

A dedicated undergraduate gynaecology teaching clinic: The Keele experience

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Summary

Much discussion in the literature centres on how best to teach medical students the intricacies of gynaecological assessment and the subsequent formulation of a management plan. At Keele University skills are initially developed in a simulated setting and then transferred to the workplace where students continue to develop their skills. A dedicated undergraduate gynaecology teaching clinic has been developed and comprises of two to three students and a tutor. All 38 students rotating through the department between January and June 2013 were invited to complete anonymous questionnaire to evaluate this clinic and 36 (95%) of them responded. Respondents felt significantly more comfortable taking a gynaecology history, ensuring privacy during examination and formulating a management plan post-clinic (all $p < 0.001$), with female students feeling significantly more comfortable than their male counterparts ($p = 0.04$). The use of this clinic shows great promise to help students learn an unfamiliar and challenging skill.

Introduction

It is acknowledged that the teaching of obstetrics and gynaecology can be challenging for medical students. An unpleasant training experience at the undergraduate level can lead to a subsequent poor enrolment into the specialty (RCOG, 2006). A variety of approaches to teaching medical students gynaecological consultation and examination skills have been employed at different institutions. These include the use of pelvic simulators, examination under anaesthesia, online learning, and the use of gynaecological teaching associates (Seago *et al*, 2012; Broadmore *et al*, 2009, Ronn *et al*, 2012 and Pickard *et al*, 2003). Whilst simulation for intimate examinations is no doubt valuable, the ability to examine a real patient with genuine pathology within the context of a consultation is desirable, and indeed will be expected of them as junior doctors on qualification.

As an alternative to gynaecological teaching associates (GTAs), a dedicated Undergraduate Gynaecology Teaching Clinic was established at the Royal Stoke University Hospital (RSUH) in 2008. The aim of this clinic is to enable fourth year medical students to develop tactful and sensitive consultation skills within a real gynaecology clinic environment and gain confidence in gynaecological examination.

Gynaecology teaching clinic

The teaching clinic is run on a weekly basis in the gynaecology outpatients department at RSUH. The clinic session is facilitated by a clinical teaching fellow or clinical lecturer (registrar or consultant). A maximum of four patients are booked for each session with two to three students allocated to each clinic, the time allocated per patient is 45 minutes. Each student has an opportunity to see at least one patient under the supervision of a tutor.

Prior to attending the teaching clinics the students have received workshops on gynaecological history taking and consent with simulated patients, and examination using pelvic models. Students may also have had the opportunity to ask for consent from patients in clinical settings prior to performing pelvic examinations under anaesthesia.

The appointment letter received by patients indicated that they were due to attend a teaching clinic and advised them how to rearrange for a conventional clinic should they wish to.

Students independently take a history from their patients before presenting the history to their tutor. The tutor may then clarify any aspects of the history that are unclear or unaddressed, before supervising the student to perform necessary clinical examinations. Following this the student is encouraged to formulate a management plan and discuss investigations they consider necessary. After the patient's departure the tutor provides feedback to the student on their history taking, examination, and management.

This evaluation study aimed to determine whether the gynaecology teaching clinic was effective at developing students' confidence in gynaecological consultation skills.

Methods

All students rotating through the gynaecology department between January and June 2013 were invited to complete a paper questionnaire .

Consenting students completed a pre- and post-clinic questionnaire in which they self-rated their comfort with: taking a gynaecology history, ensuring privacy during

examination, supervised speculum examination, supervised bimanual vaginal examination, ordering of investigations, completion of relevant forms in clinic and formulation of a management plan with the tutor. Respondents rated their comfort with each activity on a four-point Likert scale anchored at 1=very uncomfortable and 4=very comfortable. Respondents were asked their gender and whether they had performed a female pelvic examination on a patient before the gynaecology teaching clinic. Respondents were asked which of the following four formats they would prefer to be adopted when formulating a management plan with the tutor during consultations:

- 1) Discuss both the examination and management plan with the clinician in a separate room to the patient, having presented the history
- 2) Discuss both the examination and management plan with the clinician in the patient's presence, having presented the history
- 3) Discuss the management plan in a separate room with the clinician, having presented the history and examination findings
- 4) Discuss the management plan in the patient's presence, having presented the history and examination findings.

Respondents were also asked to comment on areas that should receive more or less focus within the teaching clinics, further areas that could be included within the teaching clinics, and any additional comments.

A paired samples t-test was used to analyse the difference between students' confidence before and after the teaching clinics. In order to determine if there was any difference between comfort before or after the clinic for male or female students,

or those that had or had not previously performed female pelvic examinations on patients, the students' comfort with each competency was summed to give an overall comfort rating. Differences with overall comfort between groups were analysed by independent samples t-tests. Students' preference for format of examination and management was analysed by a chi-square test. Responses to the free-text questions were independently analysed by two authors (WPS & ELR) through thematic analysis.

All statistical tests were performed in SPSS v19 (SPSS Inc., Chicago, IL). A p-value of less than 0.05 was considered statistically significant.

The procedures for securing the participation and safeguarding the well-being of students who took part in this evaluation study fulfilled the requirements of the Keele School of Medicine Ethics Committee, and written confirmation of this has been provided by the chairman of that committee.

