

## *In Focus: Pharmacy in Spain*

# A British–Spanish Collaboration in Clinical Pharmacy Teaching

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## INTRODUCTION

During the 1990s the United Kingdom experienced a significant expansion in postgraduate Clinical Pharmacy education with the introduction of specialist postgraduate Diploma and Masters programmes. The School of Pharmacy, University of London, launched its Diploma following 10 years of experience of running a full-time postgraduate Master's programme in Clinical Pharmacy. Graduates from this Master's programme returned to hospital pharmacy and, over a decade, pioneered the development of in-service education and training programmes in basic clinical pharmacy. These training programmes were formally recognised and accredited as part of a Diploma in clinical pharmacy. 1993 saw an extension to the Diploma and a modular MSc/Diploma in Pharmacy Practice was developed offering a more flexible approach towards these postgraduate clinical pharmacy

programmes. Pharmacists can complete components of an MSc programme over a 2 to 3 year part-time period or take full-time courses. Qualifications are available at Certificate (completion of an accredited in-service training scheme), Diploma (a 12 month part-time programme) or MSc (a two year part-time programme) levels. Interest from continental Europe highlighted needs in other countries for formal programmes in clinical pharmacy leading to a certificate or Diploma or a specialisation in Clinical Pharmacy. Collaboration between Barcelona and London resulted after informal discussions on the scope and extent of postgraduate courses in the UK.

An "Introductory Course in Clinical Pharmacy" consisting of a two-week taught block course had already been established by the Pharmacy Department of the Hospital de la Sta. Creu i St. Pau in Barcelona in 1974. It was clear, following programme reviews, that the aims,

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objectives and syllabus taught in the Barcelona programme were similar to that of the Certificate level of the Diploma in Pharmacy Practice run by London, except it did not offer a practice component.

The key difference was that the UK programme has a more clinically based educational component. Following discussions on the clinical practice-based components of the UK course, it was agreed to extend the Spanish course by adding a new practice-based module. In order to facilitate the development of this programme, London and Barcelona established a joint "Training for Trainers" course, which developed a number of experienced pharmacists into accredited practice tutors.

In order to enhance the tutors' teaching capability, and to provide them with relevant skills to teach Clinical Pharmacy Practice, a "Training Course for Tutors" from each of the practice sites was held before starting the practical module. This training course is repeated every 2 years in order to recruit and develop new tutors. The Spanish course was accredited by the Accreditation Committee of the School of Pharmacy of the University of London in January 1994 and has the support of the School of Pharmacy, University of Barcelona.

A formal Examination Board was established, comprising the Course Director in Barcelona, two teacher practitioners, a lecturer/manager, one Professor of Pharmacy of the University of Barcelona, and the Course Director of London as visiting examiner.

## COURSE SYLLABUS

### Introductory Course in Clinical Pharmacy

This is held at the Pharmacy Department, Hospital Sta. Creu i St. as a two-week full-time module. The objectives are:

- To provide pharmacists with an overview of Clinical Pharmacy Practice.

- To enable pharmacists to get information from patient medical records and identify and interpret laboratory and pharmacokinetic data.
- To initiate students in prescription monitoring methodology.

The syllabus for this module is shown in Table I and the teaching methods comprise of lectures, workshops and tutorials. The candidates are all residents or specialists in Hospital Pharmacy, and tend to number around 50. The teaching team is made up from Pharmacist tutors, physicians and professors from the University of Barcelona.

In terms of assessment, the Spanish students undertake the same range of practice course work as London tutees and also take the 2.5 hour written examination. The examination comprises two multiple choice sections (MCQ-A – determinate type and MCQ-B – single response type) and a written prescription monitoring section (referred to as Section C). The scope of the MCQ section of the paper and range of questions set in Section C are similar between the two papers and over the past three years the UK and Spanish students take the same examination questions for sections A and B and a similar range of questions for section C. These latter are prescription review questions and are set in both countries to reflect contemporary therapeutic practice. Section C questions are reviewed

TABLE I Introductory course in clinical pharmacy

<i>Content</i>
Priorities in Pharmacy Practice
Pharmacoeconomics
Antibiotic policy and TDM
Pharmacoepidemiology and ADR
Drug Information and patient education
Individual Drug Compounding
Patient records and medical terminology
TPN monitoring
Biopharmaceutics and Clinical Pharmacokinetics
Advances in Drug Therapy
Clinical Trials
Quality Assurance
Study and presentation of Clinical cases

TABLE II Mean examination scores for the joint introductory course in clinical pharmacy

Year	Spain % (sd)	UK % (sd)
<i>MCQ Section</i>		
1995	67.2 (8.9)	61.0 (9.6)
1996	60.8 (14.4)	59.2 (10.1)
1997	61.7 (11.3)	55.0 (8.5)
1998	54.0 (6.9)	55.0 (12.6)
1999	57.9 (7.9)	52.0 (8.6)
<i>Section C (prescription monitoring)</i>		
1995	74.0 (11.5)	50.0 (7.3)
1996	61.1 (12.7)	56.1 (6.5)
1997	56.1 (10.4)	55.0 (14.0)
1998	57.9 (13.5)	56.0 (9.5)
1999	60.1 (11.5)	57.0 (12.5)

by the UK external examiner to ensure consistency in the content and style of the prescription monitoring questions. The paper is examined for content validity. Table II shows examination results from previous years.

