

Transferable training resources for internal medicine trainees: the future of practical procedural training

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Table 1. Summary of pre- and post-implementation survey responses

	Pre-Implementation				Post-Implementation			
Response Rate (total)	21/26 (81%)				17/26 (65%)			
IMT 1	28%				42%			
IMT 2	48%				48%			
IMT 3	24%				12%			
Procedure (n=7)	Clinically independent	Previously attempted on a patient – need more practice	Previously attempted in a skills lab setting	Not confident, never seen one	Clinically independent	Previously attempted on a patient – need more practice	Previously attempted in a skills lab setting	Not confident, never seen one
Pleural aspiration	19%	43%	33%	5%	65%	23%	12%	0%
Seldinger chest drain	5%	38%	52%	5%	35%	53%	12%	0%
Ascitic tap	43%	43%	14%	0%	94%	6%	0%	0%
Ascitic drain	24%	43%	29%	4%	94%	6%	0%	0%
Lumbar puncture	62%	38%	0%	0%	88%	12%	0%	0%
CVC insertion	33%	29%	38%	0%	47%	35%	18%	0%
DC cardioversion	19%	24%	43%	14%	70%	18%	12%	0%

Introduction

The internal medicine training (IMT) curriculum requires competence by year 3, in 12 practical procedures.¹ Traditionally, these have been delivered via a simulation-based education approach allowing skills lab demonstration, familiarisation and practice, before consolidating training in practice.

The COVID-19 pandemic has resulted in reduced educational opportunities for junior doctors, with particular impact on

face-to-face training and associated increased remote learning approaches adopted. In order to maintain high standards of education and development for our future medical registrars and consultants, it is essential to create new, adaptive, high quality education models.

This education initiative aimed to firstly, transform and improve procedural skills teaching at a large central London teaching hospital, leading to increased competence among IMT trainees, and secondly, to create and use virtual and transferable teaching resources in order to integrate a flipped learning approach when teaching practical procedures.²

Materials and methods

A survey was carried out to capture trainee-perceived baseline competence: nine video demonstrations were created, comprising curriculum-aligned practical procedures and a procedures handbook was written to complement the videos. All IMTs were sent these resources and post-implementation survey data was subsequently collected.

Results and discussion

Pre-implementation survey (81% response rate) data highlighted a gap in resources. 28% of respondents were IMT1, 48% IMT2 and 24% IMT3; pre-implementation data suggested a delay in perceived clinical competence in those approaching the end of IMT and who were about to embark on higher specialty training. Reported perception of ability and confidence showed a wide range across multiple skills; 5% of trainees reported never having seen a pleural aspiration or drain, or ascitic drain in clinical practice or a skills lab setting. 19% felt independent in performing DC cardioversion (DCCV), 62% independent in performing a lumbar puncture (LP) and 33% in central venous catheter (CVC) insertion.

Nine video demonstrations and the accompanying handbook were distributed as trainee pre-course material prior to a trust procedural skills training day. Post-implementation, a trainee survey (65% response rate) showed an increase in reported confidence across all procedures (Table 1). 42% of respondents were IMT1, 48% IMT2 and 12% IMT3. 65% of respondents reported independent ability to perform a pleural aspiration and 35% a chest drain. 95% independence in ascitic drain insertion was reported, 71% independence in performing DCCV and 47% in performing CVC insertion. 100% of respondents had utilised both resources and would recommend them.

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Qualitatively, trainees described the resources as being ‘a helpful quick reference guide before performing procedures on the ward,’ ‘a good concise summary and explanation of what we need to achieve by the end of IMT’ and ‘the resources made SIM more effective as I could focus on the technique as I already understood the procedure.’

Conclusion

The creation of these learning resources has demonstrated a valuable, accessible remote learning resource bank that is now actively utilised in wider training programmes including acute

internal medicine registrar procedural training. Further, the resources have been shared with the wider deanery for collective educational purposes across GIM training. ■

References

- 1 Joint Royal College of Physicians Training Board. Internal Medicine Training Curriculum, 1st ed. JRCPTB, 2019. www.jrcptb.org.uk/sites/default/files/IM_Curriculum_Sept2519.pdf [Accessed 9 February 2022].
- 2 Persky A, McLaughlin J. The flipped classroom – from theory to practice in health professional education. *Am J Pharm Educ* 2017;81:118.