



DEVELOPMENT OF PRESCRIBING KNOWLEDGE OF JUNIOR DOCTORS IN THE FIRST YEAR AFTER GRADUATION

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Introduction

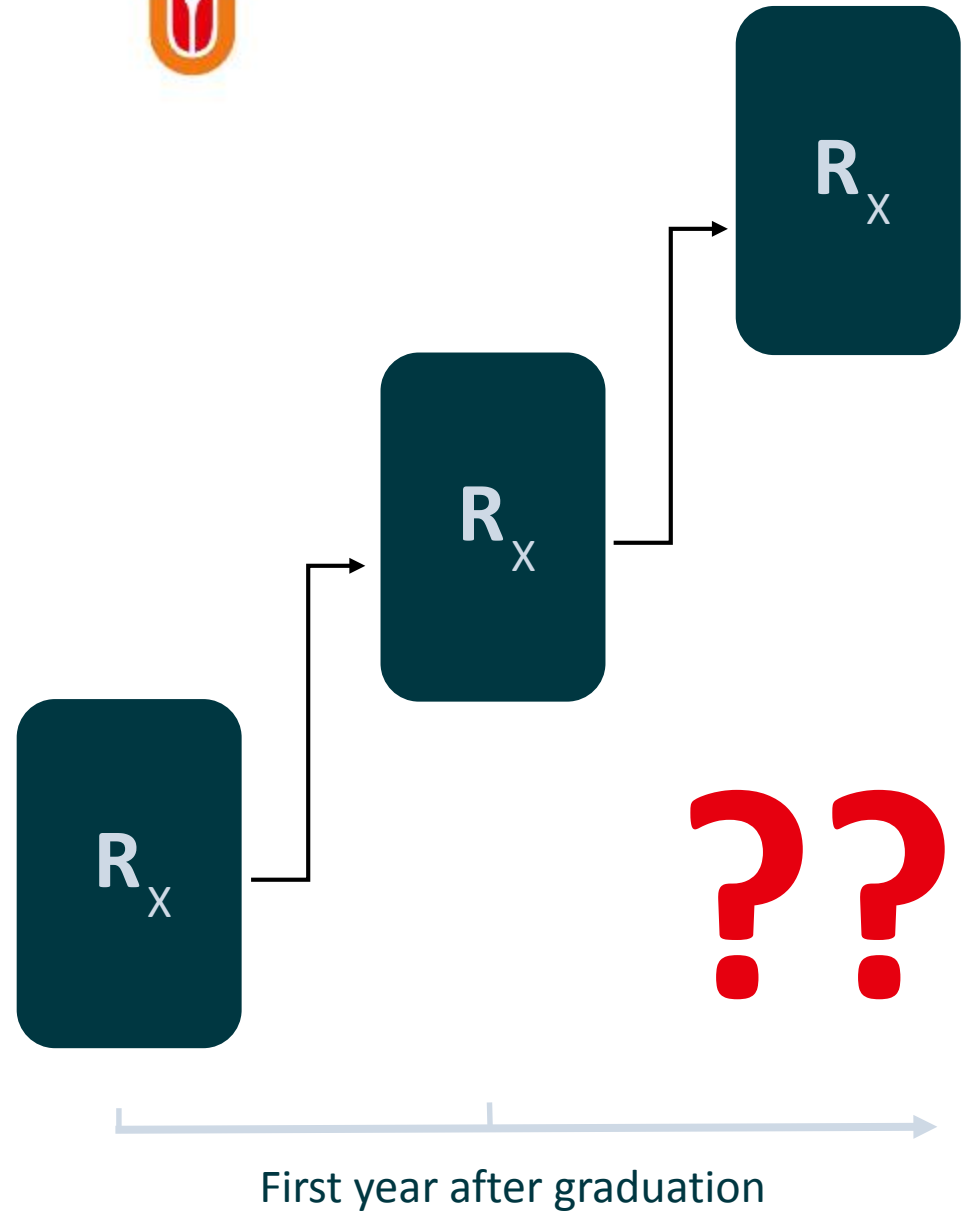


