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West of the Andes - Undergraduate Medical Teaching in Chile, South America

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Abstract

Wrenching myself away from Edinburgh in winter. I made two working visits of 2-3 weeks each to the University of Concepcion, in central Chile, at the invitation of Drs Carlos Gonzalez and Mario Munoz, the vice-deans of Science and Medicine respectively. My remit was to meet with undergraduate course organizers and comment on their plans for a new medical curriculum, in the light of my experience as the first course director of Year 1 of Edinburgh's new curriculum, and as module organizer for Nutrition and Digestion, one of the six modules that make up the Biomedical Science component of this first year. Edinburgh's new course, which originally had the slightly embarrassing title 'Vision 2000', was implemented in October 1998, and has been extensively revised for the new semester system. In Concepcion the new medical curriculum was introduced in February of this year.

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Wrenching myself away from Edinburgh in winter, I made two working visits of 2-3 weeks each to the University of Concepción, in central Chile, at the invitation of Drs Carlos González and Mario Muñoz, the vice-deans of Science and Medicine respectively. My remit was to meet with undergraduate course organizers and comment on their plans for a new medical curriculum, in the light of my experience as the first course director of Year 1 of Edinburgh's new curriculum, and as module organizer for Nutrition and Digestion, one of the six modules that make up the Biomedical Science component of this first year. Edinburgh's new course, which originally had the slightly embarrassing title 'Vision 2000', was implemented in October 1998, and has been extensively revised for the new semester system. In Concepción the new medical curriculum was introduced in February of this year.

Concepción lies some 500 km south of Santiago, close to the coast, on the estuary of the Bío-Bío river. No-one would call it a beautiful city – it was almost completely razed by an earthquake in 1960, and has been rebuilt in a rather uniform, utilitarian style, but it has a visitor-friendly layout of broad, leafy streets, built to a grid-plan around the central square, the Plaza de la Independencia. Here in 1818 'El Libertador', Bernardo O'Higgins, proclaimed the independence of Chile, and now the Penquistas (natives of Concepción) sit there listening to music or political speeches, eating ice-cream, having their shoes polished or uninhibitedly expressing their affection for each other. The University of Concepción is the third-oldest in Chile, and one of the largest; it has a marine biology unit in nearby Dichato, and other out-stations further south in Los Angeles and Chillán. It is partially government-funded, unlike the private Catholic university on the outskirts of the city. The spacious main campus, just a few minutes' walk from the centre, has many modern buildings surrounding a broad central plaza, and its handsome white campanile (no longer open to visitors, after several unfortunate events in recent years) is a local landmark. A small lake is home to a family of black-necked swans, some of which were rumoured to have been caught and eaten by hungry students. I was struck by the relaxed but (the swans notwithstanding) respectful atmosphere – there were no graffiti or litter, but plenty of students sitting on the grass or under the trees, reading and talking. Behind the lake is a monument to the many staff and students who disappeared during the political violence following the military coup in 1973.

The previous medical curriculum was in many ways like Edinburgh's, pre-1998, in that it was discipline-based, relied extensively on didactic teaching, and was sharply divided into clinical and pre-clinical phases. These features have largely disappeared from the new curriculum: biomedical sciences are now taught through a series of integrated, system-based modules, which are spread over five semesters and include contributions from the departments of physiology, pharmacology, pathology, biochemistry and microbiology. Anatomy stands partly outside this plan, and some of it is still taught in separate modules: this perhaps reflects the continued existence of academic departments, some with powerful and conservative heads. Another feature that I noticed and commented on was the relative lack of 'social medicine' and public health in the first three years of teaching, and the lack of emphasis on communication skills, ethical awareness, personal and professional development and so on, in the formal curriculum. In Edinburgh we found that conflicts between competing 'kingdoms' were counter-productive, in that each discipline insisted on defining its own input to the curriculum, resulting in far more detail than the students could reasonably be expected to assimilate; 'information over-load', as was recognized (and castigated) by the GMC in 'Tomorrow's Doctors', one of the driving forces for

curriculum reform. This led to the creation of the Medical Teaching Organization, the remit of which was to oversee curriculum development, to maintain a balance between the contributions of the different Departments or disciplines, to develop case-based learning so as to integrate scientific, clinical, sociological and ethical approaches to cases, to oversee students' personal and professional development (including communication and consultation skills), and to coordinate assessment throughout the curriculum. Our experience was that the creation of the MTO, with its own budget for the delivery of medical teaching, was very helpful in overcoming conflicts between departments. It involved the creation of several new posts, although some members of the MTO were existing staff, seconded from their departmental jobs. Academic departments remain the basic organizational units in Concepción; on the other hand there is a real appetite for modernization among the teaching staff – the pharmacologists, in particular, have been enthusiastic users of case-based teaching methods for some years, and in the new course medical microbiology is taught in the same way. This is a very progressive development that will certainly be taken further, even though it puts a big demand on staff time. Many Edinburgh students will have encountered Drs Mariana Domínguez and Marcelo Fasce, colleagues from Concepción who have a particular interest in course development, and who visited us in the autumn of 2003 and attended many practical and CBL sessions in years 1 and 2 of the Edinburgh course.

