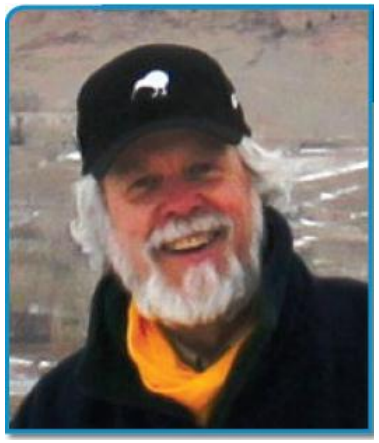

Dr Marc Shaw

Worldwise Travellers Health Centres

Australia

Too Much of a Good Thing - Tourism and Masses Who Travel - Main Session (Workshop options scheduled)

Sunday, 23 June 2013 Start 8:30am Duration: 25mins Baytrust

Too Much of a Good Thing - Tourism and Masses Who Travel

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WORLDWISE OnLINE (www.worldwise.co.nz)
'Travel Health Information for Professionals'

- Focuses on 'types of masses of travellers' and 'what do they do' that impacts on travelling
- Probes the question - 'how much do we know about what the travellers we advise for their health needs will do on their travels'?
- Develops 'Impact Consultation Points' for Travel Health Professionals
- Challenges the Travel Health Professional to 'look behind' the current images of travel in understanding what the traveller may be doing on their 'travel for the masses' experience
- Seeks to extend images which can be created by the media, and which are perceived by the intending traveller
- Acknowledges that travelling masses can seriously impact upon a destination, and therefore what can we (as health professionals) do to minimalise this

This Presentation…

MOBIL POPULATIONS *(after Leggat P)*

- Immigrants and Refugees
- Migrant and guest workers
- Missionaries
- Humanitarian Aid Workers
- Military personnel, Diplomatic corps
- Scientists
- Students
- Business personnel and expatriates
- Aircrew, sailors, astronauts
- Tourists
  - Cruise ships
  - Eco-tourists
  - Adventure tourism
  - VFR (Visiting Friends and Relatives)
  - Sex tourists
  - … et cetera

‘All the world’s a stage’

Who are ‘the Masses of Travellers’?

Mass Gatherings

- The WHO defines a mass gathering MG as “an event [where] the number of people attending is sufficient to strain the planning and response resources of the community, state, or nation hosting the event.”
- Mass gatherings can be spontaneous events, e.g. funeral for a head of state or a rally or march, but most are planned events
- Every year, millions of people travel internationally to engage in MG ranging from major sports events to fairs, festivals, concerts, political rallies.
- These mass gatherings often pose special risks for travellers,
  - large no.s people in small areas can facilitate the spread of infectious diseases or increase the risk of injury
- Mass gatherings may occur regularly at different locations (e.g. Olympic Games), and others recur in the same location (e.g. the Hajj or Kumbh Mela)

- The reason for the mass gathering will often set a predictable tone for the event
  - The purpose often influences the characteristics of the participants (age, origin, culture, homogeneity)
  - Rock concerts are expected to be loud and boisterous
  - Religious events would have other predictable characteristics
    - Religious and family oriented events tend to have participants at the extremes of age, who may have increased susceptibility to certain diseases
- The location will determine the climate and weather and will give some indication of social and political stability in that area
- There will be diseases endemic to that area, and there may be specific disease outbreaks occurring that could affect the health of visitors

This Presentation

- Geography (particularly altitude) and climate can predispose visitors to problems such as altitude sickness, heat-related illnesses, and dehydration
- Venue can be: fixed (stadium, open space)
  mobile (procession, pilgrimage)
- The health infrastructure at the event and in the area will determine the ability to respond to both anticipated and unanticipated incidents
- Facilities for food, water, and sanitation
  - affect the health of attendees
  - maybe temporary, recently erected
  - may not meet the needs of the population

Physical / Social Features

- The density of the crowd influences the potential risks e.g.
  - problems with crowd control, which can quickly overwhelm facilities
  - disease transmission
  - Injury
- Crowd characteristics, such as age, mood, and availability of drugs or alcohol, will influence whether violence is a risk
- Events with large numbers of international participants tend to have increased risk of infectious disease outbreaks.
  - In part related to varying endemic diseases in host and home countries
  - Different levels of vaccinations in those locations
- The longer an event lasts, the more likely that stresses to facilities, organizers, and participants will be observed.

Physical / Social Features

Health Diseases

- Commonest health problems reported at mass gatherings:
  - injuries
  - respiratory and cardiac issues
  - heat-related illness
  - alcohol or drug effects
  - gastrointestinal illnesses
- During the last Olympic Games and the European Champions League 2012 medical interventions were required by 0.1% of visitors
  - Non-communicable health problems accounted for 70 to 99% of those consultations… mainly accidents > illnesses
- Communicable diseases are a concern for organizers of large gatherings, but
- Historically they're not been a significant cause of adverse health events
  - e.g. infectious diseases contributed to <1% of health care visits during the 1996 Atlanta Olympic Games and the 2000 Sydney Games

The travel health issues of today are complex:

1. The Traveller
   - Appropriateness of advice for type of travel: holiday, business etc
   - Affect of the traveller on the host nations and vice versa
   - The effect of Migrants and their travel to new regions

2. Environmental Travel
   - Eco-economy
   - Expeditions and adventure
   - Religious travellers and the impact of the religious traveller

3. Safety and Security: the Terrorism risk
   - Personal Security
   - Social security
   - Biosecurity

Year 2013 … *Now*

Numbers at Mass Gatherings

- Mass gatherings (MG) are events attended by at least 1,000, usually over 25,000 people in a specific location

- Among the largest:
  - the Kumbh Mela 2013 in Allahabad for 55 days with 120 million devotees – every 12 years, in between years only 10 million
  - the World Expo 2010 in Shanghai, 73 million visitors in 6 months
  - up to 3 million pilgrims join the annual Hajj to Mecca
  - Association Football (soccer) 8-12 million per season, [game ave 20-40,000]

Kumbh Mela


VAUXHALL
VAUXHALL
VAUXHA

Disasters at Mass Gatherings

- The most frequent disasters at MG are stampedes; they are often associated with excessive crowd density at an 'eye of the needle', but sudden panic may also result in such tragedies

- Planning for MG includes risk analysis, surveillance, and response. Risk factor calculation allows the calculation of a score to impact on the health infrastructure needed at a specific site. There are many unusual challenges in the health sector to be prepared for — an interdisciplinary approach is essential and General Practitioners and Practice Nurses are part of this


The mind boggles at what all this lot will get up to!!!
Words like ‘sex’, ‘drugs’ and ‘rock n roll’ bring up all thought of matters medical!!

