A ‘topical’ approach to planned teaching and learning using a topic-based study guide

GARY J. MIRES¹, PETER W. HOWIE¹ AND R. M. HARDEN²
¹Departments of Obstetrics and Gynaecology, ²Centre for Medical Education, Ninewells Hospital and Medical School, Dundee, UK

SUMMARY A study guide has been developed which forms the basis of a ‘TOPICAL’ approach to the undergraduate teaching programme in obstetrics and gynaecology. The guide has the following features: (1) topics identified; (2) objectives set out for each topic; (3) programme of work for each student; (4) issues for learning established; (5) clinical tasks and a structured case history related to each topic; (6) assessment of each student; (7) log of clinical activities completed personally by each student. All of these elements are designed to provide a welcoming learning environment that promotes enthusiasm, improves organization and communication and encourages feedback and evaluation. This pragmatic teaching programme provides a methodical approach to obtaining core knowledge, skills and attitudes over a wide range of subjects. It has been well received by students, with 94% considering it to be helpful or very helpful in feedback responses. It is suggested that this approach to study guides could have wide application.

Table 1. A ‘TOPICAL’ Approach to planned teaching and learning.

| T | Topics |
| O | Objectives |
| P | Programme |
| I | Issues for Learning |
| C | Clinical Tasks |
| A | Assessment |
| L | Log Book |

Table 2. Topics included in the study guide.

TOPICS
(1) Normal labour
(2) Failure to progress in labour
(3) Hypertension in pregnancy
(4) Diabetes in pregnancy
(5) Antepartum haemorrhage
(6) The small-for-dates pregnancy and assessment of fetal well-being
(7) Abnormal menstrual bleeding
(8) Female sterilization
(9) Incontinence of urine
(10) Abnormal cervical cytology
(11) Infertility
(12) Bleeding in early pregnancy

What is the structure of the study guide?

Topics
The study guide consists of 12 core topics within the speciality of Obstetrics and Gynaecology (Table 2). There

Correspondence: Dr Gary J. Mires, Department of Obstetrics and Gynaecology, Ninewells Hospital and Medical School, Dundee DD1 9SY, UK
are six obstetric and six gynaecology topics. The topics are problem based, informed by community need and define clinical core.

Each topic is identified by a presenting complaint or observation as would occur in clinical practice, and which on completion will allow the study of a number of subjects.

For example:

**Topic 7—Abnormal menstrual bleeding**
Identified by the presenting complaint of “My periods are heavy”
Subjects covered may include: fibroids, endometriosis, endometrial cancer, pelvic inflammation, dysfunctional bleeding.

**Objectives**
A set of learning objectives covers the knowledge, skills and attitudes to be achieved on completing the topic. These provide guidance for both students and teachers.

For example:

**Topic 7—Abnormal menstrual bleeding**
Objectives (include total of 11 objectives):

**Knowledge** At the end of this topic you should be able to:
- state the definition of menorrhagia and its clinical features
- describe the investigation of abnormal menstrual bleeding

**Skills** During this topic you should:
- take a full history from a patient with abnormal menstruation
- evaluate the clinical findings and investigations
- appreciate the counselling issues prior to any surgical management

**Attitudes** Following this topic you should have understood:
- the effect which abnormal menstrual bleeding can have on a woman and members of her family
- the concerns which a patient may have before and during investigation and treatment

**Programmes of work**
The guide suggests a programme of work for the student. This includes:
- sources of reference information including advanced reading on the topic;

For example:

For this topic you should:
Revise your notes from the appropriate lectures
Read the following to obtain core knowledge (three textbooks are referenced for each topic)
*Abnormalities of Menstruation Gynaecology Illustrated, pp. 219–228*

For further reading consult:
*Dewhurst Textbook of Obstetrics and Gynaecology for Postgraduates*
Chapter 39—Endometriosis; Chapter 40—Dysfunctional bleeding;
Chapter 47—Benign tumours of the uterus

• the clinical work areas in which suitable patients to complete the topic can be found.

For example:

**Topic 7—Abnormal menstrual bleeding**
Suitable patients to enable you to complete this topic can be identified in the gynaecology clinic, outpatient hysteroscopy clinic, gynaecology wards and gynaecology theatres.

**Issues for learning**
A series of questions identify the learning issues. These are addressed in the reference material. The answers to the learning issues are provided at the end of the guide. Using these allows the students to assess their core knowledge.

For example:

**Topic 7—Abnormal menstrual bleeding**
(series of 10 questions including:)
(i) Define menorrhagia
(ii) What are the pathological causes of abnormal menstrual bleeding?
(viii) What diagnostic methods are used in the investigation of menstrual disorders?
(xi) What medical treatments are available for menstrual disorders? Note their modes of action

**Clinical tasks, assessment and log book**
The guide is in two parts: (i) the ‘study guide’ which includes the topics, objectives, learning resources and opportunities, the learning issues and the answers to the learning issues and (ii) the ‘response book’ which includes the structured case report. The advantage of the two-part arrangement is that the ‘response book’ can be taken in for assessment leaving the student with the remainder of the study guide.

The student completes a structured case report. This is designed to focus on the features of the history and examination which are relevant to a doctor confirming or reaching a diagnosis and subsequently managing the patient and any complications.
For example:

<table>
<thead>
<tr>
<th>Topic 7—Abnormal menstrual bleeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Series of 10 points including:)</td>
</tr>
<tr>
<td>Patients Initials</td>
</tr>
<tr>
<td>LMP</td>
</tr>
</tbody>
</table>

(i) What was the patient's presenting complaint?
   Note the bleeding pattern, duration of menstrual problem and associated symptoms.
   Make an assessment of blood loss during menstruation. Note the extent to which the diagnosis was based on the history.

