Pilgrims to Mecca

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Mecca

• The Holy Place with the larger number of pilgrims at the same time:
  - between 2 – 3. $10^6$ people during the Hajj:
    - 60% from Asia, 25% from Arabic Countries
    - 10% from Africa, and <5% from Europa
• Leading to transmission of several diseases:
  - tuberculosis
  - meningitis
  - influenza,…
Pilgrims to Mecca

• From more than 140 countries… and:
  - Netherlands: +/- 6,000/year
  - Belgium: +/- 3,000/year
• At Travel Clinic CHU St Pierre, meningococcal vaccination for:
  +/- 1,500 pilgrims in 2007
  1,100 pilgrims in 2008 and 2009
≈ 20 to 130/day, mostly during 1 month after the end of ramadan
Hajj

• One of the five pillar of Islam
  - Once a year, for a period of 5 days during the 12th month of the lunar Islamic calendar
  → ever-changing seasonal dates (10-11 days « earlier » each year)
  → ≠ environmental/epidemiological conditions

NB: Umrah: shorter pilgrimage, may be done at every time
Hajj

- 7 hospitals...
- 74 health-care centers...
- >10,000 specialized health care personnel for healthcare free of charge

For pilgrims staying in:
- hotels and appartement(from? to 5 stars !)
- tents (by nationality) for a few nights
Meningococcal infection

• Vaccination for pilgrims from the meningitis belt required since a long time.

Several outbreaks of serogroup A disease following the 1987 Hajj:
- 19 cases/10,000 UK pilgrims
- 15 secondary cases in UK
  with carriage +/- 10 %(US pilgrims)
Areas with frequent epidemics of meningococcal meningitis.
Meningococcal infection

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Several outbreaks of serogroup A disease following the 1987 Hajj:
- 19 cases/10,000 UK pilgrims
- 15 secondary cases in UK
with carriage +/- 10 % (US pilgrims)
Meningococcal infection

- Vaccine (A and C) required since 1988
- Quadrivalent vaccine since 2001 (W135 cases)
  - if older than 2 years
  - issued >10 days and < 3 years

NB: if arriving from countries of the meningitis belt, administration at the port of entry:
  - adults: 500 mg cipro
  - children: rifampicin tablets
  - pregnant women: cefriaxone IM
Poliomyelitis vaccination (WHO 2006)

"For those who have received $\geq 3$ doses of OPV, it is advisable to offer another dose of polio vaccine as a ONCE-ONLY dose to those traveling to endemic areas"
Wild Poliovirus Weekly Update

Wild Poliovirus*, 04 Sep 2008 – 03 Mar 2009

- Wild virus type 1
- Wild virus type 3
- Wild virus types 1 & 3
- Endemic countries
- Case or outbreak following importation (0 - 6 months)

*Excludes viruses detected from environmental surveillance and vaccine derived polio viruses.

Data in WHO HQ as of 03 Mar 2009

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Poliomyelitis

- Imported from Nigeria into Saudi Arabia in 2004
- Since 2005: requirement for documented proof of up to date oral vaccination
  6 weeks before application for a visa in < 15 y old from countries where polio still occur
  + 1 dose administered to all those < 15 y at the border
- IF arriving from India, Pakistan, Afghanistan or Nigeria:
  ALL pilgrims (regardless of age) should receive
  - 1 dose 6 weeks prior to departure
  - 1 dose at the border
Influenza (pandemic)

• Vaccination mandatory IF the vaccine is available in the country of origin FOR those pilgrims (risk groups, …)

• IF not available:
  - visa issued; responsibility of the health authorities of each country …

also responsible for educating / advising!
Influenza (seasonal)

- Mandatory
  - at least 2 weeks before arriving in Saudi Arabia

IF available in the country of origin
Yellow fever

• Required for all pilgrims arriving from or transiting through any country infected with yellow fever

• →**For Belgium**: important only if the pilgrim is first going to a/his subsaharian country of origin

• Valid if > 10 days and < 10 years
Hepatitis A

- S Arabia: High/moderate endemicity country
  ...but most pilgrims coming from high endemicity countries!
- (Most) older pilgrims naturally protected
  → vaccination for youngers born in european countries!
Geographic Distribution of Hepatitis A Virus Infection

Anti-HAV Prevalence

- High
- High/Intermediate
- Intermediate
- Low
- Very Low

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Prevalence of chronic infection with hepatitis B virus, by country, 2006
Hepatitis B

- Low risk
  (no sexual relation allowed for pilgrims)

- Mostly linked to ritual shaving
  by non official barbers
  → either vaccinate and/or advice to:
    - be shaved by official barbers
    - use your own razor blades..

…Hepatitis C…..
Typhoid fever

- Few data available….
- Local risk seems low for most
  → -vaccine not obviously useful
    for most pilgrims
    -consider for long stays
      in « poor » conditions
Typhoid fever – estimated incidence rates

High: >0.2 per 1000

South Asia

West/ Central Africa
Dengue fever

- Low endemicity around Medine/Mecca
- Few available data/transparency…
  → Non official reports:
    150 hospitalized in Mecca/3 months
    +/- 100 cases/month in Jedda
    beginning 2009
Sand fly fever

• Small risk of this endemic viral disease, especially between April and October in periurban areas.
• Same protection as for dengue: DEET 20-30% during the day.
Malaria

• NO risk around Mecca-Medine-Jedda
Diarrhea

- Water from distribution systems is safe in major urban areas, as the Holy Places
- Remaining risk linked to local food but few epidemiological data …
- Risk of dehydration, especially during the summer months!

NB: Importation of food is not allowed no cholera anymore since 1989
Diarrhea

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• Remaining risk linked to local food but few epidemiological data …
• Risk of deshydratation, especially during the summer months!

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Infections of the U/LRT

- Most frequent complain and reason for local hospital admission…

...but nothing to do specifically…

...outside flu vaccine!
Trauma

• Mostly focused on the Jamaraat sites: occasional unfortunate crowd stampedes (380 death in 2006…)

But may happen everywhere…
Cardiovascular diseases

• Most frequent cause of death…

As in other travellers worldwide!
MABROUK HADJ