This is a continuing column that examines the practice of emergency medicine in countries around the world. This issue will look at EM in Chile. This article is written by Judith Tintinalli, MD MS. Dr. Tintinalli is a Professor and founding Chairman of the Department of Emergency Medicine at the University of North Carolina at Chapel Hill. Dr. Tintinalli has been a pioneer in the development and organization of emergency medicine in Chile and various other countries around the world.

**Background**

Things Chilean: Patagonia, Magellan Strait, Torres del Paine, Pisco, Pucon, the Elqui Valley, the Atacama Desert, Tierra del Fuego.

Chile is a long strip of land bordered on the north by Bolivia and Peru, on the east by the Andes and Argentina, and on the south and west by the Antarctic and Pacific Oceans, respectively. It has some of the most stunning geography in the world. The capital is Santiago which has a population of approximately 15 million.

Chile was discovered in 1536 by Almagro and was a Spanish colony until its independence in 1818. Chile retains much of its Spanish influence in culture, music and literature. In 1950, Chile was devastated by an enormous tsunami with simultaneous earthquakes, floods and Andean volcano eruptions. The town of Valparaiso was saved from destruction by the work of hundreds of citizens who worked day and night to dig, by hand, artificial channels to divert the destructive lava flows and floods around the town.

The socialist president Salvador Allende governed from 1970-73 until overthrown in a military coup by Pinochet in 1973. Today, it is a democratic republic with its first woman president, Michelle Bachelet, elected in 2006. Santiago demonstrates a unique mix of socialism and capitalism. Looking down from my hotel room in downtown Santiago, I saw dozens of buses leapfrogging around each other racing to bus stops! It turns out that the driver’s salary is determined by the number of riders captured (sort of like RVUs/shift), so there is intense competition for each bus to get to the bus stop first.

**Healthcare**

Healthcare is provided by a network of health ministry hospitals and clinics, university teaching hospitals and private hospitals and clinics. In Santiago, I visited a major health ministry hospital with over 1,000 inpatient beds. It is staffed by a group of heroic individuals. Heroic is an understatement. Funds are scarce, and everything is in short supply - nurses, bandages, even light bulbs. Much of the medical care is provided by medical students. Hallways are filled with patients, and waits for ED care are long. Physician salaries are low. Inpatient stays are long, and the environment was reminiscent of US city hospitals in the 1960s.

In contrast, the Catholic University Hospital is modern, functional and extremely efficient. All specialties are available. The emergency department has its own electronic medical record system and computerized radiology system. CT, MRI and ultrasound are available 24 hours a day. Continuous Quality Improvement (CQI) and ED length of stay are everyday tools used to monitor and improve patient care. The Catholic University has recently opened an ultramodern satellite hospital in a Santiago suburb, with an adult and pediatric ED and staffed with emergency physicians and pediatric emergency medicine specialists.

**Medical Education**

Medical training follows the European system. Medical school entry is by competitive examination. Medical students have a great deal of responsibility in the public hospital rotations. However, residency positions are available for only the top 10-15% of medical school graduates. Medical school graduates who cannot get into a residency, and who stay in Chile, are assigned to staff rural or city clinics or emergency departments! There is little, if any, Continuing Medical Education (CME) for those physicians and no telemedicine system. For individuals selected for residency programs, facilities and training are on a par with, and perhaps even superior to, that in the US and western Europe. Residencies are sponsored by either the government or by hospitals. Thus, the numbers of residency positions are limited by funding.

At the Catholic University, medical student training is extremely contemporary. There is a well-equipped simulation lab, including examination rooms with two-way mirrors for teacher observation. Emergency medicine faculty have been leaders in the development of this program.

**EMS**

The EMS system is a bipartite system consisting of a free, state-run EMS system and a subscription-based private EMS system. The state system has been structured exactly like SAMU (Services D’Aide Medical Urgente) of France. As a matter of fact, the current EMS head is a native of France. SAMU headquarters is on the top floor of the city hospital. SAMU can activate ground units and helicopters like SAMU (Services D’Aide Medical Urgente) of France. As a matter of fact, the current EMS head is a native of France. SAMU headquarters is on the top floor of the city hospital. SAMU can activate ground units and helicopters and uses a sophisticated set of SAMU-derived algorithms. EMTs are well-trained in ALS, PALS and ATLS.

Private systems are hospital-associated. Patients call specific phone numbers and are always taken to the associated, private hospital. Trauma, however, is...
generally referred to SAMU and the city hospitals. It is not anticipated that the public-private systems would someday merge. The private ambulance services are important economically, are well-established and provide outstanding service.

Emergency Medicine
The University of Chile has had an emergency medicine residency for several years and has attracted residents from Ecuador, Bolivia, Columbia, and Peru, besides Chile. Very recently, a program has been developed at the Catholic University, and the two programs were combined into one this year with a single program director. The curriculum is quite similar to that of emergency medicine residencies in the US, Canada and Australasia. The emergency medicine residents are bright, motivated and cosmopolitan. They would function very well in any US emergency department.

There are three major obstacles to the growth of emergency medicine in Chile: 1) resistance to change the traditional methods of EM care, 2) resistance to establishing an academic identity for emergency medicine and 3) lack of government recognition of EM and the resultant lack of jobs for graduated emergency medicine residents. Clinics and emergency departments outside of Santiago are staffed with non-residency trained physicians. However, if the Bachelet government recognizes the need for emergency medicine (and there are hopeful signs), things can change quickly. The Chilean Ministry of Health is acutely interested in the collection and aggregation of emergency department and clinic data as markers for acute illness and injury, disease prevention and surveillance. If this can be realized, Chile will move rapidly into the 21st Century of healthcare and will bring emergency medicine along with it.

Summary
I’d put Chile on my list of ‘must-see’ countries. From north to south, it is spectacular! Chile is the economic leader of South America. While the current healthcare system is radically stratified based on economics, improvements in healthcare are major goals of the Bachelet administration. The Catholic University and University of Chile in Santiago have all the necessary ingredients for the growth of a vigorous specialty of emergency medicine.