Brinkman et al. 2017 and 2018



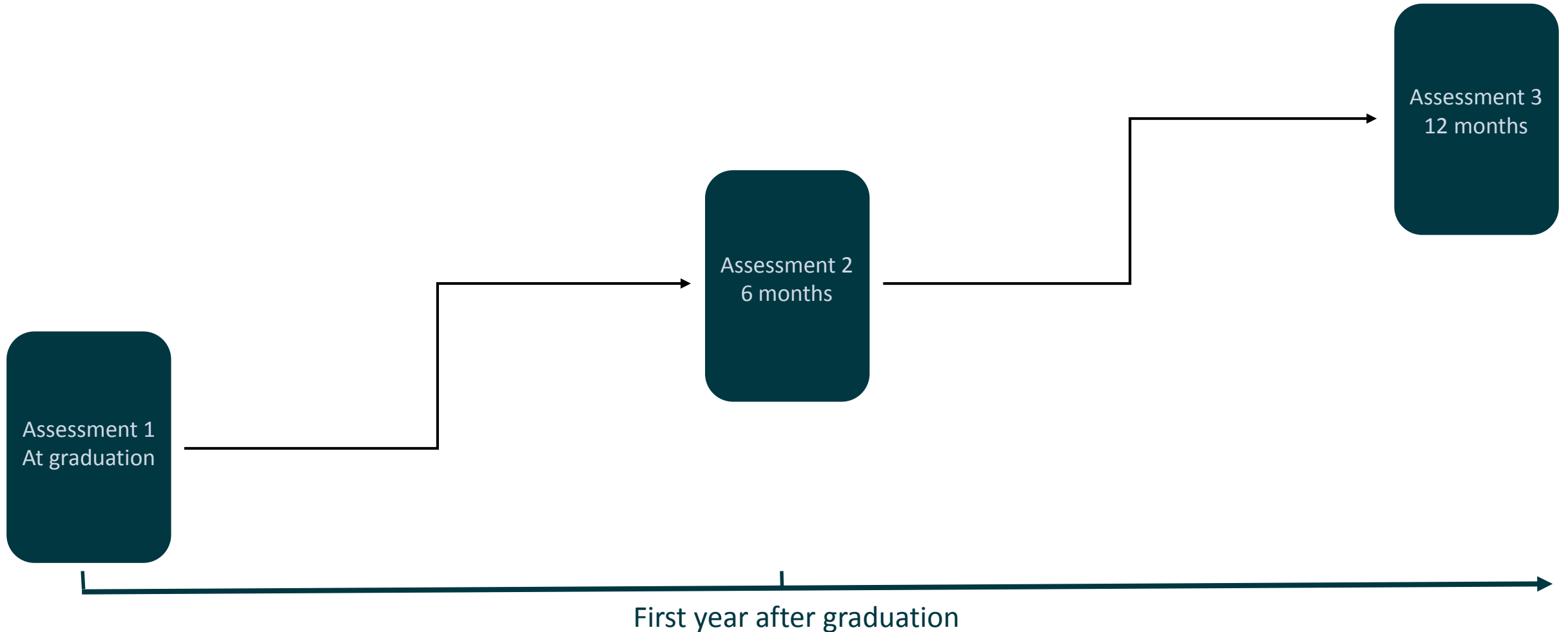


Introduction





Methods





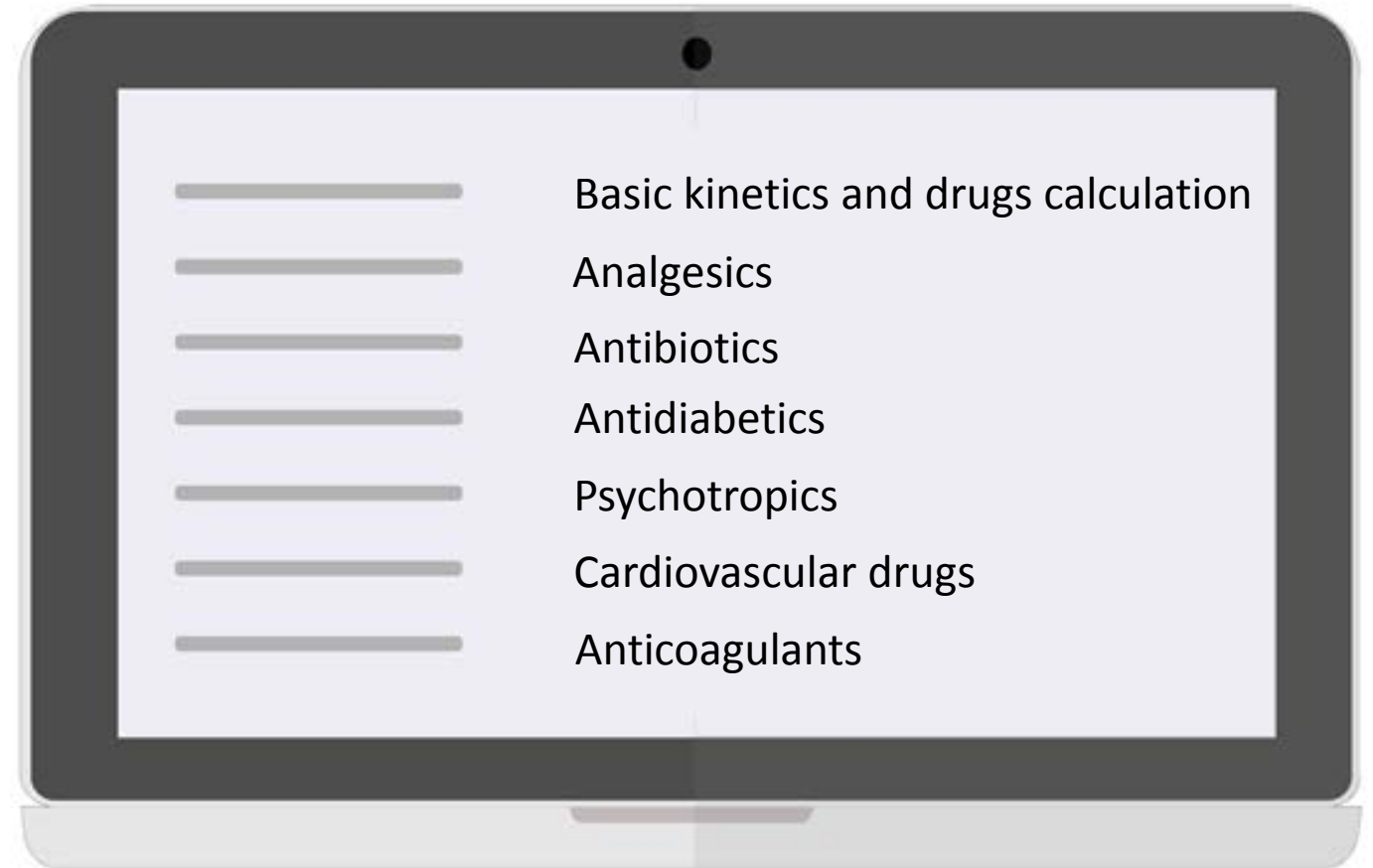
Methods

35 multiple choice questions

Extracted from the Dutch
National Pharmacotherapy
