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Can Case-Based Training Improve the Confidence of Final Year Student Doctors in Drug Prescribing?

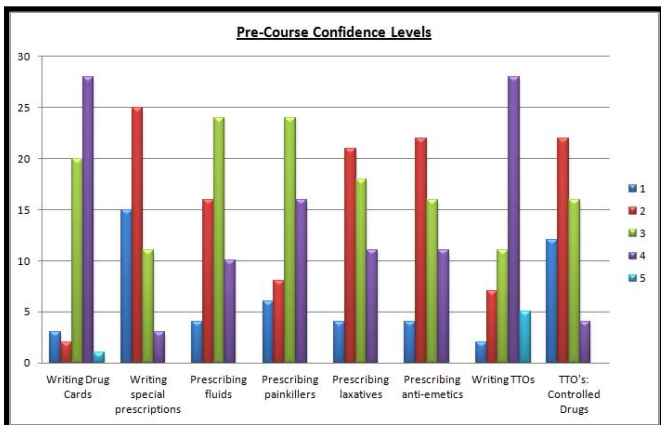
Church, H; Pearson Z; Walker A.

Email: helen.church@nhs.net or zoe.pearson@nhs.net

Prescribing is a core component of medical practice, and yet is often overlooked during undergraduate training. We describe a case-based training program delivered at the end of a five-year undergraduate medical degree to increase the confidence, and competence, of newly qualified doctors in drug prescribing.

Background:

The General Medical Council stipulates that medical graduates must be able to "Prescribe drugs safely, effectively and economically". Randomised controlled trials demonstrate that student doctors are inadequately taught prescribing skills. In further research, the most valuable asset to prescribing skills was found to be self-directed study followed by interactive discussion sessions.



"Outstanding"

"pre-course material was really useful"

- 1 Mark: Circling RED CELLS
- 1 Mark: Date for transfusion
- 1 Mark: Duration of transfusion
- 1 Mark: Signed, name stated, bleed number and date
- 1 Mark: Circling YES for 'any other drugs required' for 2nd transfusion

Peri-operative

Prescriber of transfusion to complete		Administrator of transfusion to complete															
Name of patient (include ID)	Date of transfusion	Quantity of transfusion (litres)	Any other drugs required? (See drug chart)	Prescribed	Issued	Checked	Given	Checked	Date	Time	Room No.	Ward No.	Initials	Signature	Time	Signature	
0/6/12	0/6/12	0.5	Yes											Z.M. Pearson			
Signature: Z.M. Pearson				Duration number of unit (After tickbox)													
Name: Zoe Pearson #201				Empty of unit:													
Date: 6/6/12																	

Method:

Final year student doctors from the University of Sheffield attended three two-hour prescribing sessions delivered by two Academic F2's and one Medical CT1 doctor. The topics delivered were developed using qualitative feedback from the previous years' cohort. The students engaged in self-directed study, guided by online pre-course material, before attending the interactive sessions. Thirteen case-based tasks enabled students to develop their prescribing skills through practice and discussion. The students self-rated their confidence levels in prescribing before the course, through online questionnaires using a Likert scale (1-5; 1= not confident at all, 5 = very confident) and then provided qualitative feedback for future course development.

"it was easy to ask questions and clarify things during the session"

On the Wards

- 1 Mark: Writing up MST, total in words and figures
- 1 Mark: Writing up Oramorph (with sensible total amount to dispense in words and figures)
- 1 Mark: Writing up fentanyl patch in words and figures including frequency

"clear explanations with examples provided... questions answered well"

"Well structured"

"I've improved my prescription writing.. I'm more confident when writing drug kardexes"

MEDICINE AND FORM (Approved name in capital)	DOSE and DIRECTIONS	Drugs changed since admission (Times changed)	Reason for Change	Duration of treatment (Country, County, Ward /POD, Pharmacy)	Quantity supplied (from Pharmacy)
SENA	7.5MG ON PO			Y	
MOVICOL	1 SHACHET BD PO			Y	
METHOTREXATE	7.5MG OW (WEDNESDAYS) PO			Y	Co-Signed G/M/J (SHO)
MST (IZOMORPH) M/R	20MG BD PO - PLEASE SUPPLY 500MG (FIVE HUNDRED AND SIXTY MILLIGRAMS)			Y	
ORAMORPH 10MG/SML	5MG PRN PO - PLEASE SUPPLY 100ML (ONE HUNDRED MILLILITRES) OF 10MG/SML (TEN MILLIGRAMS IN FIVE MILLILITRES) SOLUTION				
FENTANYL PATCH	12 MICROGRAMS/HR EVERY 72HRS TOP - PLEASE SUPPLY 4 (FOUR) 12MG/HR (TWELVE MICROGRAM PER HOUR) PATCHES				

Gentamicin Px

On-Call

- Check Exclusion Criteria
- Patient Obese (i.e. Patient's weight greater than ideal body weight + 20%)
- Therefore → Ideal Body Weight
- Gentamicin Chart - Use of Ideal Body Weight (1 point)

Height (feet/inches)	5 feet 8 inches
Actual body weight (kg)	90 kg <input type="checkbox"/>
Ideal body weight (kg)	65kg <input checked="" type="checkbox"/>

Tick box to indicate which weight is used to calculate dose (see point 3 overleaf)

Summary of Results:

Students valued undertaking the prescribing course, as it increased confidence and was considered important to their training before embarking on their F1 year. The pre-course material followed by interactive marking of their own work was deemed very useful for students to identify areas of strength and weakness and were very positive about the impact that the course had on their confidence in prescribing.

Conclusions:

Case-based training was a very successful way of improving confidence of prescribing in student doctors. The use of practical prescribing involving common clinical scenarios proved particularly useful to students.

References:

Tomorrow's Doctors: Outcomes for graduates 2 - The doctor as a practitioner. London; GMC: 2009.
 Heaton A, Webb DJ, Maxwell SRJ. Undergraduate preparation for prescribing: the views of 2413 UK medical students and recent graduates. *British Journal of Clinical Pharmacology* 2008; **66**: 128-134.
 Smith A et al. Construction and evaluation of a web-based interactive prescribing curriculum for senior medical students. *British Journal of Clinical Pharmacology* 2006; **62** (6): 653-658.