- Lets explore the intimacy of one such Mass gathering …

Mass Gatherings

The Hajj

Pilgrimage to Mecca

To be performed once in a life-time by each Muslim

2006 NZ census 36,072 people identified themselves as Muslim

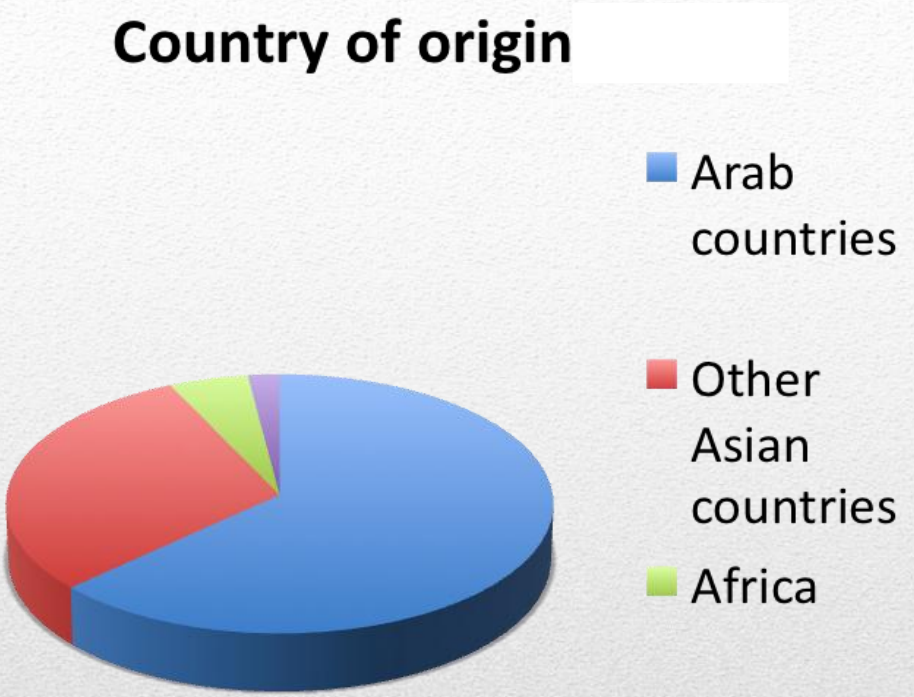
Facts about the Hajj

- Considered as one of the five pillars of Islam → each Muslim is duty to bound to perform one hajj in his lifetime

- 10-15th day of the 12th month of the Islamic calendar (lunar)
  - *2008: 6-9th Dec*
  - *2009: 25 – 28th Nov*
  - *2010: 14 – 17th Nov*
  - *2011: 4-7th Nov*
  - *2012: 24-29th Oct*
  - *2013: 13-18th Oct*

- Climate: 25°C (winter) to >45°C (summer) humid
- Average stay: 2 wks – 1 month

Profile of the Pilgrim



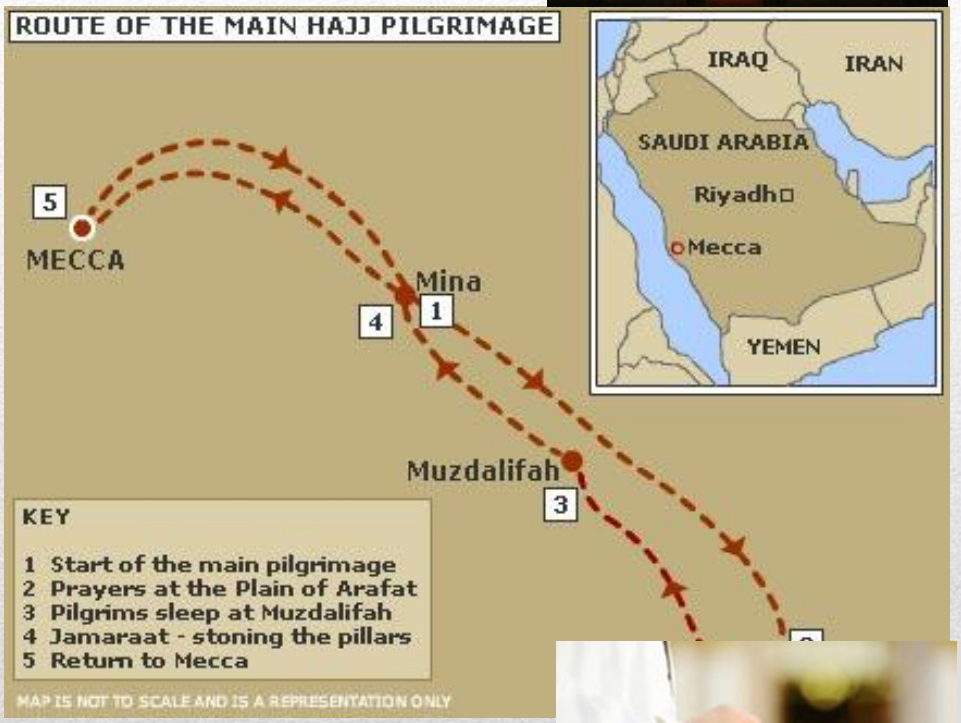
Year	Hijri Yr	Saudi	Foreign	Total Pilgrims
2003	1423	610,117	1,431,012	2,041,129
2004	1424	592,368	1,419,706	2,012,074
2005	1425	629,710	1,534,769	2,164,469
2006	1426	573,147	1,557,447	2,130,594
2007	1427	746,511	1,707,814	2,454,325
2008	1428		1,729,841	
2009	1429	154,000	1,613,000	2,521,000
2010	1430	989,798	1,799,601	2.8 million
2011	1431	1,099,522	1,828,195	2,927,717
2012	1432	1,408,641	1,752,932	3,161,573