Assessment

7 topics

3 clinical scenario's





Radboud (n= 57)

AMC (n= 17)

Erasmus (n= 23)

Gent (n= 45)

LUMC (n= 10)

MUMC (n= 47)

UA (n= 30)

UMCG (n= 31)

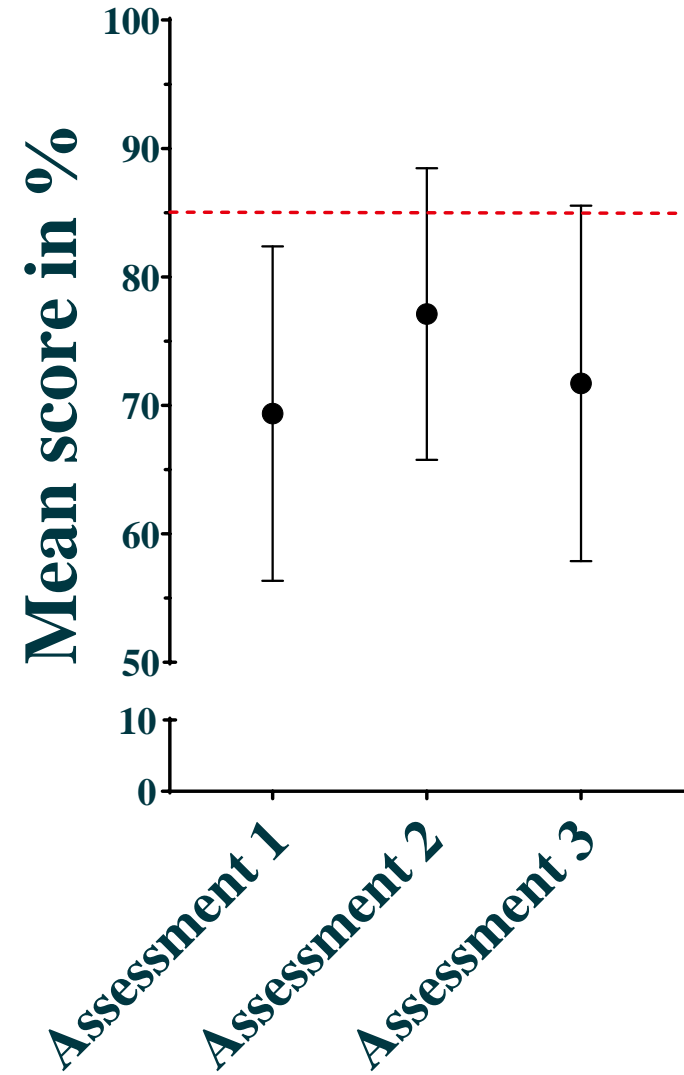
UMCU (n= 22)