Results

Of the 38 students rotating through gynaecology, 36 (95%) completed the questionnaire. Eighteen (50%) students were male. Twenty seven (57%) students had previously performed a pelvic examination on a patient. Respondents felt significantly more comfortable taking a gynaecology history, ensuring privacy during examination, supervised speculum examination, supervised bimanual vaginal examination, ordering of investigations, completion of relevant forms in clinic and formulation of a management plan with the tutor after the clinic (table 1).

There was no difference in overall comfort between male and female students pre-clinic (male = 17.9, female = 17.9, $p=0.95$), however females felt significantly more

comfortable than males post-clinic (male = 21.8, female = 23.5, $p=0.041$). Before the clinic students who had not previously performed a female pelvic examination on a patient felt less comfortable than those who had (No experience = 15.5, experience = 18.8, $p=0.004$), no difference was seen between the two groups after the clinic (No experience = 21.7, experience = 23.0, $p=0.24$).

Students' preferred format for the teaching clinic was to discuss both examination and management plan in a room separate to the patient, having presented the history to their tutor ($\chi^2=11.06$, d.f.=3, $p=0.01$) (table 2).

From the responses to the free-text questions three themes emerged: the desire for more clinics and more patients, greater focus on management, and the recognition that the teaching clinic was a good learning opportunity. Illustrative quotes for each theme are shown in box 1.

Discussion

This paper is the first description of a dedicated undergraduate gynaecology teaching clinic balancing service provision with education. The clinic is an effective means of increasing students' comfort in gynaecological competencies, this is important for students' education, patients' experience, and recruitment in to the specialty. Students would like further opportunities to develop management plans, and prefer to discuss management options privately with their tutor before discussing with patients. While students may feel more comfortable presenting the history and discussing the management plan separate to the patient, there may be advantages of doing this in the patient's presence. The increased discussion with the patient

would provide them with further knowledge of their condition, and may be an opportunity to gather feedback on the student's performance.

A number of medical schools augment their gynaecological skills training with GTAs, which have been reported to improve students' performance on communication and technical skills assessments when compared to standard teaching alone (Pickard *et al*, 2003). A systematic review of patient involvement in intimate examination teaching concluded that there is a positive impact of including patients in teaching; further anxiety levels were not reduced more by GTAs than real patients (Jha *et al*, 2010).

The discrepancy between male and female students' comfort after the clinics is worth noting and warrants further investigation of males' experience during undergraduate training in gynaecology.

Routine Gynaecology clinics in the United Kingdom have been traditionally designed mainly for consultation purposes only. Most University Hospitals however intermittently incorporate medical education into their routine clinic set-ups, resulting in some unintended consequences such as increased patient waiting times, less time for adequate teaching and increased potential for patient complaints. Learning in this type of environment can lead to time constraint issues due to a lack of structured and consistent approach in the delivery of teaching (Pickard *et al*, 2003). It is essential that patients are informed prior to their appointment about the presence of students in a clinic in order to allow them time to decide whether to attend or opt out for an alternative clinic (Carmody *et al*, 2011).

This evaluation aimed to assess students' comfort, this does not necessarily equate to their competence. The objective assessment of change in students' knowledge

and skills was outwith the remit of this evaluation. Though the sample size was small, the response rate was high. With small samples it is more likely that a type 1 error would be made, however all differences reached statistical significance.

Though the dedicated teaching clinic is resource intensive, it is effective at improving students' comfort in gynaecological consultations and was highly regarded as a good learning opportunity by students. This clinic allows students the opportunity to perform gynaecological consultation and examination skills on real patients under supervision rather than solely through simulation. The use of a gynaecology-teaching clinic shows great promise to help students learn an unfamiliar and challenging skill.

Conflict of interest

All authors declare no conflict of interest.

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Table 1. Students' comfort before and after the gynaecology teaching clinic

Competency	Mean rating pre-clinic	Mean rating post-clinic	t	p
Taking a gynaecology history	2.72	3.36	6.45	<.001
Ensuring privacy during examination	3.14	3.56	4.14	<.001
Supervised speculum examination	2.60	3.40	6.99	<.001
Supervised bimanual vaginal examination	2.42	3.19	6.47	<.001
Ordering of investigations	2.31	3.00	6.96	<.001
Completion of relevant forms in clinic	2.35	2.94	6.87	<.001
Formulation of a management plan with the tutor	2.50	3.21	6.09	<.001

Table 2. Students' preferred format for the teaching clinic

Format	n (%)
Discuss both the examination and management plan in a separate room, having presented the history.	15 (43%)
Discuss both the examination and management plan in the patient's presence, having presented the history	3 (9%)
Discuss the management plan in a separate room, having presented the history and examination findings	12 (34%)
Discuss the management plan in the patient's presence, having presented the history and examination findings	5 (14%)

Box 1. Illustrative quotes for emergent themes

1. More clinics and more patients:

'Potential to have more patients in the clinic whilst still maintaining the teaching support'

'If possible we would like more teaching clinics as we only saw 1-2 patients per person. Maybe if we took only 30 mins per patient?'

2. Greater focus on management:

'Ask students to explain management plan to patient under supervision to ensure they understand it'

'Get students to make a management plan suggestion before the supervisor makes initial suggestion so students get challenged to see if they could formulate it'

3. Good learning opportunity:

'Teaching clinics are really very good and we appreciate the effort that goes into it'

'Was a 'safe' environment to discuss anything and I never felt embarrassment or was unsure about an answer'