Numbers attending the Hajj

The Hajj Procedure

- **Day One**

- The Muslim begins her / his spiritual journey by reciting intention to perform Hajj.
- He/She then enters a spiritual state called Ihraam where the Muslim will refrain from things such as cutting their nails and hair, making marriage proposals, hunting or killing animals, sex, and wearing perfume.
- The Muslim then makes their initial tawaf (circle) around the Kab' ah [Kaaba]
- Afterwards, Muslims run between the hills of Safa and Marwa, symbolic of Hajar, wife of Ibrahim, searching for water for their son, Ismail.
- It is here that water appeared from a well (the well of Zamzam) below Ismail's feet.
- The pilgrims then travel to the nearby town of Mina.



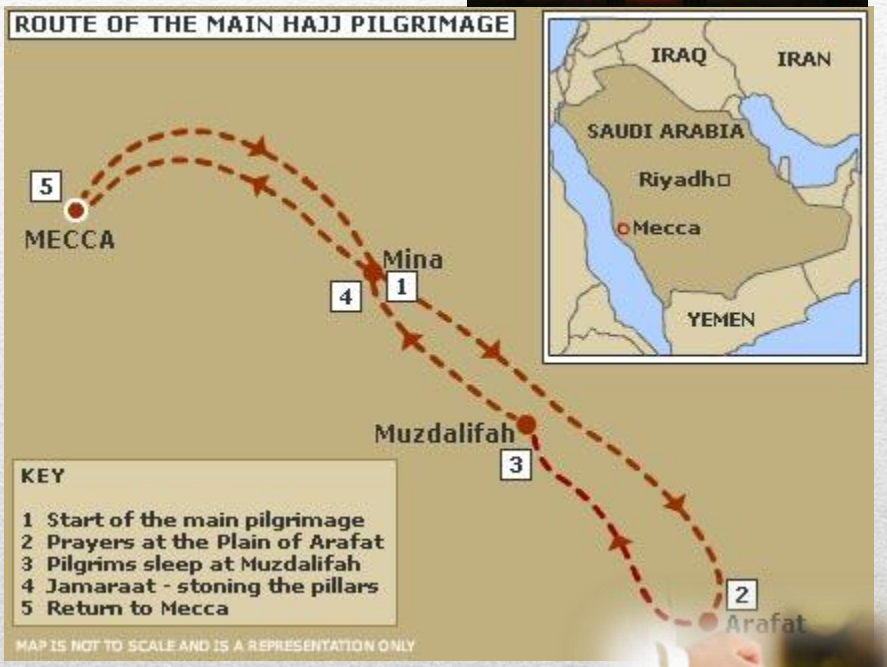
The Hajj Procedure

The Hajj Procedure

- **Day Two**

- Pilgrims travel to Arafah after morning prayer. Once there, the pilgrims pray and repent for their sins on Mount Rahma (Mountain of Mercy)

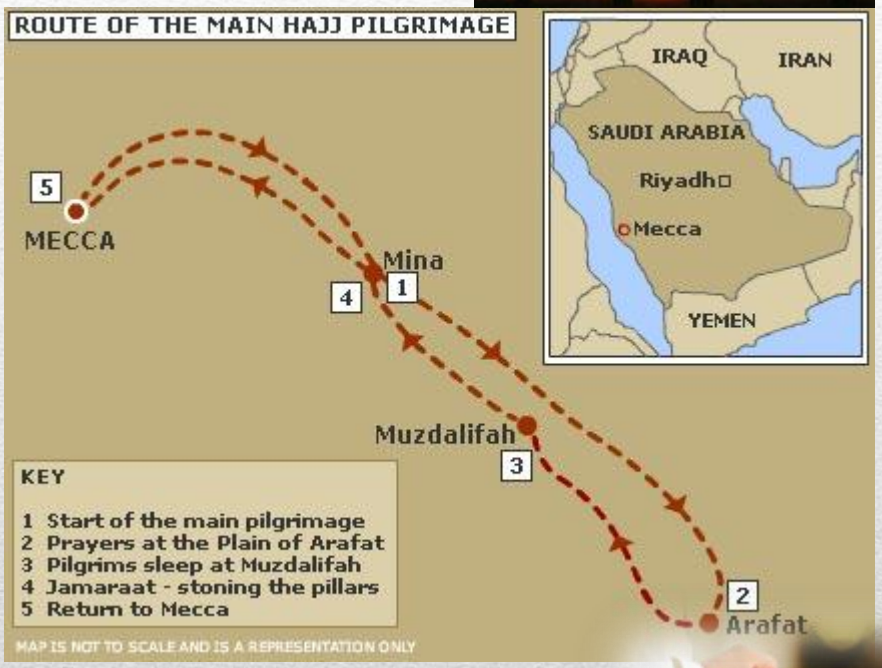
- After this, the pilgrim travels to Mudalifah and collects seventy pea-sized pebbles, which will be used the following day for throwing.