VUB (n= 10)

VUmc (n= 34)

11 universities in the Netherlands and Belgium







Assessment 1

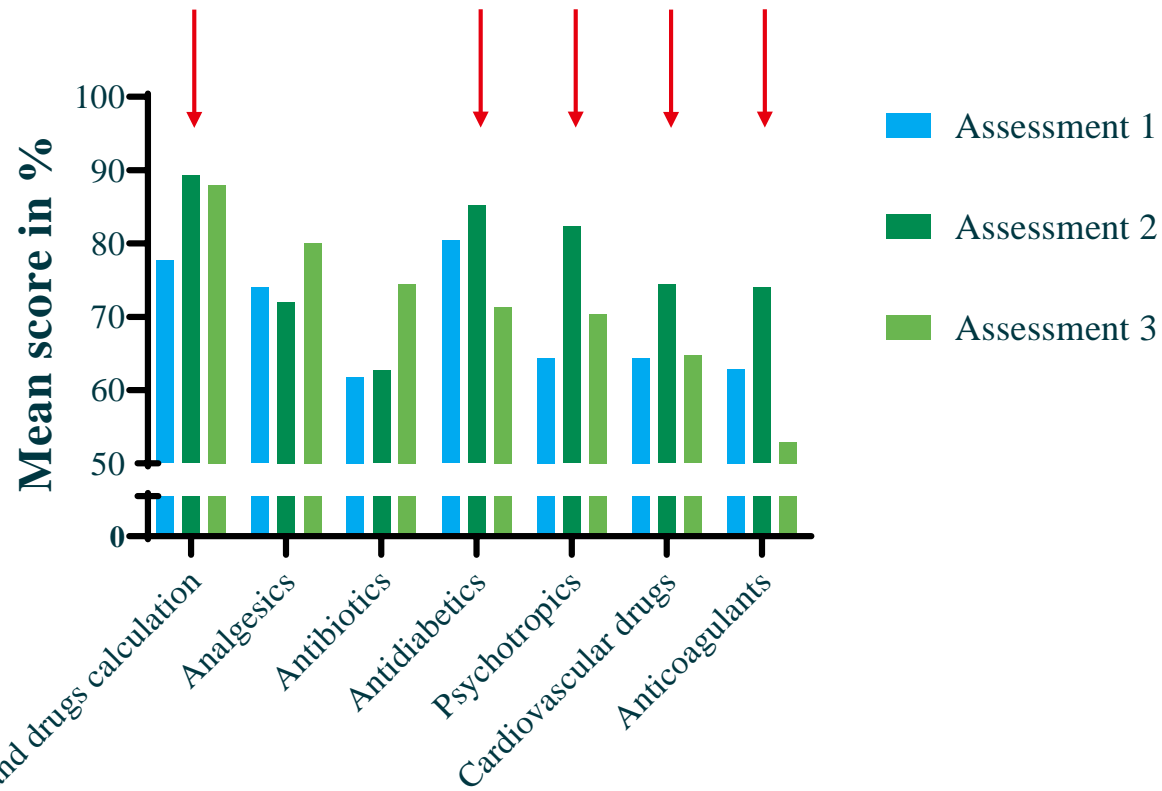


Assessment 2



Assessment 3

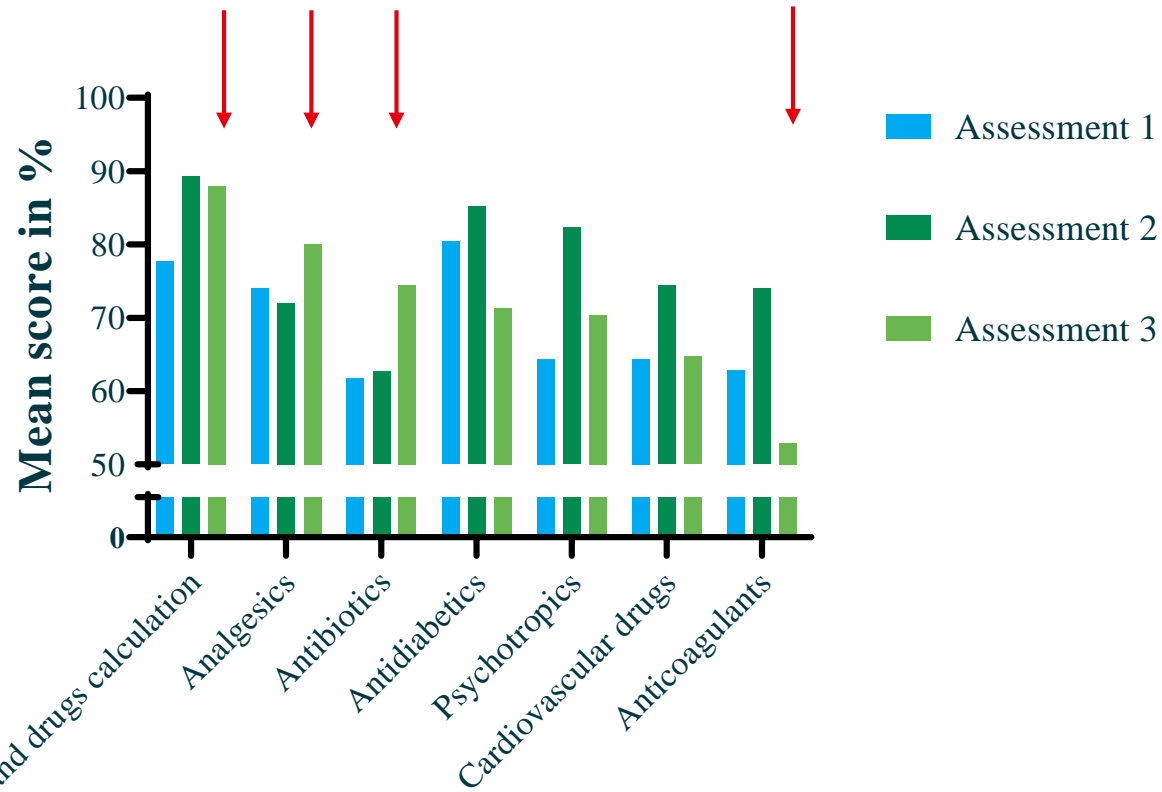




5/7 topics increase in first 6 months

- Basic pharmacokinetics
- Antidiabetics
- Psychotropics
- Cardiovascular drugs
- Anticoagulants

Basic pharmacokinetics and drugs calculation



5/7 topics increase in first 6 months

- Basic pharmacokinetics
- Antidiabetics
- Psychotropics
- Cardiovascular drugs
