Implementation and evaluation of case-based clinical competency tutorials for pharmacists

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Background

In 2015, a clinical incident occurred at The Prince Charles Hospital (TPCH) where a patient required dialysis for loss of renal function due to intravenous vancomycin therapy. Incident review recommended Pharmacy Department address safety and documentation issues related to high risk medications requiring therapeutic drug monitoring (TDM). One of the interventions implemented was the development of clinical competency tutorials for clinical pharmacists.

Aim

To describe the development and evaluation outcomes of clinical competency tutorials for clinical pharmacists at TPCH.

Methods

Enoxaparin and vancomycin were chosen as the pilot clinical competency tutorial topics.

A senior pharmacist (tutor) who was the content expert developed a case scenario in consultation with the pharmacy team leaders group.

The tutor conducted one-on-one sessions (30 minutes) with pharmacists in August 2016 (enoxaparin) and March 2017 (vancomycin).

Pharmacists had the opportunity to discuss the management of clinical issues related to the use of the high risk medication and practise clinical pharmacy activities including TDM, documentation and clinical handover.

The pharmacist's answers were assessed against a checklist of competency criteria agreed by the pharmacy team leaders group.

A staff survey was conducted to evaluate the perceived benefits and issues of undergoing a peer-led, case-based clinical competency tutorial.

Table 1: Assessment criteria for clinical competency tutorials

CORE CRITERIA	
• Demonstrate clear, precise and appropriate communication • Check patient's details, e.g. weight, height, electrolytes, renal function • Check allergies / adverse drug reactions • Recommend appropriate monitoring, e.g. tests required, timing of samples • Recommend appropriate dose adjustment based on monitoring results • Practise appropriate documentation on the Medication Action Plan • Provide appropriate clinical handover • Identify other pharmaceutical care issues, e.g. drug interactions, venous thromboembolism risk assessment	
ENOXAPARIN	**VANCOMYCIN**
• Identify anticoagulant options available • Describe treatment rationale for anticoagulant of choice • Individualise recommendations based on patient and clinical issues • Ensure appropriate administration time and dosing intervals for enoxaparin • Consider risks/benefits of enoxaparin dose capping and once-daily dosing	• Identify loading dose required • Recommend appropriate loading dose, maintenance dose and infusion time • Clarify time of administration in relation to drug level sampling • Provide appropriate recommendations in response to sub- and supra-therapeutic vancomycin levels • Comment on the need for concurrent antibiotic therapy

Results

Table 2: Evaluation outcomes

	Enoxaparin	Vancomycin
No. of pharmacists completed tutorial	37	27
Average no. of criteria achieved	14 of 16 (88%)	17 of 22 (75%)
There was no obvious difference in the number of criteria achieved in terms of the pharmacist's years of clinical experience.		

Table 3: Staff perception on benefits of clinical competency tutorials

* Responses received = 55 of 64 (86%)

(1 = strongly disagree, 5 = strongly agree)	1	2	3	4	5
The case helped evaluate my clinical pharmacy skills	0	0	0	20	35
The case helped evaluate my personal and professional qualities	0	1	4	23	27
I understand how the outcomes from the case scenario may be applied to improve my practice	0	0	0	20	35
The case scenario discussion enhanced my confidence with the management of 'therapeutic topic'	0	0	0	25	30
The case scenario helped to enhance my knowledge of management of 'therapeutic topic'	0	0	0	26	29
The case scenario provided a fair reflection of my work performance	0	2	3	30	20
I am comfortable with the idea of undergoing professional development through a case based competency assessment	0	0	1	26	28
I am motivated by the prospect of undergoing peer assessment using a case scenario discussion	0	0	2	31	22
I think that a competency based case helps to promote fairness in the peer assessment process	1	0	3	22	29
I understand how undergoing a competency based case discussion might help me deliver better patient care	0	0	0	19	36
I am comfortable with receiving feedback on my performance from my peers	0	0	0	21	34

Figure 1: Staff feedback on peer assessment and feedback process

Conclusion

The peer-assessed, case-based clinical competency tutorials were found to facilitate continuous reflective, objective assessment and constructive feedback on clinical pharmacists' knowledge and skills.

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