The Hajj Procedure

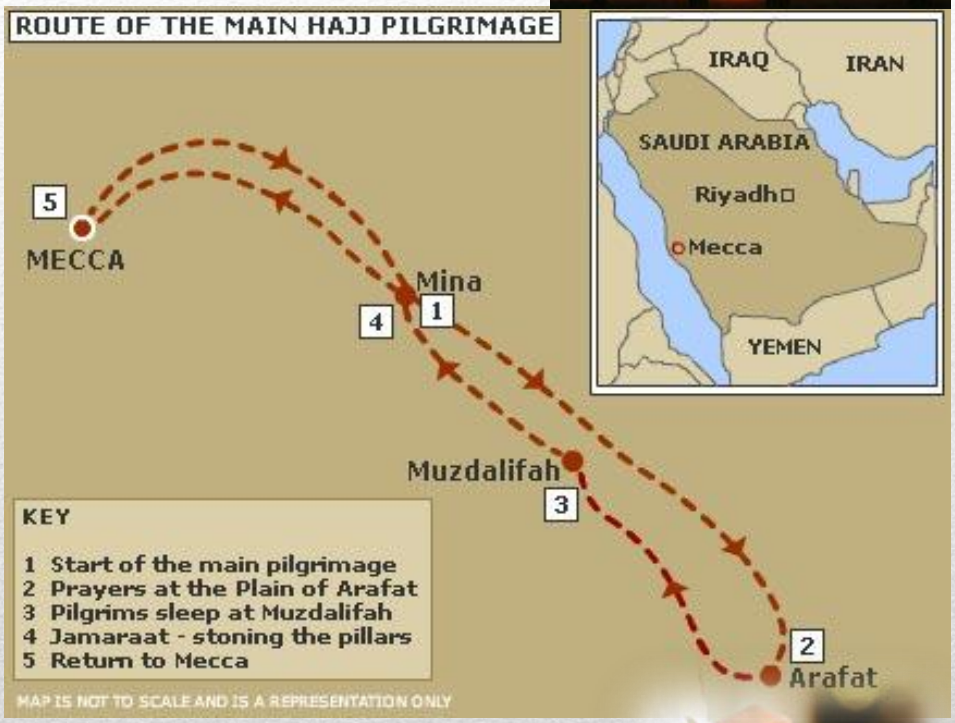
- **Day Three**

- Pilgrims travel to Mina and throw stones at the Jamarat, which is the symbol of all the evil in the world
- These ceremonial actions represent our continuous battle against evil.
- While throwing the pebbles, pilgrims recite "God is great" and "in the name of God"
- Pilgrims may then sacrifice an animal, consuming one third of the meat, giving one third to friends and family, and giving one third to celebrate Eid-ul-Adha. [celebrated world-wide]
- It is a joyous day for all Muslims. Pilgrims then return to Mecca and circle (tawaf) around the Kabaa'



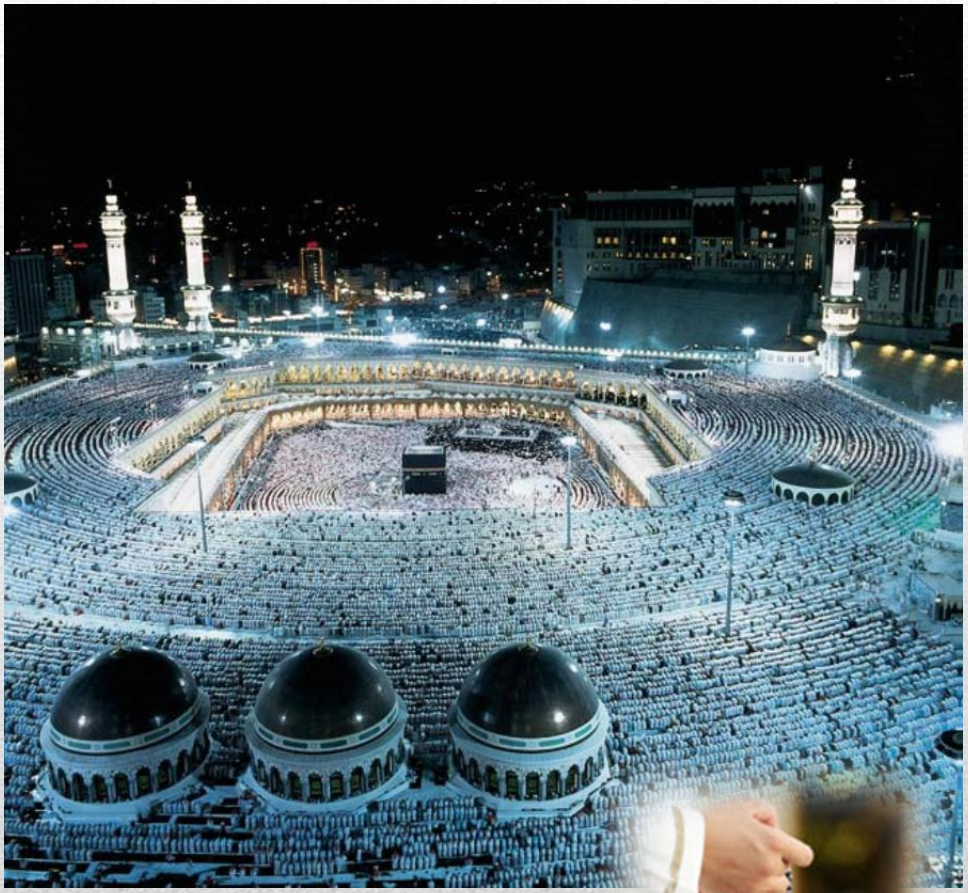
The Hajj Procedure

- **Day Four**
- Pilgrims then leave Mecca and return to Mina where they once again stone the Jamarat Pillars, this time stoning three instead of just one
- Once again, the pilgrims recite "God is great" and "in the name of God."