- Anticoagulants

Only 3/7 increase after 12 months

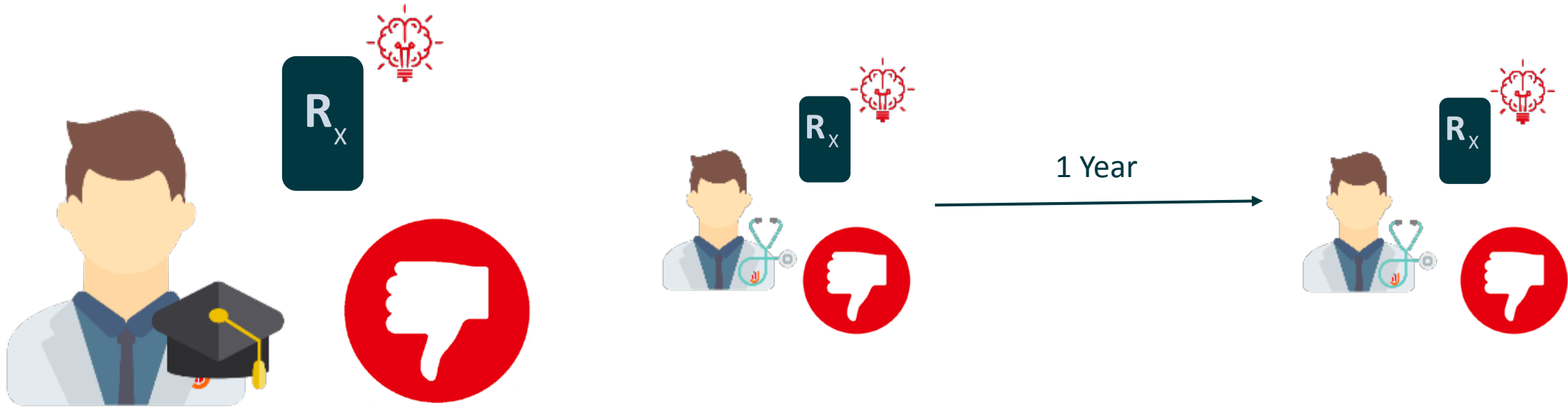
- Basic pharmacokinetics
- Analgesics
- Antibiotics

Least knowledge in anticoagulants

Basic pharmacokinetics and drugs calculation



To conclude





Recommendations



- 1.) Intensify education in CPT in the undergraduate curriculum
- 2.) Investigate which educational interventions for junior doctor are suitable
- 3.) Implement new educational programs on prescribing knowledge





Thank you!





