Report on International Volunteer Programme placement in the Maldives
Dr Andrew Lee, May 2 – 15, 2010

I) Public Health placement at Hulhumale Hospital

Background to the Maldives and Hulhumale Island

The population of the Maldives is around 300,000 persons excluding about 70,000 immigrants (both legal and illegal, short- and long-term). Overall, the health indicators, including the Millenium Development Goals, for the Maldives are considerably better than other countries in the region. The islands were reported to previously have had a good public health system. However, it has declined over the years and is particularly weak in urban areas. Urban health as such is increasingly a key issue. In addition, an epidemiologic transition is occurring with the diseases of development (i.e. non-communicable chronic diseases) becoming increasingly common.

Maldivians apparently pay no income tax although an income tax bill is currently under discussion in Parliament. The sources of government revenue at the present time include import duties, and taxation of the tourism/resort industry. There is also donor funding although this is likely to diminish in the coming years. A user fee is levied and the government plans for hospitals such as IGMH to charge no more than MRF25 per consultation (Inpatient costs are considerably higher). However, estimates by the Apollo Health group are that the hospital costs are triple that of the income. The hospitals are therefore not cost neutral facilities. That said, the current government had made pre-election pledges to work towards affordable healthcare for the population which therefore implies some level of subsidisation will be required.

Hulhumale is an artificial island formed through reclamation of land from the sea. It is attached to the airport landmass but separated from the capital Male. (Male is a 20 minute boat ride from Hulhumale.) New urban developments have been carried out on Hulhumale with new residential buildings, a hospital and school having been built since 2004. Hulhumale was seen as a means of relieving some of the overcrowding and congestion of the capital Male where roughly a third of the country's population (~100,000) currently reside. The population of Hulhumale now stands at around 12,000 (although some observers guess it could be as high as 20,000) and is expected to increase further up to 50,000. It was reported that the people living in Hulhumale are mostly young and growing families.

Hulhumale hospital

The hospital is a relatively new 2 storey building with 50 beds consisting of casualty 5 beds, medicine, surgery, obstetrics and gynaecology, paediatrics, as well as 5 private rooms. It has 7 outpatient clinic rooms, a dressings room, a room for immunisations and antenatal checks, an operating theatre, a labour room, and a private pharmacy attached. Non-medical facilities include a large open plan administrative office and a conference room. There are 3 ambulances although only 2 are functional. The hospital is strikingly very clean and appears relatively well maintained. Bed occupancy rates are low (<25%). There is a weekly Non-Communicable Disease clinic, and twice weekly antenatal/immunisations clinic. All the specialities present run daily clinics 5 days a week. There is also a general medical clinic daily. There is also a visiting ophthalmologist from IGMH who runs a weekly clinic. The hospital, like others, is not autonomous and many of its activities require MoHF approval.

Staff

The nursing staff at the hospital were approachable and courteous. They were keen to be taught and to learn new skills. I regret that during my time here I was not able to spend more time providing them with much training apart from a 2 hour session on smoking cessation and clinical audit.

The administrative staff were generally helpful when asked. They helped organise a meeting with local community representatives and prepared teaching material.

The medical staff were generally very friendly and medically competent. There are 5 general doctors, and 6 specialists (O&G, paediatrics, anaesthetics, surgery, orthopaedics and internal medicine) Most were expatriate doctors, mainly from India, working on short term contracts of between 1-2 years (although some leave after a few months). Staff turnover is reported to be high and there has been difficulties recruiting to posts (resulting in prolonged vacancies in some of the specialities). This situation has not been helped by the low patient load, lack of continuing medical education opportunities at the hospital, relatively low rates of pay, and uncertainty introduced by the "corporatization" of the health service that is ongoing at the present time.

Dr Ashraph is the Director General of the hospital. He has been in post for the past 2 years and previously had worked as a medical officer in other islands in the Maldives after completing medical training in the Ukraine. The hospital is managed in a reactive style.

Public health services in Hulhumale, including aspects such as the primary care approach and community engagement in health, is understandably less well developed. Unfortunately, this led to the absence of any planned activities for me during my time there. (On one occasion, I wasted an entire day waiting to meet someone who never turned up; for volunteers on short placements when time is of the essence, this was not a good use of my time, and also comes at a loss to them).