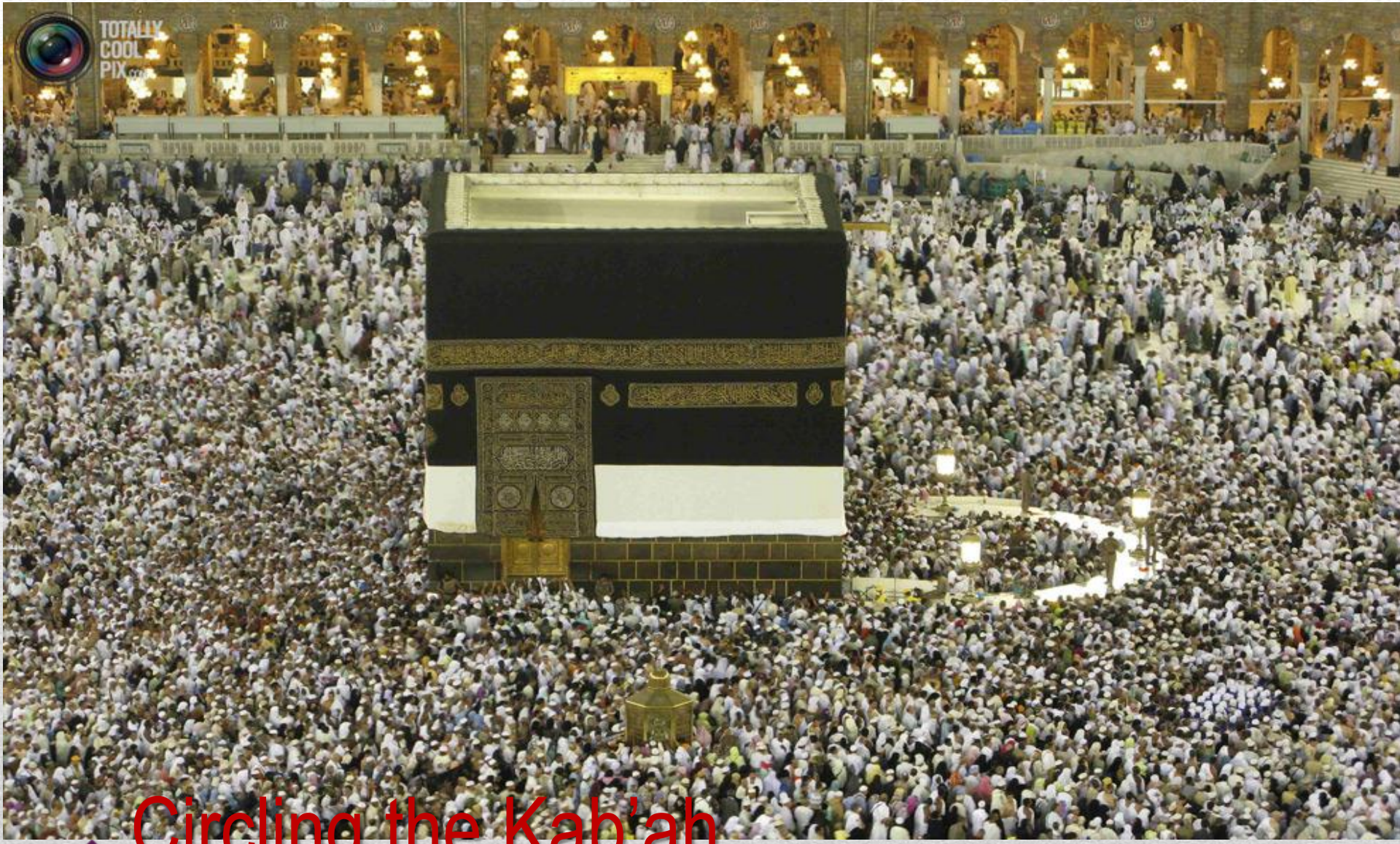


- **Day Five**

- Pilgrims stone the Jamarat once again and return to Mecca.
- Once in Mecca, they once again tawaf around the Kab'ah
- This is the "farewell" tawaf
- This is an emotional time for the pilgrims because this is the last time they will see the Kab'ah.
- This completes the Holy Pilgrimage.



The Hajj Procedure



Circling the Kab'ah

Health Risk Profile

- Infectious risks
  - Meningococcal disease, tuberculosis, other respiratory tract infections, diarrhoea
- Non-infectious risks
  - Cardiovascular disease, stampedes, MVA
- Current Health regulations issued by the Saudi Government for pilgrims travelling to the Hajj …

http://www.moh.gov.sa/en/Hajj/HealthGuidelines/Pages/BeforeHajj.aspx

Kingdome of Saudi Arabia - Ministry of Health

Hajj & Umrah e-Portal

Your health... a provision for your Hajj

Other Languages:

Health Regulations | Health Guidelines | Publications Awareness | Information Center | Manual Workers | Health Facilities | عربي

Hajj > Health Guidelines > Before Hajj

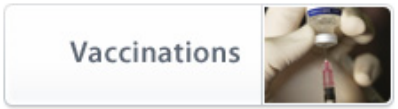
Before Hajj

Pre-Hajj Health Tips:

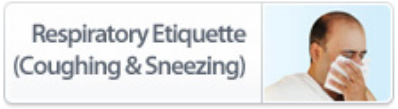
- Taking the necessary vaccinations, especially the elderly and those suffering from chronic diseases. Herein is an elaborate account of the required vaccinations, to be enumerated later on, as well as the timing of taking such vaccinations prior to setting out for the Hajj Holy Sites.
- Seeing a doctor before travelling to verify of your health stability, and ability to perform the Hajj rites.
- Taking sufficient medications, especially in case you suffer from one of the diseases that require you to take medications regularly, such as heart diseases, hypertension, kidney diseases, asthma and diabetes.
- Bringing enough cloths, since you'd better change your cloths regularly and repetitively to maintain your hygiene. Cloths are recommended to be light and loose.
- Carrying a detailed report of the medical diagnosis of your case, and the required medications and doses, to help follow up your case when need be.
- Be sure that your personal bag includes the necessary cleaning tools and supplies (towel, shavers, tooth paste and brush, umbrella, loose cotton cloths, moisturizing creams, etc.).
- By sure that your medical bag includes wound-sterilizing tools, heatsink, and painkillers.
- In case you're a diabetic, be sure to have a blood sugar measurement device.
- It is advisable to move your legs every now and again while sitting in the plain or bus, and walk for a while every hour or two hours, to avoid kibe (swollen feet).
- In case you're a tuberculosis patient, you have to undergo all the necessary medical tests and submit the results that prove infection could not be transmitted from you to other pilgrims. Pilgrimage is not recommended until after you complete treatment, and get recovered.

In case you're suffering from persistent cough for more than two weeks, you have to undergo the necessary

Minister of Health's Message



Vaccinations



Respiratory Etiquette (Coughing & Sneezing)

Chronic

Saudi Government Requirements

Infection	Causes
Meningococcal disease	All pilgrims and children over two, as well as pregnant women
Yellow Fever	Pilgrims hailing from places affected by the disease, such as African semi-desert regions, and some South-American countries.
Seasonal Influenza	All pilgrims, especially the elders, those suffering from chronic diseases, patients with immunodeficiency (natural and acquired alike), as well as patients with metabolic diseases, obese persons, and pregnant women (beginning with the fourth month)
Vaccination against pneumonia	Patients with such diseases as sickle cell anemia, renal failure, immunodeficiency, and splenectomy. It could be given, also, to the elders and those suffering from chronic diseases in the liver, heart and lungs.
Polio	Pilgrims of all age groups hailing from regions stricken by polio.