To answer your questions



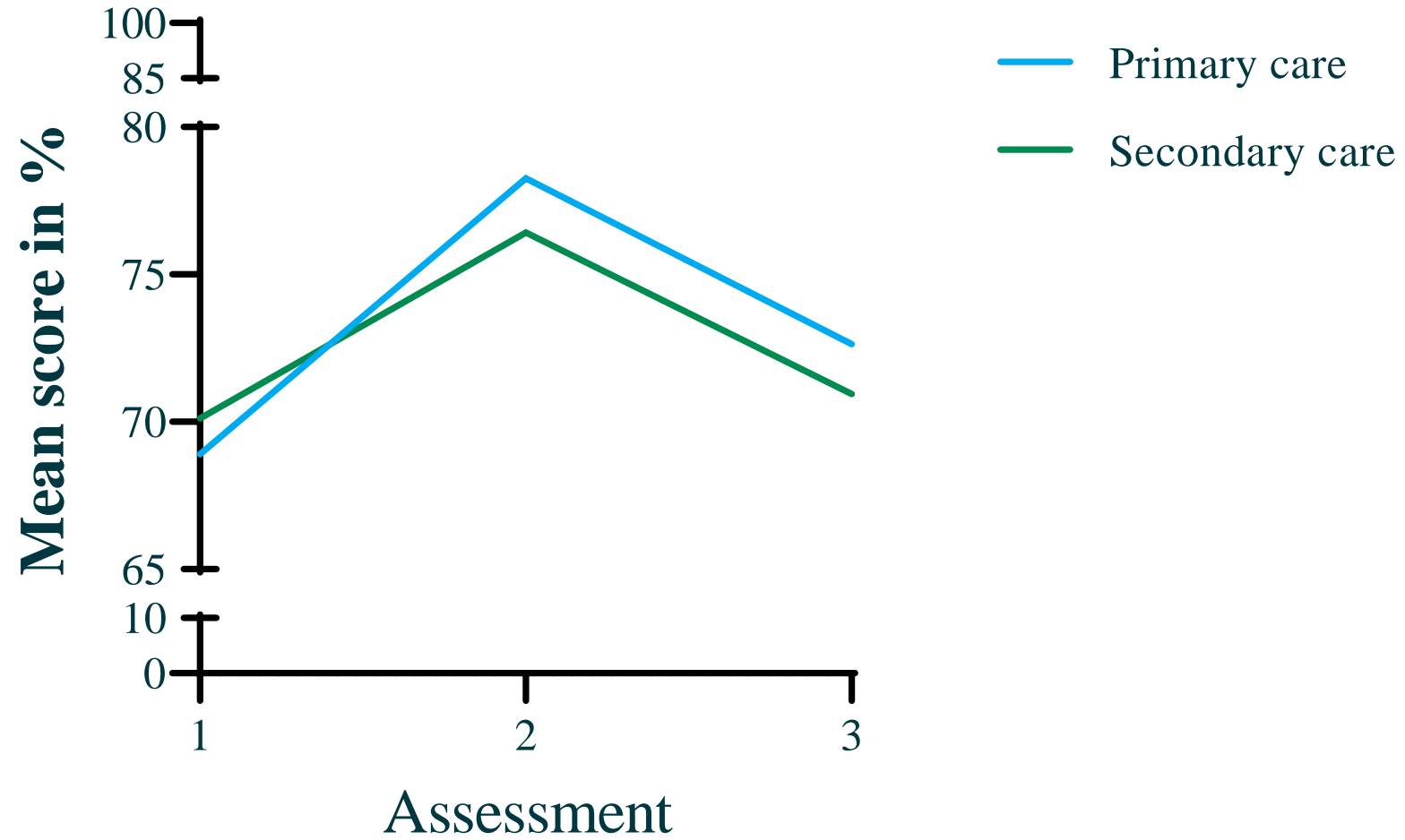