#### Practice Activities – Part Two

The practice-based activities are run at several hospitals in Spain:

- Hospital del Mar (Barcelona)
- Hospital de Sant Pau (Barcelona)
- Hospital de Granollers
- Hospital Juan Canalejo (La Coruña)
- Hospital de Getafe (Madrid)
- Hospital Dr. Peset (Valencia).

This section of the programme is run over one week, full-time, and is aimed at improving clinical monitoring skills. In particular, the stated objectives are:

- To develop prescription monitoring and basic drug information skills.
- To enable pharmacists to identify patient groups where dose optimization requires application of pharmaceutical skills.
- To strengthen the pharmacists' problem solving and practice skills, and enable the pharmacists to work as effective members of the health care team.

TABLE III Introductory course (Part 2) in clinical pharmacy

<i>Content</i>
Prescription monitoring
Patient profile
Patient counseling
Case presentations and handouts
Drug information research
Ward rounds
Diary log/clinical portfolio

The content of Part Two of the programme is listed in Table III. The teaching methods include ward work, patient contact and tutorials which are organised and delivered by Clinical Pharmacy Practitioners, selected according to their teaching capability. All of them were Staff Pharmacists of Teaching Hospitals in Spain, having an Accredited Postgraduate Pharmacy Specialization. Tutees entered for this part of the overall teaching programme must have passed the examination set at the end of Part 1.

For assessment for Part Two, the practice activities are based on the tutors' evaluation of student performance, plus completion of a clinical portfolio and a case presentation. An assessment form for student evaluation of the programme is also distributed at this point.

#### Joint Certificate in Pharmacy Practice

One hundred and twenty-one students from various parts of Spain and Portugal have successfully achieved the Joint Certificate of the University of London, Pharmacy Department (Hospital Sta. Creu i St. Pau/Barcelona) and School of Pharmacy (University of Barcelona).

A comparison of the examination results between Spain and the UK shows good consistency (Table II, Figs. 1 and 2). The higher results obtained by the Spanish students in the early years may be a reflection of the expertise and experience of the Spanish pharmacists. In the early years of the programme these pharmacists developed clinical pharmacy services and now have moved on into tutor roles. The more recent

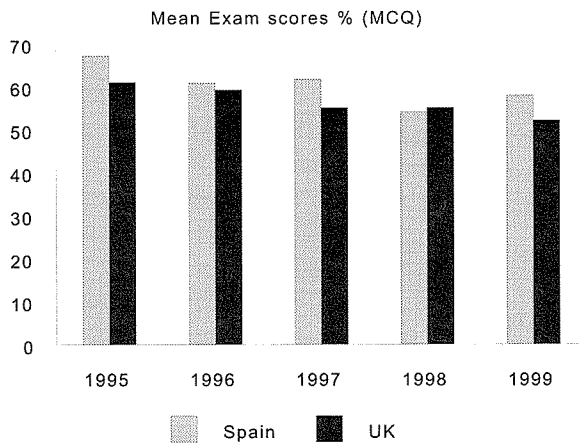


FIGURE 1 Examination scores – MCQ sections.

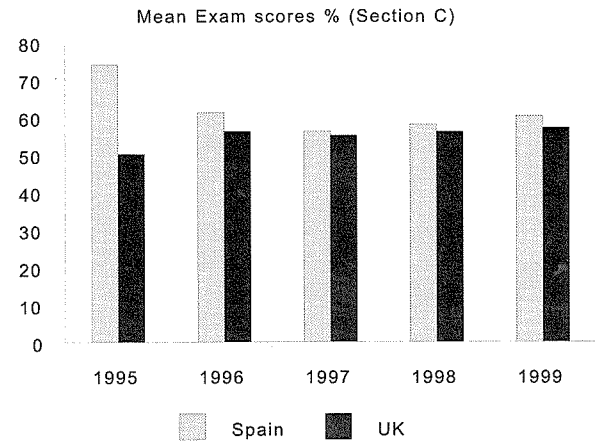


FIGURE 2 Examination scores – Prescription monitoring (Section C).

results are for less experienced Spanish pharmacists and this cohort will be similar to the UK sample; in other words those students who have up to one year post-registration experience only.

#### SUMMARY

This teaching collaboration has been beneficial to both UK and Spanish tutors. The experience has been very satisfactory, from the perspective of the tutor development and the students undertaking the programme.

Mutual cooperation between the two centres promotes effective use of resources and develops expertise in teaching activities as well as in clinical pharmacy practice. The Certificate Programme in Pharmacy Practice is the first one established in Spain and it is also the first formal postgraduate collaborative programme in Clinical Pharmacy between two European countries. It is hoped to further develop this collaboration in the future and perhaps this development will lead to an exchange of students at both undergraduate and postgraduate levels.