare students are capable of increasing the quality of complex clinical care!



Future analyses

- Reducing adverse drug reactions
- Effect on quality of life and patient medication satisfaction
- Interprofessional (learning) benefits students

Acknowledgement



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