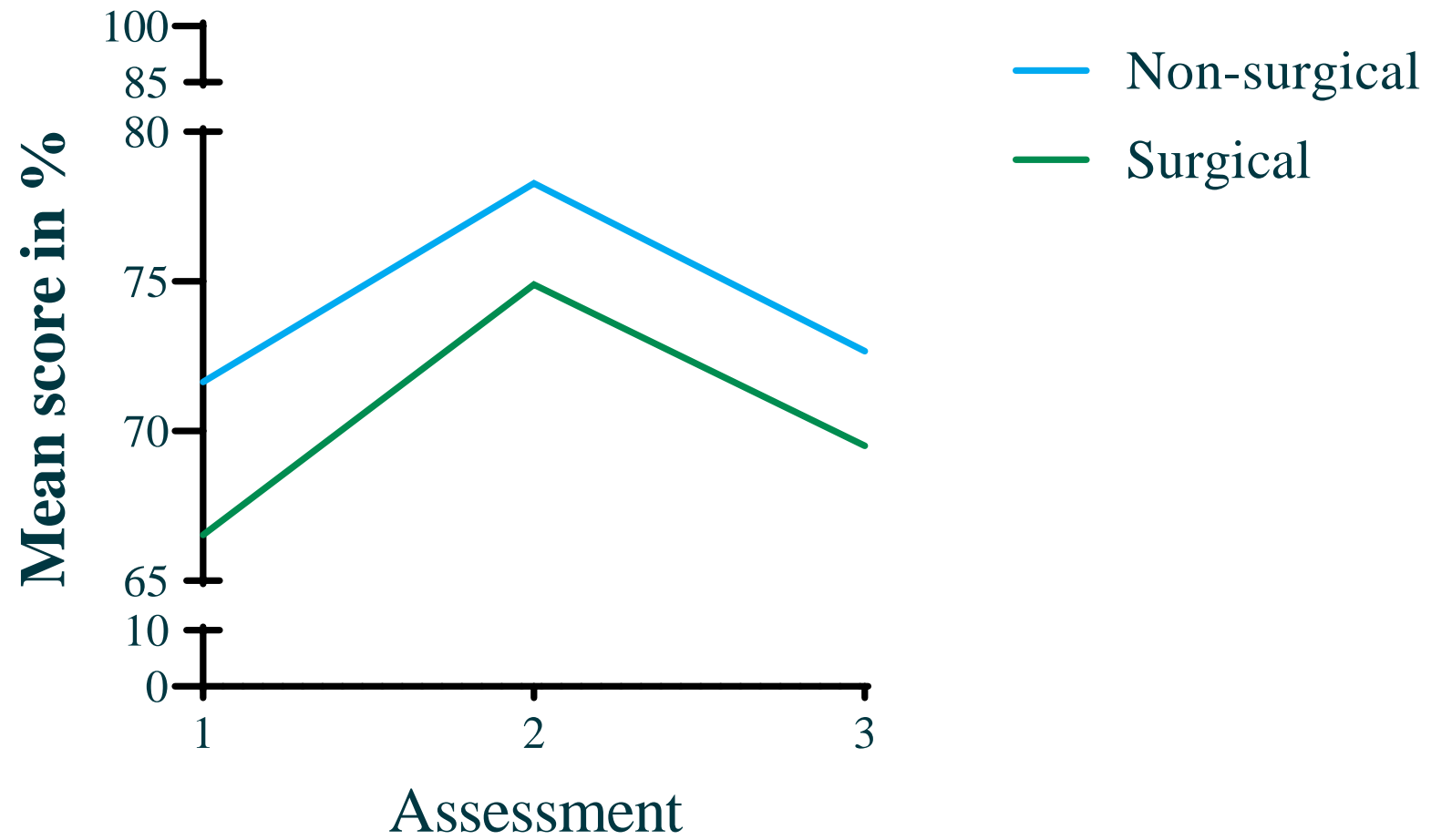
Explanation of the peak of knowledge after 6 months