I was rather surprised not to find much human nutrition in the course – this is an important topic that is easy for students to comprehend in the context of basic medical sciences. Nor was there any early teaching of basic clinical skills, such as blood-pressure measurement and respiratory function testing, or even first aid and resuscitation. Teaching of simple clinical skills from the beginning of the course helps student morale, as without it they can easily lose sight of their educational aims; furthermore much of this teaching can be done by nurses and first-aid instructors, and when students eventually arrive in clinics they are equipped with some useful skills. I suspect that arranging such sessions is administratively difficult in Chile, where a great deal of medicine is conducted privately. However the framework of the new course is in place, and given the enthusiasm and vision of the staff I met, there are certain to be further developments in the coming years. There is already a move to deliver parts of the curriculum electronically: medical students have their own well equipped computer lab, presided over by a computing officer whose console shows every screen on the room – surfers beware.



Plaza de la Independencia, Concepción



Arco Universidad de Concepción - The University Campus

There were some other aspects of teaching that I would have liked to have explored, but did not have the opportunity. For example, there were formal classes in English, and the students that I spoke with all spoke good English (otherwise there would have been precious little communication between us), but I did not come across any teaching that is conducted in English, and remain uncertain whether that would be desirable. The indigenous population of Chile is relatively small, unlike those in Bolivia or Peru, but Chileans come from a great range of ethnic backgrounds, and I would have liked know to what extent cultural differences would have a bearing on patient care, or whether this is given much consideration in the course. Finally, because of my own background as a non-clinical teacher and also because of the time of my visits, both of which were during the Chilean summer vacation, I was not able to sit in on any classes; nor was I able to speak to many clinicians or discuss the clinical part of the course.

My timetable left me quite a lot of free time between meetings, which I used to explore the city. Chile is the most developed country in South America, and Concepción one of its most industrialised cities; nevertheless it seemed to me quite exotic. Some of the streets around the Plaza are barred to traffic, and in the evenings these are filled with musicians, hawkers and stalls offering everything from cherries or plums to copper plates depicting Salvador Allende, Che Guevara or even General Pinochet; or for a hundred pesos you can view the moon through a large telescope. I was content to sit in one of the outdoor cafés and watch the parade of passers-by. Talcahuano, the adjoining port, is Chile's largest naval base. Here one can see and visit the *Huascar*, a veteran ironclad war-ship that was built in Birkenhead for the Peruvian navy and used during the war with Chile (1879), when it was lured into a trap by several Chilean vessels and eventually taken. I was even more interested in the many sea-food restaurants in nearby Lenga, some of which were set up in government job-creation schemes – their *empanadas mariscos* (little pies containing shellfish in a sauce) were indescribably delicious. A lunch bill of four thousand pesos (\$4,000.00) looks alarming, but is less than £4.

My overwhelming impression of Chile was of the warmth and kindness of the people. As I cleared customs in Santiago a cab driver grabbed my bag; when I explained I was just changing planes he let it go, shook my hand and welcomed me to Chile. This was typical – encounters in shops and restaurants were invariably friendly, and I was entertained and shown around not just by Carlos and Mario, but by many kind people, especially Sergio Mancinelli, the genial Dean of Science. He took me on several tours by car, and also invited me for a weekend at his small fruit farm in Tucapel, a village in the foothills of the Cordillera, where I was treated to an asado (large-sized barbecue). After dinner we took to the fields with a bottle of pisco (the Chilean national drink, a bit like grappa) to look at the stars – I could just about pick out the Southern Cross, but Carlos the freemason was able to name them all.

My visits were enormously enjoyable – I hope that my advice and the report I wrote were also of some use to my hosts. Some of the problems they face with their new curriculum, both financial and political (university politics, that is) are daunting. I would certainly recommend Chile as a destination for any student seeking an elective attachment in a fascinating, beautiful and friendly country. More staff visits are planned, in both directions. Will I go back? Certainly, if I'm invited – and, as my granny used to say, if I'm spared.



Student Life on Campus

Semester					
1	Introduction to medicine	Orientation and basic information	General and organic chemistry	General anatomy	English
2	Introduction to biomedical sciences 1	Orientation for medical studies	Introduction to medicine	General and topographical anatomy	Medical anthropology
3	Introduction to biomedical sciences 2	Evidence-based medicine			
4	Neuroscience	Endocrine system	Cardiovascular system	Respiratory system	Digestive system
5	Haematology	Renal system	Infection	Medical psychology	
6	Internal medicine 1	Surgery 1	General pathology		
7	Internal medicine 2		Public health		
8		Surgery 2	Public health	Medical law	
9	Obstetrics & gynaecology			Mental health	
10	Obstetrics & gynaecology	Paediatrics		Mental health	

Outline plan of the undergraduate medical course at the University of Concepción