Barts and the London Medical and Dental School

SSC 5C Elective Report

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Elective information

Elective Lead: Dr Ernesto Salazar Sanchez
Location: Hospital Regional De Loreto, Iquitos, Peru

Objectives set by school

1. Describe the pattern of disease/illnesses of interest in the population with which you will be working with. Discuss in context with global health.

Iquitos, Peru is the largest city in the Peruvian rainforest and the fifth largest city of Peru. It is the capital of the Loreto region and the Maynas Province. In translation the city is named after 'the people'.

Statistics (World Health Organisation Peru)

Total population (2012)	29,988,000
Gross national income per capita (PPP international $, 2012)	10,090
Life expectancy at birth m/f (years, 2012)	75/79
Probability of dying under five (per 1 000 live births, 2012)	18
Probability of dying between 15 and 60 years m/f (per 1 000 population, 2011)	119/93
Total expenditure on health per capita (Intl $, 2011)	496
Total expenditure on health as % of GDP (2011)	4.8

Common diseases

- Malaria – 22878 cases per year
- Tuberculosis – 95 per 100,000 per year
- Dengue fever – US Naval Medical Research Center Detachment (NMRCD) documenting the prevalence of Dengue fever in Iquitos since the 1990s when DENV was reintroduced into the population.
    - There are 4 RNA viruses of the DENV strain.
    - No vaccination available
- Parasitic infections
    - E.g. Amebiasis
- Human Immunodeficiency virus
    - Acquired immunodeficiency syndrome

Common risk factors

- Malnutrition
- Sanitation
- Drinking water
- Access to health
- Alcohol
- Smoking
- Low income households

Herbal medicine

Peru has one of the largest bio diversities of the world. It is home to around 25,000 plant species, 10% of the world total. Some 2000 plants in Peru are believed to have medical and pharmacological properties. Already early cultures in Peru used medicinal plants and herbs to prevent diseases and heal illnesses. This traditional knowledge of the wide variety of natural products and their use was passed on to modern times.

Today Peru offers a huge selection of natural medicines, nutritional supplements and cosmetics using only natural ingredients giving you a good alternative to mainstream medicine. Products can be found in supermarkets, pharmacies, shops specializing in natural medicine and care products and in numerous centers offering alternative and integrative medicine.

Global health

- Health promotion through the use of posters
- Outreach clinics to help those with difficulty accessing medical aid
- Vaccination programmes
- Health education

2. Describe the pattern of health provision in relation to the country in which you will be working and contrast this with other countries

Peru has a decentralized health care system administered by 5 entities:

- Ministry of health (MINSA) which provides health services for 60% of the population
- EsSalud which provides for 30% OF THE PIOPULATION
- Armed forces (FFAA)
    - National Police (PNP)
- Private sector, which provides 10%

The resulting system contains multiple providers of service and insurance, often performing functions with a high degree of overlap and resulting in health workers working in multiple subsectors.

Overall there is an inequitable geographical distribution of health worked with Lima and the coastal areas having the highest densities and areas such as Loreto, Piura, and Lambayeque having the lowest. To overcome this, the SERUMS plan was introduced by the Recursos humanos en salud al in 2011. The plan was to provide a way of distributing health workers to remote regions of Peru so as to help improve the level of medical aid available across the specialties.

Objectives set by student

3.

a) Experience Peruvian medicine via attending ward rounds/clinics/theatre sessions of choice.
b) Witness management of diseases/complications

Infections

Dengue fever – fluid resuscitation
Malaria
HIV
Tuberculosis
Varicella Zoster

Endocrine

Diabetes
Renal disease

Neoplasm

Pulmonary carcinoma

Surgical

Appendicectomy
Wound management

Emergency medicine

Trauma
Firearm injury

Management plans seen

1. Antibiotic
2. Fluid resuscitation
3. Wound management
4. Infection control
5. Emergency assessments

Community

Pharmacy

Prescription only medicine
Over the counter medicine

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c) Learn about utilisation of medical resources

Sterile procedures
Suturing
Catheterisation
Canulations
Fluid giving
Prescribing antibiotics
Biopsy
Culture samples
Chest drains
Abdominal drains
Oxygen delivery devices
Surgical managements

4.

a) Learn more about the culture in Peru
b) Reflect on experience

Our stay in Iquitos, Peru has given us a taster into the world of Peruvian medicine.

Even with the limited resources that were available, it was awe-inspiring to see the level of dedication from the medical team.

This experience has highlighted the importance of using resources efficiently and effectively. Coming from the UK we have noticed that the doctors in the UK can take for granted the wide resources available and use them without clinical judgment.

We have noticed that doctors within the hospital are often more versatile and not fixed to one specialty, in comparison to the UK where each doctor is often restricted to their own field.