Saudi Government Requirements

Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

- MERS-CoV (formerly called "novel coronavirus") has caused respiratory illness in a number of people in the Middle East, including Saudi Arabia. Most people infected with MERS-CoV had severe illness and pneumonia, and about half of them have died. The virus can spread from person to person through close contact, so pilgrims living and traveling in close quarters may be at risk.

- Pilgrims can help protect themselves from respiratory illnesses by washing their hands often; not touching their mouth, nose, or eyes; and avoiding contact with sick people.

- Seek medical care if they develop a fever and cough or shortness of breath within 14 days after returning from their trip.

- At this time, there are no recommendations to change travel plans for Hajj or Umrah because of MERS.

Saudi Government Requirements

Preparation

- Preventive measures during the Hajj:
  - Saudi Arabia provides free health care to all pilgrims during the Hajj.
  - For the 2012 Hajj: 25 hospitals,
    4427 beds including 500 critical care and 550 emergency care beds
    141 health care centres in the vicinity of the Hajj area with 20 000 specialised health care workers.

- 18 hubs at King Abdulaziz International Airport Hajj terminal in Jeddah, each with 2 clinical examination rooms: assess arriving pilgrims, **check immunisation status, admin. prophylactic medicines**

- The public health teams and teams at the ports of entry report back to the command centre on 9 communicable diseases: **influenza, influenza-like illness, meningococcal disease, food poisoning, viral haemorrhagic fevers, yellow fever, cholera, poliomyelitis, and plague**

Disease	Requirement	Who
Meningococcal disease	Vaccination with ACYW135 > 10 days but < 3 years	All travellers > 2yo
	Chemoprophylaxis to reduce carrier rates	▪ those arriving from African meningitis belt ▪ those who are not vaccinated
Yellow fever	Vaccination with yellow fever vaccine >10 days and < 10 yrs	All travellers entering from yellow fever endemic countries
Poliomyelitis	One dose of OPV to be administered upon arrival	▪ All travellers from India, Pakistan, Nigeria, Afghanistan, Pakistan ▪ All travellers < 15yo from polio-affected countries
	Proof of vaccination with OPV 6 wks prior to visa application	All travellers < 15yo

Incoming Pilgrim Immunisation Status

Travel Health Practitioner Consult

Marc Shaw ❑ JAMES COOK University ❑ Australia ❑ WORLDWISE Travellers Health ❑ New Zealand

Pre-travel consultation

Pre-travel advice	Comment
Pre-existing medical problems	Especially cardiovascular disease, diabetes
Vaccinations	**Meningococcal ACYW135, Polio, DTP Influenza, Pneumococcal vaccine, Hep A/B, Typhoid, Cholera/ ETEC**
Advice	Heat, Personal medical kit, TB
Medications	Anti-diarhoeals, antibiotics for self treatment of TD Usual medications → advice on storage Consider contraception for women (no risk of malaria in Jeddah, Mecca, Medina)
Medical insurance	*Essential, but may take persuasion*
Investigations	Assess cardiovascular risk

Risks	Advice
Traveller's diarrhoea	Food and water safety
	Management of dehydration, travellers' diarrhoea Self-treatment, when to seek medical advice
Sunburn, heat exhaustion, heat stroke	Sunscreen, good umbrella (allowed) Perform rituals at night, in shaded areas Recognition of symptoms of heat exhaustion and Mx
Stampede	Safety in numbers (stay with family members) Avoid extremely large crowds
Cardiovascular ischaemia	Rituals by proxy Consider using wheel-chair
Hand injuries	Arrange for slaughtering by professional butcher
Skin infections, esp feet	Good footwear Keep skin dry, protect exposed areas
Diabetes	May need to adjust insulin with stress, physical activity, food intake Check feet carefully, protective footwear

Infection	Causes
Hepatitis B, C and HIV	Shaving of head by ill-trained barbers
Skin infections, especially of feet	Humid, hot climate, long periods of standing/ walking
Travellers' diarrhoea and Cholera	Poor hand hygiene Eating from street vendors Drinking contaminated water Inadequate storage of food
Respiratory Tract Infection [RSV, Parainfluenza, Adenovirus]	Crowed conditions and close contact Shared sleeping conditions
Meningococcal Disease	Overcrowding Hugh Humidity Dense air polution
Tuberculosis	Overcrowding Pilgrims from TB endemic Areas
Hepatitis A	Food and water
Malaria	Not in Mecca, Medina, Jeddah

Infectious Disease Risks

Sunburn / Heat exhaustion / heat stroke

Cardiovascular disease

Trauma (MVA, stampedes)

Non-infectious disease risks

Sunburn / Heat exhaustion / Heat stroke

- Leading cause of morbidity at the Hajj

- Summer: daytime temperatures > 45°C – need for sunscreen
- Winter: 25-30°C but still warm for pilgrims from temperate climates

- Causes:
  - Lack of acclimatisation
  - Lack of fluids
  - Arduous physical rituals
  - Exposed areas with limited or no shade
  - Men: not permitted to cover their heads

- Rituals in the desert at Arafat high risk
- Desert sand reaches high temperatures; need good quality footwear
- Footwear must be removed during times of prayer

Cardiovascular disease

- Most common cause of death in Hajj (43%)
- Hajj physically demanding → precipitate ischaemia
- Most pilgrims have out of hospital cardiac arrest
  → rarely resuscitated!!
- Difficulty and danger in retrieving peri-arrest patients in large crowds

Trauma

- MVAs
  - Causes: dense traffic,
    disordered traffic flow,
    poor compliance with seat belts
  - Mecca: highest incidence of accidents