• *CCHDC visit*

During my time at the hospital, Dr Ashraph arranged for me to go to the Centre for Community Health and Disease Control (CCHDC). This organisation's function mirrors best that of the public health departments in the UK (indeed it was previously named the Department of Public Health). I met with Dr Ubaid, the head of the Non-Communicable Diseases (NCD) unit who has been educated to a high level in public health and demonstrates a good understanding of the relevant issues. Dr Ubaid and Dr Sola (an epidemiologist at CCHDC) were approachable and kindly offered some insights into the Maldivian health situation.

CCHDC runs the preventive programmes including awareness workshops and training of community health workers. It is funded by the WHO with government supplementation. Its units include:

- HIV/AIDS (funded by UNDP)
- Population Health Division
    - Vector control unit
    - Nutrition
    - Immunisations
    - Maternal and child health (by UNFPA)
- NCD unit
    - This unit covers mental health, tobacco and drugs.
- Communicable disease
    - Surveillance and Response Unit (monitors daily communicable disease reports sent in from the various hospitals)

- Behaviour change unit
- Elimination unit
    - Covers filarial, malaria and leprosy elimination activities
- Environmental and Occupational Health
- Admin

(Incidentally, disaster and emergency planning is covered by a separate department under the lead of a State Minister.)

Unfortunately, the separation of this department from the MoHF has meant that curative and preventive aspects of health care are not integrated as they should be. It is not clear how coordinated the activities of both key health stakeholders are in reality. There is some suggestion that it may not be optimal, e.g. staff at Hulhumale Hospital were not always clear who was at CCHDC or what resources might be available from them that they may be able to call upon. Another complaint from hospital staff was that they received little feedback on all the communicable disease reporting that they do. To be fair to CCHDC however, they appear to have a skeletal taskforce which may explain their difficulties exerting a presence throughout the country. Perhaps the vertical delineation of roles may be unhelpful, and they could have perhaps adopted a “network”-style of organisation as described by Charles Handy, with various team members having generic functions but perhaps with a special interest or responsibility for various aspects of preventative healthcare.

Vision for Hulhumale hospital

The current Director General's vision for the hospital is for it to become a major tertiary care centre, providing in particular emergency trauma care. He sees this as necessary in order to fulfil a potential need for trauma patients arriving at the airport nearby from across the Maldives.

One can see the justification for the need for such a hospital and it is ideally placed on the same island that the airport is attached to. However, this vision is perhaps not quite in tune with the existing public health needs of the community in Hulhumale. In view of the low utilisation of existing health services, health sector budgetary and resource constraints, as well as the absence of other tertiary services at the hospital, turning this vision into reality may be difficult in the medium term.

Challenges

• *High patient expectations*

The public has unrealistic and very high expectations of the health service, with an expectation that they would have access to specialist doctors for even common ailments that could easily be dealt with by generalists and primary care health workers. The current medical system apparently uses a paternalistic model that seeks to give in to what the public demands. As a consequence, polypharmacy is common. There is therefore a need for greater rationalized prescribing. There is also a hospital or health centre on every island with a population greater than 600 which is staffed by a doctor. Such a set up is highly inefficient. For example, some laboratories apparently only process 2-3 samples a day, and there are health centres staffed with 20 health workers who only see 4-5 patients a day. Public dissatisfaction with the health service is high with a misplaced understanding that any referral indicates failure of a particular health facility even though the referral may have been entirely appropriate. Public confidence in the health system is also low following lots of changes.

Currently it may not be politically expedient for this public demand to be challenged, although from a budgetary view point, this needs to be dealt with sooner or later as it will otherwise lead to high consumption of costly specialized services unnecessarily. An economic recession would place the existing health budget under further strain to provide such extensive health care.

• *Underutilisation of services*

The activity levels in this hospital are low. There are several possible explanations for this. Firstly, the hospital has suffered adverse media publicity recently following complaints by local residents of the lack of specialist care and certain diagnostic facilities. Secondly, it is a "dormitory" town where a lot of residents commute to Male and other islands for work. Consequently, the residents might seek health care at facilities near or en route to their place of work. In addition, the doctor:patient ratio is relatively low (11 doctors to a population of 10,000 or so) which compares extremely favourably with the other islands or countries in the region. As such, the doctors are under-utilised. To illustrate this feature, for a population of this size in the UK, the health needs would have been provided by a primary care (GP) clinic with 5 full-time primary care doctors only. Residents have feedback that they tend to bypass the hospital and seek medical services in Male directly as they feel they are likely to be referred across anyway for tests or treatment.

