

**Elective Report:**  
**Remote Medicine**  
**Amazon/Ampiyacu Rivers, Iquitos, Peru**

**1. What are the most prevalent medical conditions affecting the indigenous communities living along the Amazon River and how do these differ from the UK?**

The most prevalent conditions that we saw in clinics often differed between age groups. Amongst children, upper respiratory tract infections & fungal skin infections were the most common presentations, whilst musculoskeletal problems such as osteoarthritis and muscle injuries constituted the majority of adult complaints, due particularly to the nature of their work; often quite hard manual labour. There was also one common complaint that spanned all ages – intestinal parasites, which were endemic.

Whilst we did see problems such as malaria, snakebites and trachoma, which are rare in the UK, these were much less frequently than the conditions mentioned before, illustrating that there is a fair amount of common ground amongst presentations seen in the Amazon and the UK.

In terms of differences, perhaps most interestingly we saw very few cases of conditions considered very common in the UK. Hypertension for example is present in a significant proportion of those aged over 50. However amongst this same age group in the Amazonian communities we visited, we saw perhaps 3 or 4 people with any kind of hypertension, with the vast majority running at around 110/70mmHg. This was similar for other conditions such as type-two diabetes and is probably a reflection of the low levels of obesity, differing diets and levels of physical activity between the 2 regions.

**2. How are medical services organised and delivered to such remote communities?**

Amongst the communities we visited, the vast majority had no formal medical provision, with no health centres or doctors in the communities themselves. A travelling health technician, who could offer basic medical advice, but often no form of treatment, would occasionally visit a couple of the communities.

The NGO organising our elective, ran 10 medical expeditions each year, however each one visited a different section of the Amazon River and therefore different communities.

The closest large city, from where our boat departed and arrived, was called Iquitos in the district of Loreto, in North West Peru. This city was home to the largest hospital in the district and for the communities we visited, would be the only place to receive specialist treatment or any kind of surgical intervention.

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After this, roughly a days boat journey down the Amazon River from Iquitos, was the only other relatively large settlement in the area, Pevas. Here there was a health centre staffed by 2 doctors, 4 nurses, 2 lab technicians and several admin staff. The furthest community we visited was roughly 5 hours by speedboat from Pevas. However the cost of hiring/buying/running a speedboat prevented many from making this journey in all but the most serious cases.

In terms of the costs of healthcare, the majority of people have health insurance, whether fully private, or state-subsidised. For long-term treatment, everyone must be covered by insurance, however there is a safety net for the poorest, whereby free emergency treatment is available to all, so long as they have their identity officially registered. However this in itself can be a problem, with many members of the indigenous communities we visited unregistered and therefore unable to access any kind of healthcare.

### **3. Explore the prevalence of traditional health beliefs and practices amongst the indigenous communities of the Amazon.**

Traditional health beliefs are still prevalent amongst the communities that we visited, with many different local plants still used as medicines. However western medicine exists comfortably besides these beliefs, with many now instead thinking that western style medicines are much more effective than the traditional remedies.

Where traditional beliefs are still particularly strong is in the crossover between medicine and spirituality. Psychoactive plants, particularly Ayahuasca have been used in the region for centuries by Shamans. The ceremonies conducted by these Shaman have long been thought to have a healing and restorative effect on both mind and body and many local people still partake in these ceremonies several times each year and strongly believe in their merits. The use of Ayahuasca has become very well known about and has sparked a large number of tourists visiting the area solely for this purpose.

### **4. How have your experiences on elective influenced how you will practice medicine on returning to the UK?**

First and foremost this trip reemphasised the importance of a service such as the National Health Service in the UK. Many of the people we visited had little or no access to healthcare, both due to remote location, but also often lack of money. It was upsetting telling people that they needed to visit Iquitos for specialist treatment, knowing that they almost certainly would not go, as they could not afford the journey or the treatment.

The trip also reinforced the value of many skills that I have considered important for a long time. Working in another language definitely improved my communication skills and illustrated perfectly how much of communication is non-verbal. Similarly the importance of good teamwork was shown. Our small teams worked really well together, sharing tasks of translating, scribing etc and then all coming together to reach a diagnosis and management plan.

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In particular for life as an FY1 the importance of being able to get senior help was also reinforced, as there were several instances aboard when a more senior medical opinion would really have been valuable.

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## **Elective Reflection**

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*Subject:* Remote medicine

### **Was it what you expected?**

The elective was even better than I expected. Looking back now, it is easily one of the best things that I have had the opportunity to do, offering the chance to practice medicine independently for the first time in a variety of remote and fascinating communities.

The only thing that differed slightly from what I expected was that there would be more senior doctors aboard the boat, where as in reality there was only one Peruvian doctor at the equivalent level of an FY2.

### **Clinical experience?**

The elective could most easily be compared to running a GP clinic. Each day we would visit a separate community along the Amazon & Ampiyacu Rivers. We set up several clinic stations (generally 3) and a pharmacy, with different members of the group swapping between areas each day.