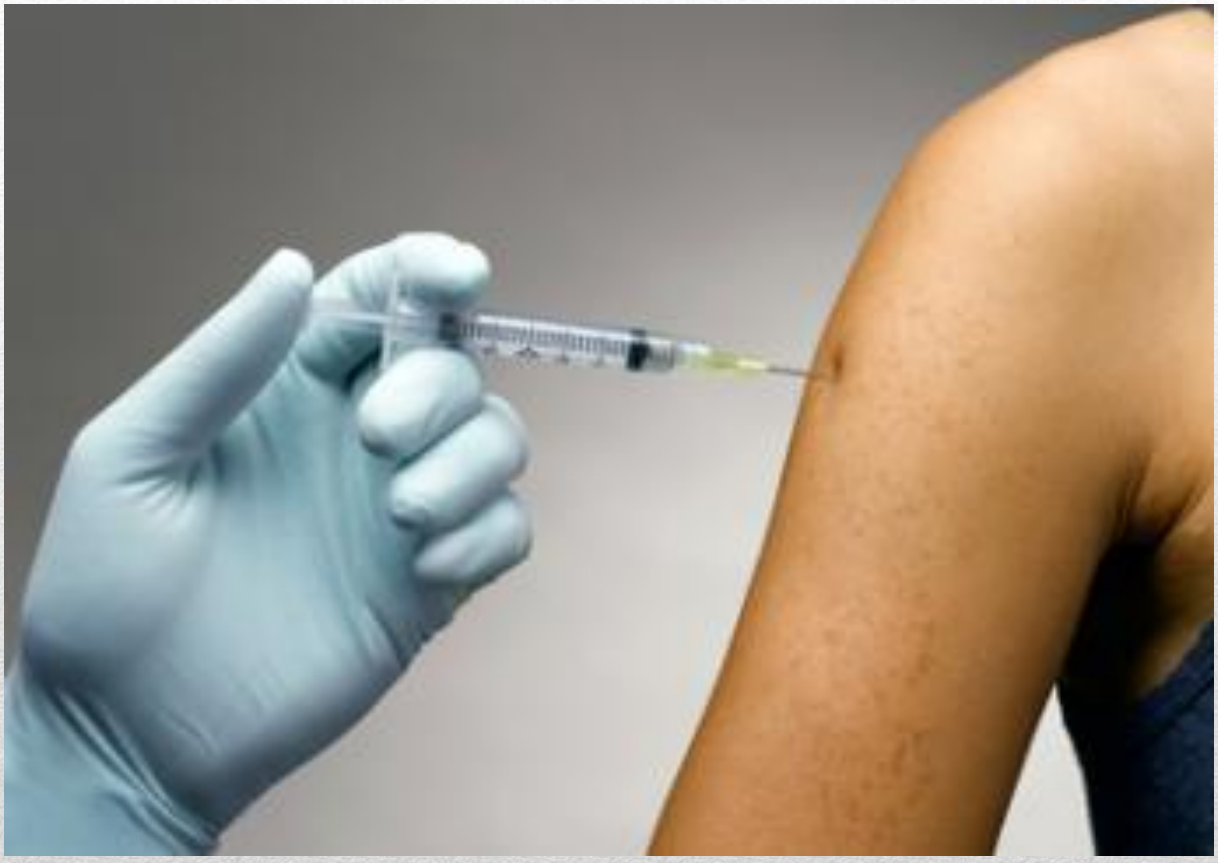
- Stampedes:
  - Large crowds in limited spaces
    → 1-2 individuals trip and fall
    → precipitate stampede
  - Mass panic
  - Death via head injury or asphyxiation
  - High risk areas: Jamarat (ritualistic stoning),
    Circumambulation at Ka'abah

Year	Chronicle of Hajj disasters
1990	1426 pilgrims killed by stampede / asphyxiation in tunnel leading to holy sites
1994	270 killed in stampede
1997	343 pilgrims died and 1500 injuried in a fire
1998	119 pilgrims died in a stampede
2001	35 pilgrims died in stampede
2003	14 pilgrims died in a stampede
2004	251 pilgrims died in a stampede
2006	76 pilgrims died after a hotel housing pilgrims collapsed; a stampede wounded 289, killing 380
2013	??

Trauma

Trauma

- Hand injuries from ceremonial slaughtering of animals
  - 80% from knives (Rahmann et al 1999)
- Stoning
  - Over enthusiastic pilgrims may hurl larger stones with great ferocity
- Burns to feet from standing barefoot on marble floors (in holy areas)
  - Sand temperature gets very high



What Consultation is needed

- All travellers to international mass gatherings should be evaluated by a travel health provider, ideally 4–6 weeks before travel:
  - to assess the level of risk faced by the traveller and
  - to take steps to manage the risk.

- Travellers should take precautions to mitigate risks associated with mass gatherings:
  - Be aware of the most likely health risks associated with the event they are attending and what they can do to stay healthy and safe.
  - Avoid gatherings:
    - where drug and alcohol use could contribute to dangerous behaviour,
    - where political or religious fervour may contribute to violence,
    - where inadequate facilities may contribute to an unhealthy environment.
  - Avoid densely congested areas with limited egress.
  - Be aware of emergency precautions and the location of exit routes and medical facilities.

What consultation is needed - A

What Consultation is needed - B

It is essential and the Travel Health Practitioner advise upon:

- Knowledge of the country or region being visited
  - This can be obtained from destination pages on the CDC Travelers' Health website (http://wwwnc.cdc.gov/travel/destinations/list.htm),
  - World Health Organization www.who.int
  - Worldwise NZ specific information - www.worldwise.co.nz [INTEREST DECLARED]

- For all international travel, travellers should practice healthy and safe behaviors, including:
  - Safe food and water habits
  - Prevention of insect bites
  - Avoidance of animals, especially dogs
  - Avoidance of barbers, tattooists…
  - Hygiene and regular hand washing
  - Safe driving
  - Advice on basic first aid and 'what to do' with personal health care

Things for THP to Consider in Consultation:

- If planning to travel internationally to a mass gathering, the traveller needs to be advised to consider the characteristics of the event and how they might contribute to health risks:
  - Local diseases: the THP to advise the traveller on local diseases and illnesses
    - Advise the traveller on preventative management for them
    - Advise the traveller on when to seek advice for any illness
- Climate: the Traveller needs to be wary of the climate .
  - Hot or cold, thus think about ways to reduce the risk of heat- or cold-related illnesses.
- Crowd Demographics – is the travellers aware of the other participants??
  - Crowd density: injuries are more likely where people are packed closely together.
  - Age of the crowd,
  - Purpose of the gathering,
  - ? Drugs or alcohol are used can influence the risk of violence.