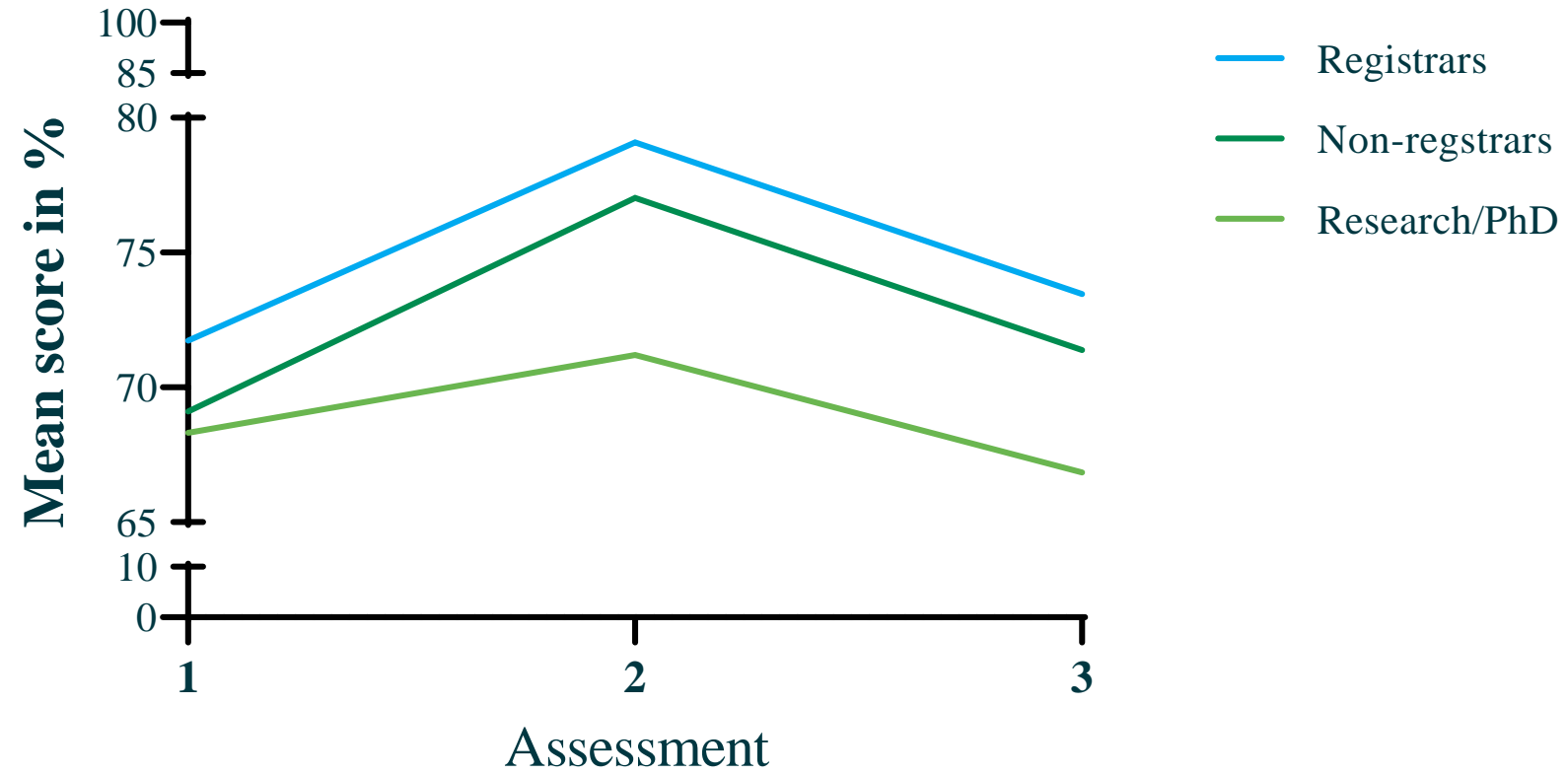
- 1.) Working on routine or copying teachers after 6 months
- 2.) Test 2 was too easy
- 3.) Test 1 and 3 were too difficult

But, whatever the case is, the prescribing knowledge is insufficient!











Examples

Analgesics:

- *Which of the following drugs increases the risk of reducing the kidney function when prescribed simultaneously with a non-steroidal anti-inflammatory drug (NSAID)?*

Anticoagulants:

- *A patient uses warfarin and is admitted to the hospital with severe gastric bleeding. The gastric bleeding cannot be coagulated endoscopically and the patient becomes hypotensive.*

Which of the following drugs should be directly administered to antagonize the effect of warfarin:



Examples

Antibiotics:

- *A 6-year-old boy comes to the doctor with his mother because of a chronic sinusitis. The general practitioner decides to start antibiotic treatment to relieve his symptoms.*

Which of the following antibiotics is contraindicated in this patient?

Psychotropics

- *A patient uses oxazepam, metoprolol, simvastatin, amitriptyline, warfarin and digoxin. Besides oxazepam, which of these drugs is MOST likely to cause drowsiness?*



Examples

Cardiovascular drugs

- *A 64-year-old patient with a history of essential hypertension and heart failure has been treated with furosemide for several weeks because of progressive shortness of breath. The laboratory tests show a serum potassium level of 3.0 mmol/L (11.7 mg/dL). You decide to prescribe a drug to prevent further potassium loss.*

Which of the following drugs can be used for this purpose?

Antidiabetics

- *Which of the following drugs can mask the symptoms caused by hypoglycaemia?*



Examples

Basic pharmacokinetics and drug calculation

- *A patient of 100 kg is treated with gentamicin because of sepsis. Her estimated creatinine clearance is 75 mL/min. The target value for gentamicin peak concentration (immediately after infusion) is 15 mg/L. The volume of distribution of gentamicin is 0.4 L/kg.*

Which dose of gentamicin should be administered to reach the target value for gentamicin peak concentration?