Depending on the size of the community, we would see between 30-150 people each day. Families would be seen as a whole, each discussed in turn and a prescription and specific instructions would be issued for each medication. We also often made 1 or 2 house calls per community to visit those who were particularly unwell or frail.

The majority of cases we saw were fairly straightforward, such as osteoarthritis or fungal skin infections. However we did see rare and serious problems such as filariasis in a 12 year old boy and gross ascites in a 21 year old male.

There was also a Peruvian dentist travelling with us, who many of us spent a clinic session with and had the opportunity to extract teeth.

### **What did you learn about the people and the country?**

It was fascinating to see how the communities had adapted to living along the Amazon. Of particular interest was the changing water level during the dry and rainy seasons. We visited towards the end of the rainy season and many of the villages were still flooded, illustrating the need for all houses to be built on stilts, as well as making dugout canoes the main method of transportation through the villages.

It was also interesting to see how popular western medicine was amongst the local population, with many now moving away from traditional medicine altogether. However at the same time a strong spiritual connection does remain to the Shaman

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and the use of plants such as Ayahuasca being a normal part of life. However this was seen as a more general healing and rejuvenating ritual as opposed to a specific treatment.

**What did you learn about the health care professionals that you worked with?**

There were 2 Peruvian healthcare professionals aboard the boat, a doctor coming to the end of the equivalent of her FY1 year and a more senior dentist.

In Peru a similar programme is followed for medical education as in the UK. Medicine can be entered at both the undergraduate and postgraduate levels. Following medical school, all junior doctors have to complete a service year, where they work in a deprived or remote area. The doctor on board had just completed her service year and had been working in Pevás as one of only 2 doctors in the local health centre.

**What were the best bits?**

The people (both on the boat and in the communities) as well as the environment. I met a lot of new friends and other interesting people and got to experience practicing medicine independently for the first time in an incredible setting.

Other good things: Stars (zero light pollution), river dolphins, village pets (monkeys, parrots, turtles etc), entertaining the local kids, swimming in the Amazon, meeting Amazonian artists, nights out in jungle towns.

**What were the bits you least enjoyed?**

The isolation – no internet, no phone signal (a satellite phone was available for emergencies) etc. Whilst I definitely became used to this, there were times where I missed being able to get in contact with other people. However the isolation also contributed towards what made the trip so memorable, as there were never any outside distractions.

**Were there any shortcomings?**

The trip probably would have benefited from a more senior doctor being on board. Whilst in the vast majority of situations we were fine. There were a couple of more complex cases that we saw throughout the elective, where more senior advice could have been valuable. Whilst easy to convince medical students to go on these kind of trips, finding a more senior doctor who is willing and able to give up their time is understandably much more difficult.

**Would you recommend it to another student?**

100% - this was an incredible and unique experience that benefited me as both a doctor and on a more personal level. I would encourage anyone to go on this elective!

**Would you do anything differently?**

I would have liked to practice my Spanish more before I left. I was able to get by and take an ok history, but it would have been nice to feel more confident doing so from the beginning.

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**What did you learn about yourself?**

I realised I have grown quite a lot over the last few years. I put myself in the middle of nowhere, with people I did not know and fairly difficult conditions (heat, humidity, rain, insects, other animals etc) and absolutely loved the experience. It made me realise how adaptable and flexible I am, as well as how my confidence has increased over the last few years.

**How was your accommodation?**

Accommodation was on board the boat, which was quite big with 2 floors and around 10 cabins. We shared 2 person cabins, which were small and basic. There were showers and toilets on board, which worked using water pumped up from the river (although most people just ended up washing in the river, whilst swimming each evening). There was also a good amount of communal space – dining room, front deck and back deck (equipped with a couple of hammocks), where we spent the majority of our time in the evenings.

On our trip there were 9 elective students (all from the UK), 1 Peruvian doctor, 1 Peruvian dentist and a crew of 7 including cook, tour guide, captain etc.

**How were your travel arrangements?**

- Flew with American Airlines to and from Lima
- Flew with Star Peru to and from Iquitos
- I was in Iquitos for a few days before the elective and stayed at the Nativa Apartments, which were excellent.
- We were met by the head of Project Amazonas in Iquitos at a prearranged location
- All travel to and from the boat was arranged

**Other experiences and information useful to other students:**

- Try and learn at least some basic Spanish beforehand – makes life easier, clinics more interesting and any travelling much more fun.
  
- Take toothbrushes and/or reading glasses for the communities – there was nowhere near enough of these on board.
  
- Spend a few days in Iquitos on either side of your elective. It's a really fun town with a lot to do, good restaurants and great nightlife. A few ideas are: Visit the butterfly farm, visit the manatee centre (you can feed baby manatees), visit Belen market, go on a fishing trip, eat at the floating restaurant Al Frio y Al Fuego (great for the night you arrive back from elective).
  
- You can also arrange hospital/clinic placements in Iquitos or Pevás if you want a more varied experience. In particular there are a number of HIV programmes in the area, as infection rates are higher in Iquitos than in much of Peru. Project Amazonas can help organise and provide contact details for all of these.