Quite conceivably due to its proximity with Male, one wonders whether it could have functioned as a primary care centre providing comprehensive services, with outreach

specialist clinics staffed by specialist doctors from IGMH instead. That said, if the population of Hulhumale increases to 50,000 as expected in coming years, a secondary care district-level hospital offering a comprehensive range of services may indeed be required. The hospital then would likely be considerably busier and better utilised. In its current state, the hospital very likely does not provide value for money.

• *Reputational damage*

As mentioned above, the hospital has suffered serious reputational damage. The reputation of any health professional or facility can be easily lost. Recovering this reputation can and will take considerable time and effort. Although the hospital has rectified issues with the lack of gynaecology and paediatric services recently, it was not clear to me what else has been done to re-establish the community's trust in the hospital. Issues remain. For example, at a meeting with local representatives, the residents have given feedback that they are unaware of what services are available from the hospital. This could very easily be rectified through simple advertising of services locally in prominent places (there is a list of services provided displayed in the hospital, but local residents are unlikely to know this unless they came in to the hospital for whatever reasons).

• *Lack of quality assurance activity*

Currently there are few quality assurance measures in place in the hospital. For example, clinical audit does not occur. Neither are significant events or cases of morbidity and mortality reviewed. There are no ward rounds, journal clubs, or clinical team meetings for clinical staff to discuss issues or encourage learning. There are no clinical protocols or guidelines present.

A teaching session covering clinical audit and patient safety in health care was carried out for the medical staff and separately for the administrative staff. The medical staff have voiced some interest in developing audit further and it is hoped that they will deliver an audit project at Hulhumale Hospital in the coming year.

• *Deficient public health activity*

I was asked by the Director General of Hulhumale Hospital, Dr Ashraph, to examine and advise accordingly on policy and topic areas for intervention. Public health services at the hospital are pretty rudimentary. Some preventative work is carried out in the hospital such as antenatal care, immunisation services, as well as a nurse-run non-communicable disease clinic. There are also occasional 'themed' events based around particular dates in the calendar e.g. Nurses Day, No tobacco day, etc… However, other than that there are no regular health promotion activities being carried out either in the community or at the hospital. Unlike other island hospitals, Hulhumale lacks a Public Health Unit and related staff (e.g. community health workers, public health officer, primary care workers) which might explain the lack of public health activity here. The public health units would normally be involved in the health promotion and surveillance work. Another issue is that curative activity and preventive activity are funded by different budgets.

There is some health education being carried out in schools by the health coordinators in each school. However, these staff are the responsibility of the Ministry of Education's School Health Division and therefore separate to the health system. Apparently, they cover many key public health issues such as sexual health, smoking, hygiene and handwashing.

• *Urban health challenges*

Hulhumale, unlike the other islands, is likely to become increasingly congested in coming years with the anticipated influx of persons from Male and other islands. Some local observers say the numbers may be as high 50,000 within the next few years. If so, it will develop attendant urban health issues. In addition, as the Maldives is a fast developing country, it is already undergoing a demographic and epidemiologic transition with falling rates of infectious diseases which characterizes low-income countries but rising rates of non-communicable diseases as present in developed countries. As such, problems linked with unhealthy lifestyles (e.g. obesity, lack of physical activity, unhealthy diets, smoking and drug use) will continue to rise. This will require concerted, planned and targeted public health interventions in order to mitigate the future burden of disease.

• *Partnership-working in the community*

As Hulhumale is an artificial island reclaimed from the sea with a new population only just established within the last 6 years, the sense of community and the social networks and interlinkages may not be as well developed as may be present in the other islands. Consequently, social support systems as would normally be expected in communities may be less established here. The health service can play a role in supporting and encouraging this. For example, there is a local crime reduction committee set up by local residents and the police. It would be of considerable value to establish a similar local residents health committee. This could act as a forum for residents to voice concerns, queries and feedback for the health service, which would be useful in helping to improve services. This forum is also a two-way means for the health service to transmit information to the community, provide explanations for any misunderstanding, give health promotion and education, and act as a way for the hospital to lead on key community health initiatives.

We had a helpful, enthusiastic and interesting meeting with representatives from the local schools, NGOs and police on 6/5/10. We used it as an opportunity to develop local relationships as well as raise awareness of the looming public health crisis posed by the high prevalence of smoking in the Maldives especially amongst the young. The participants were open and enthused by what they heard. They provided useful insights on smoking trends locally. Following this meeting, the Police's Station Inspector Bushree asked for the smoking awareness talk to be delivered to his officers the following week. This meeting was attended by 44 police officers and members of the local crime reduction committee. At this meeting I presented a talk on tackling tobacco and Dr Paul Harvey held a discussion on substance misuse. After the talks, Inspector Bushree expanded the remit of the meeting to include a wider discussion of how the crime reduction committee and the police could collaborate further.

