## Prescribing Optimisation Method

**An effective educational tool for medical students to master polypharmacy**

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## How to optimise polypharmacy



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## Prescribing Optimisation Method

Judgemental (implicit) method

1. Actual use
2. Side effects
3. Undertreatment
4. Overtreatment
5. Interactions
6. Dosage (kidney function)

*Includes explicit methods: START/STOP*

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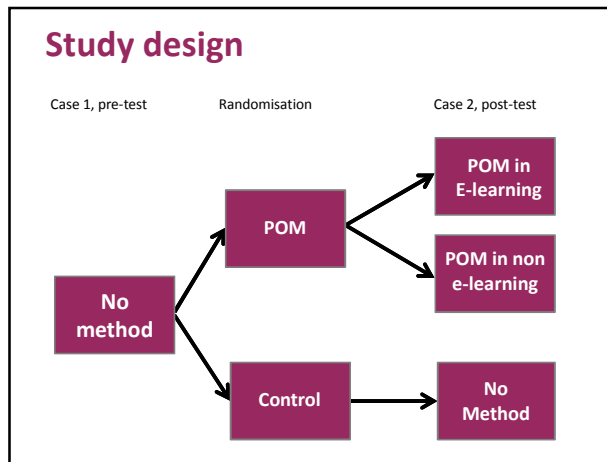Is the POM an effective tool for medical students to master polypharmacy?

With or without e-learning?
How is the satisfaction on the method and the e-learning environment

## Randomised controlled trial

103 final year medical students

2 faculties of medicine

Sources as in clinical practice e.g. internet

Cases based on real life cases

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## Study design

| Case 1, pre-test | Randomisation | Case 2, post-test |

No method → POM → POM in E-learning

POM → POM in non e-learning

No method → Control → No Method

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Medication list students vs expert panel

Each drug: right or potentially harmful decision

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## Baseline results
**control vs intervention**

| Variable | Unit | Control (n=53) | Intervention (n=50) | p-value |
|---|---|---|---|---|
| Age | median (range) | 25 (23-32) | 25 (23-40) | 0.38 |
| Gender | % female | 75 | 58 | 0.06 |
| Location | Utrecht n<br>Amsterdam n | 27<br>26 | 24<br>26 | 0.77 |
| No. of weeks before graduation | median (range) | 12 (6-42) | 12 (6-40) | 0.98 |
| Relevant pre-training | Non/non-relevant<br>Relevant | 44<br>9 | 41<br>9 | 0.89 |
| Score pre-test | Right decision n (SD)<br>Harmful decision n (SD) | 5.8 (1.7)<br>3.4 (1.5) | 5.2 (1.5)<br>3.4 (1.0) | 0.11<br>0.99 |

## Baseline results
**e-learning vs non-e-learning**

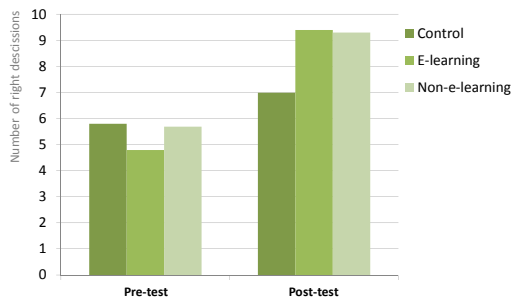| Variable* | Unit | E-learning (Faculty 1) | Non-e-learning (Faculty 2) | p-value |
|---|---|---|---|---|
| Age | median (range) | 26 (23-38) | 24 (23-40) | **0.00** |
| Score pre-test | Right decision n (SD) | 5.1 (1.6) | 5.9 (1.6) | **0.01** |
| | Harmful decision n (SD) | 3.6 (1.2) | 3.2 (1.2) | 0.11 |

*Only differences
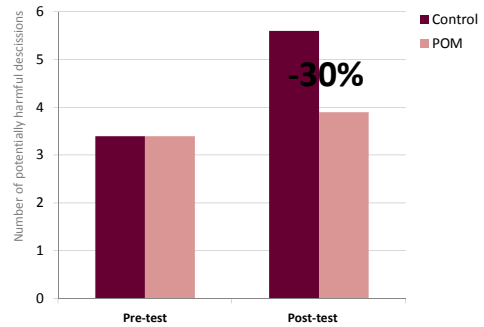
## Main Results
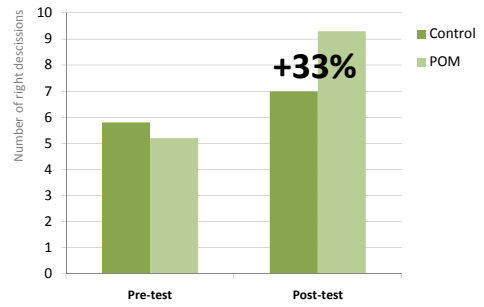


Posthoc: unpaired t-test on post-test p<0,05

## Main Results
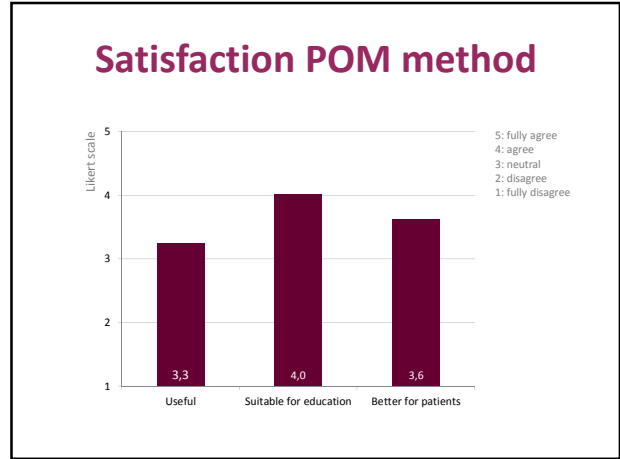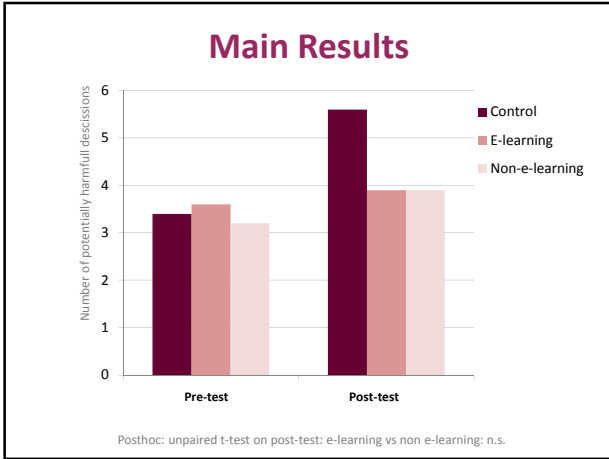


Posthoc: unpaired t-test on post-test: elearn vs non elearn: n.s.

## Main Results



Posthoc: unpaired t-test on post-test: p<0,05

**Main Results**

Posthoc: unpaired t-test on post-test: e-learning vs non e-learning: n.s.



**Satisfaction POM method**



**Satisfaction e-learning**



**Prescribing Optimisation Method**

**A well appreciated and effective educational tool for medical students to master polypharmacy**

Thank you for your attention