What Consultation is Needed - C

Things for the THP to Consider in 'Focusing the Event':

- Research of the event in advised
- Vaccinations
  - Compulsory
  - Recommended
  - Routine
- Personal Hygiene – including food and water, insect repellent
- Environment and Clothing
- Finances
- Safety and security
- Personal Behaviour – alcohol and drug, sexual
- Risk of disease and dis-ease
- What medical resources are available to the traveller
- Consular contact if in a foreign country
- FAMILY CONTACT

What Consultation is Needed

1. The travel health consultation needs to reflect care and compassion for the greater world

2. Travellers are advised to understand the globe's people and their personal stories… these they may get from the Travel Health Professional as well as from other sources

3. The travel medicine consultation should guide the traveller to instinctive personal safety and security means, as well as to understand current health recommendations

4. The Traveller is best advised to gain shared experiences of travel from the Travel Health Professional and from others. The collective knowledge makes for a better understanding

Guide to Mass Gathering Consultation

Marc Shaw ❑ JAMES COOK University ❑ Australia ❑ WORLDWISE Travellers Health ❑ New Zealand

5. Travel Health Professionals are an encyclopaedia for travellers going abroad … for it is their knowledge that travellers often do not know that they need to know

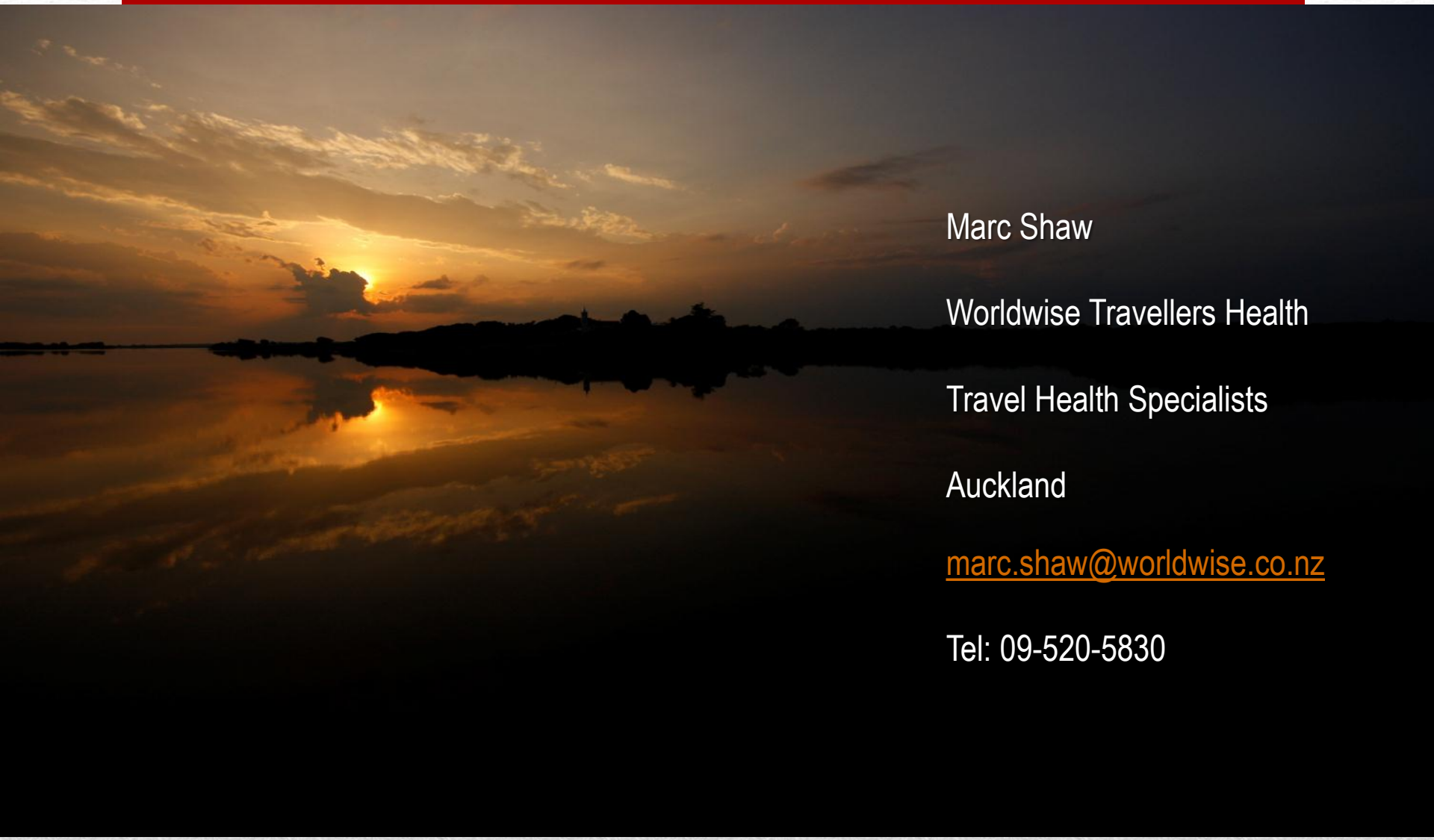
6. Travel Heath Providers thus need to guide travellers by their knowledge. They need to be prepared to ‘challenge’ the intending traveller, so that a finished journey is a joy to have experienced

7. Travel Health and Medicine is a positive energy and is best given positively

8. Dedicated PERSONAL Travel advisories have assumed great importance, and need to be included in all travel health consultations

Guide to Mass Gathering Consultation

Marc Shaw ❑ JAMES COOK University ❑ Australia ❑ WORLDWISE Travellers Health ❑ New Zealand



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THANK YOU!

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