(iv) What clinical examination was performed at the first consultation?
   Note how the examination findings assisted in making a diagnosis.

(vi) How was the patient's menstrual disorder initially managed?
   Note the treatment option and reasons for its choice.
   Note how the patient's circumstances, e.g. requirement for fertility, influenced the decision.

(x) What concerns did the patient have during the investigation and treatment of her menstrual problems?

Note how questions are structured in two parts: first, factual information from the history, examination and investigation are presented; this is followed by the requirement to interpret how this information is used to manage the patient. The main aim of this format of case history reporting is to develop higher level thinking. The majority of students at this stage in their training have little difficulty in obtaining and presenting factual details from the case history and examination, but may find it more taxing to use this information to define a differential diagnosis, arrive at a diagnosis and plan the clinical management of the patient. The challenge which this aspect of the guide is seeking to address is to lead the student from theoretical knowledge to practical application.

How are the study guides used in the teaching programme?

The study guides are used as a key part of the teaching programme, and support both clinical teaching and tutorial sessions. They are used in the following ways:

- Each student is given an individual timetable of work with sessions identified for completion of the tasks set out in the study guide. The objectives and learning opportunities are clearly stated for each topic and the study guides encourage self-directed learning.
- In the clinical teaching setting (e.g. out-patient clinics and theatre sessions) the guides are used as teaching aids by the teaching staff to identify core material to be taught with the aim of reducing factual overload, and by students as a structured means of presenting clinical information on patients they have seen and examined.

- In the daily tutorials the topics in the guides form the structure for the session with the case report providing the focus for discussion. A student is allocated responsibility for the tutorial having been given one of the topics as the theme for the session. He/she is asked to present a case according to the structured case report thus generating discussion around the learning objectives for the topic.

Students are asked to tackle all of the learning issues for self-assessment of core knowledge, checking with the answers provided. This component of the guide is also used as a revision tool by the students.

Students complete a minimum of six structured cases (three obstetric and three gynaecology) as part of the summative assessment. The response book is collected at the end of the attachment and is marked according to a structured marking scheme (Table 3).

<table>
<thead>
<tr>
<th>Table 3. Marking scheme for study guides.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of cases:</td>
</tr>
<tr>
<td>Completed 12 structured cases</td>
</tr>
<tr>
<td>Completed 9 structured cases</td>
</tr>
<tr>
<td>Completed 6 structured cases</td>
</tr>
<tr>
<td>Completed less than 6 cases</td>
</tr>
<tr>
<td>Quality of factual information from history and examination:</td>
</tr>
<tr>
<td>High quality</td>
</tr>
<tr>
<td>Good quality</td>
</tr>
<tr>
<td>Adequate quality</td>
</tr>
<tr>
<td>Poor quality</td>
</tr>
<tr>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Quality of interpretation of clinical issues:</td>
</tr>
<tr>
<td>High quality</td>
</tr>
<tr>
<td>Good quality</td>
</tr>
<tr>
<td>Adequate quality</td>
</tr>
<tr>
<td>Poor quality</td>
</tr>
<tr>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Presentation</td>
</tr>
<tr>
<td>High quality</td>
</tr>
<tr>
<td>Good quality</td>
</tr>
<tr>
<td>Adequate quality</td>
</tr>
<tr>
<td>Poor quality</td>
</tr>
<tr>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

How have the study guides been received by students?

Feedback was obtained from 125/132 (95%) final-year students. This was in the form of an anonymous questionnaire completed at the end of the block. Students were asked to rate as very helpful/helpful/not helpful (a) the aims and objectives; (b) the guide to learning opportunities/information/references; (c) the learning issues; (d) the structured case reports and (e) the guide overall.
Planned teaching and learning using a topic-based study guide

Figure 1. Feedback from students on the study guide (n = 125).

Figure 1 shows the percentage responses for each question. The guide was well received by the students with 94% considering it to be either helpful or very helpful. The students particularly liked the learning issues with 95% considering them to be either helpful or very helpful. However, 11% of students considered the structured cases to be unhelpful and this may reflect the challenge posed by this component of the guide. Some of these students stated that they would have been happier just writing up a case history and answering questions about it. We believe that this challenge of using knowledge and applying it practically to patient management is one of the main strengths of the guide.

Conclusions

Experience using the guide as part of the TOPICAL teaching programme in obstetrics and gynaecology confirms the educational value of the study guides (Laidlaw & Harden, 1990). The guide helps students to understand what they should learn, provides them with a tool for learning and allows them to assess their own learning. A valuable feature of the guide is the integration of learning and assessment and the support given for a move away from the factual recall to higher level learning objectives. This is important given the close relationship between student behaviour and the assessment procedures in the use (Harden, 1992). The guide has been well received by both students and staff. We believe it supports current trends in medical education and serves as a valuable tool for assisting teaching and learning.

Notes on contributors

GARY J. MIRE is Senior Lecturer in the Department of Obstetrics and Gynaecology, Ninewells Hospital and Medical School, Dundee, UK.
PETER W. HOWIE is a professor and Chairman of the Department of Obstetrics and Gynaecology, Ninewells Hospital and Medical School, Dundee, UK.
R.M. HARDEN is a professor, Teaching Dean and Director of the Centre for Medical Education, Ninewells Hospital and Medical School, Dundee, UK.

References