Medical students at the hospital are given a vast amount of responsibility at an early point in their career in comparison to the medical students in the UK. Here the medicals students we have met have been involved first hand in the decision making and the care plan of the patients including those in the emergency department. It was useful seeing how they approached stressful situations and managed patients using their own systematic approach.

We hope to take what we have learnt at Hospital Regional and incorporate it into our future medical practice.

Peru

SOCIOECONOMIC CONTEXT

Total population: 27 589 000 ➤ Population 15+ years: 69% ➤ Population in urban areas: 73% ➤ Income group (World Bank): Lower-middle income

Data source: United Nations, data range 1990–2006.

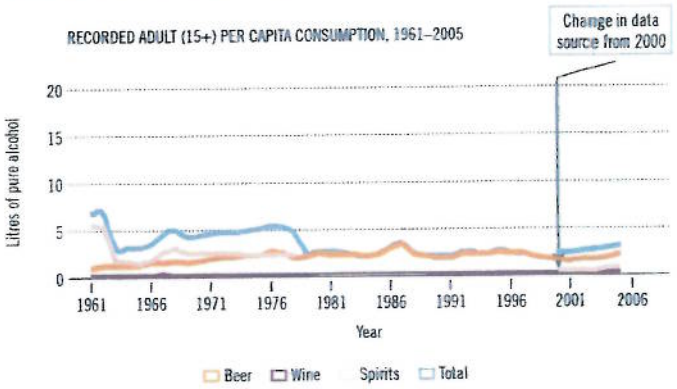
RECORDED ADULT (15+) ALCOHOL CONSUMPTION BY TYPE OF ALCOHOLIC BEVERAGE (IN % OF PURE ALCOHOL), 2005

Beer includes malt beers. Wine includes wine made from grapes. Spirits include all distilled beverages. Other includes one or several other alcoholic beverages, such as fermented beverages made from sorghum, maize, millet, rice, or cider, fruit wine, fortified wine, etc.

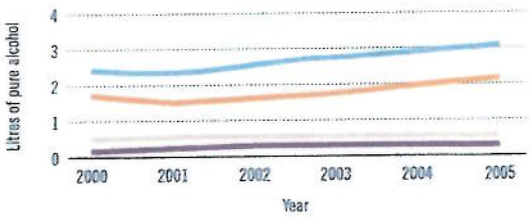
ALCOHOL CONSUMPTION

Population data (refer to the population 15 years and older and are in litres of pure alcohol)

RECORDED ADULT (15+) PER CAPITA CONSUMPTION, 1961–2005



ENLARGEMENT OF RECORDED ADULT (15+) PER CAPITA CONSUMPTION, 2000–2005



Adult (15+) per capita consumption, average 2003–2005 (in litres of pure alcohol):

Recorded	2.9
Unrecorded	4.0
Total	6.9
WHO American Region	8.7

Robust estimate of five-year change in recorded adult (15+) per capita consumption, 2001–2005:

➤ INCREASE
STABLE
DECREASE
INCONCLUSIVE

PATTERNS OF DRINKING

	Males	Females	Total
Lifetime abstainers	3.3%	8.1%	5.9%
Former drinkers	16.3%	33.7%	25.1%
Abstainers	19.6%	42.1%	31.0%

Adult (15+ years) per capita consumption - total	10.9
Adult (15+ years) per capita consumption - males	13.1
Adult (15+ years) per capita consumption - females	5.3
Heavy episodic drinkers (15-19 years; males; 2005)	2.0%
Heavy episodic drinkers (15-19 years; females; 2005)	0.4%

Patterns of drinking score* LEAST RISKY 1 2 3 4 5 MOST RISKY

* Given the same level of consumption, the higher the patterns of drinking score, the greater the alcohol-attributable burden of disease for the country.

HEALTH CONSEQUENCES

MORBIDITY

Prevalence estimates (12-month prevalence for 2004):	Males	Females
Alcohol use disorders (15+ years)	7.65%	1.33%

ALL-CAUSE MORTALITY

No information available

ALCOHOL POLICY

Excise tax on beer / wine / spirits	No Info
National legal minimum age for off-premise sales of alcoholic beverages (selling) (beer / wine / spirits)	18 / 18 / 18
National legal minimum age for on-premise sales of alcoholic beverages (serving) (beer / wine / spirits)	18 / 18 / 18
Restrictions for on-/off-premise sales of alcoholic beverages: Time (hours and days) / location (places and density)	Yes / Yes
Specific events / intoxicated persons / petrol stations	Yes / NA / NA
National maximum legal blood alcohol concentration (BAC) when driving a vehicle (general / young / professional), in %	0.05 / 0.05 / 0.05
Legally binding regulations on alcohol advertising / product placement	No / No
Legally binding regulations on alcohol sponsorship / sales promotion	No / No

NA = No information.