Based on this meeting, it was apparent that there is significant potential for developing community engagement further. In this endeavour, Dr Ashraph may require some assistance. It may be useful to identify a senior hospital staff member, e.g. a senior nurse, administrator or the deputy director general, to represent the hospital in this regard.

There is considerable scope for local collaboration between the health service and other organisations on Hulhumale (e.g. police, schools, etc…) to work on the health agenda. For example, the hospital could work with the police on getting more tobacco users into tobacco cessation clinics. The hospital could work with schools to help deliver health education messages for example on sexual health (prevention of sexually transmitted infections, HIV/AIDS) and on smoking to students. If this was

done, the hospital would indeed become a health promoting hospital as set out in the Health Master Plan 2006-2015.

Such a collaborative approach is necessary for the following reason: the residents of Hulhumale are unlikely to come into the hospital unless they are ill. As such, the potential for health education to be carried out in the hospital is limited. Instead, health needs to "reach out" from the hospital and into the community in order to deliver its health education and promotion messages. To this end, the health sector will need the help and assistance of groups and organisations with access to community networks, such as the schools and local NGOs.

• *Integrating public health and curative services*

The other aspiration set out in the Health Master Plan 2006-2015 was for hospitals to integrate public health and health promotion activities within its daily work. At the present time, as mentioned above, this is little done in Hulhumale Hospital. However, the change required is simple and not as radical or costly as one would expect. For example, health promotion could be a routine part of clinical work. Every patient encounter (be it in the outpatients department or on the wards) between a health professional and a patient is an opportunity for the clinician to give health education to the patient.

For example, smoking cessation advice (as per the WHO '5 Steps' framework) could very easily be incorporated as part of any patient consultation. This advice need not be a medical task as it could just as easily be delivered by nursing and paramedical staff. This would therefore not necessarily impinge on medical time. Indeed, reviews of the research evidence confirm the efficacy of brief counselling and advice by health professionals in helping patients stop smoking. The health benefits and cost savings of this approach in the long term can be considerable for the Maldivian health economy.

Interestingly, the hospital staff report not being aware of the resources available at CCHDC. Greater liaison between the hospital and CCHDC may be useful in the future, especially when health promotion initiatives are planned.

• *Vulnerable groups*

During one of the ward rounds I observed, we came across a Bangladeshi worker with suspected meningitis. There were difficulties in getting his clinical specimens processed by the laboratories at IGMH as the man had no identification paperwork. (He was suspected of being an illegal immigrant labourer). This socio-political problem has interfered with the clinical management of the patient, where the first priority should have been the care of the patient. I suspect this is a wider problem that the MoHF and other stakeholders may need to look at and see if an ethical and feasible solution can be found. The migrant population group would be a high need high risk health group in view of the nature of the work they may be involved in, as well as the limited access to healthcare they are likely to experience. It is likely that they are not keen to seek healthcare readily for fear of deportation. The problem then arises, as in our case with the man with meningitis, where they may seek help too late for themselves, and may pose a threat to others in close contact with them. The contacts of this patient with meningitis would for example have been at considerably increased risk of contracting the disease as well. These patients may therefore pose a threat of communicable diseases that may potentially lead to outbreaks to the host Maldivian population and it would be in the public's interest that they provided some degree of health coverage to reduce this risk.

• *Prescribing practice*

From my brief time with the hospital, it also became apparent that the prescribing practice of some of the medical staff is questionable. For example, there is a tendency to prescribe more expensive broad spectrum antibiotics for conditions where a cheaper first line drug would have sufficed. The use of such broad spectrum antibiotics also increases the risk of resistant organisms and hospital acquired infections such as Clostridium difficile.

It was also apparent that patients were being prescribed multiple drugs by private practitioners in the community. This problem of polypharmacy increases patients' expectations of further prescriptions in the future, and makes it awkward for hospital doctors to challenge the prescriptions made by others out with the hospital. Polypharmacy increases the risk of drug interactions and adverse drug reactions, and drives up the cost of healthcare. Perhaps the MoHF may wish to consider encouraging its medical practitioners to adhere to more limited rational prescribing.