

Conclusion: Identification of a population of carriers of *Salmonella* spp. in an endemic region would provide evidence for a targeted means of transmission containment and prevention, including sensibilization and sanitation enforcement followed by potential vaccination of at-risk populations.

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Prevalence of scabies and strongyloidiasis before and after MDA in a remote Aboriginal community in Northern Territory, Australia



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Background: Hypothesis: Mass drug administration (MDA) will be an effective public health measure to reduce the prevalence of scabies and strongyloidiasis in a remote Aboriginal community in Australia where both parasitic infections are endemic.

Methods & Materials: A population census and MDA was conducted in 2010 and 2011 to screen participants for scabies and strongyloidiasis and administer medications. Scabies was diagnosed clinically, strongyloidiasis serologically or from coprological examination. Participants were administered a stat dose of 200 µg/kg ivermectin unless their weight was <15 kg or pregnant. Participants diagnosed with scabies and/or strongyloidiasis were given a 2nd treatment 2–3 weeks after the first medications were administered.

Two cross sectional surveys were conducted 6 months after the MDA to follow-up participants who had been diagnosed with scabies and/or strongyloidiasis to determine treatment failures. Disease acquisition was measured from a sample of participants who had no scabies or strongyloidiasis at the population census 6 months prior.

Results: At the population census and MDA in 2010, 1012 (80%) participants were screened from 127 (80%) houses in the remote community and 7 surrounding homelands. Scabies prevalence was 4% and strongyloidiasis was 21%. In 2011, 1060 participants were screened, 702 that had been seen previously and 358 new entries. The prevalence of scabies increased to 9% for participants seen previously with strongyloidiasis prevalence decreasing to 6%.

At the cross sectional surveys, 80% of participants were followed up. The treatment failures remained constant at 6% (2010) and 7% (2011) for scabies increasing slightly but not significantly from 17% (2010) to 23% (2011) for strongyloidiasis. Scabies acquisition

increased but not significantly from 3% (2010) to 8% (2011) and decreased from 4% (2010) to 1% (2011) for strongyloidiasis. Scabies prevalence decreased significantly at both cross sectional surveys from 4% to 1% in 2010 and 9% to 2% in 2011. Strongyloidiasis prevalence decreased significantly from 21% to 6% which was sustained for the duration of the project.

Conclusion: Scabies and strongyloidiasis are neglected tropical diseases that contribute to the significant morbidity experienced by Australian Aboriginals in remote communities. MDA is an effective public health measure to reduce the prevalence of both parasitic infections.

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Measles-mumps-rubeola (MMR), varicella, and hepatitis A (HAV) seroprevalences among healthcare workers and their compliance to vaccination



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Background: In this study, we aimed to determine the Measles-Mumps-Rubeola (MMR), Varicella, and Hepatitis A (HAV) seroprevalences among the healthcare workers (HCWs) and also their compliance to vaccination.

Methods & Materials: The health records of 5040 HCWs, who admitted to the Vaccination Clinic for HCWs, were evaluated retrospectively. Seropositivity rates to MMR, Varicella, and HAV were calculated, HCWs' compliance to the vaccinations were investigated. Statistical package SPSS version 15 was used to conduct analysis.

Results: The HAV, MMR and Varicella seropositivity rates, among the HCWs, were 70, 6%, 81, 5%, 83, 8%, 94, 7% and 95, 2%, respectively. Anti-HAV positivity was found higher in nurses and doctors than the nursing and medical students ($p < 0,001$). Seropositivity rate to measles was found lower in students, young and female personnel ($p < 0, 01$). No association was found between a history of infection and the seropositivity (Table 1). Compliance rates to vaccination were found between 33, 5% and 63, 3%. Compliance was higher in females, younger than 20 years, and students ($p < 0,001$).

Conclusion: In the past, HAV seropositivity rates among HCWs were reported higher than the community (90, 4%-99, 5% vs. 40%-80, 8%) in Turkey. In our study, HAV seropositivity (70, 6%) was not found different from the community's rates. This could be explained with the improvement in the condition of hygiene in the commu-

Table 1

HCWs' history of illness and seropositivity due to the infection.

Infection (Total Number)	Seropositivity (%)	History of illness (%) ^a	
		Yes	No
Rubella (2451)	2321 (94.7)	100	97.7
Measles (1558)	1269 (81.5)	93.3	92.6
Mumps (1010)	846 (83.8)	90.7	69.2
Varicella (852)	811 (95.2)	100	95.2

^a Seropositivity rates due to the history of illness.

nity. However, this result also indicates that HCWs are at risk for HAV infection.

Measles seropositivity was lower in students and young workers. They are great risk for infection in case of a measles outbreak.

History of disease was found unreliable for all infections, including varicella.

Compliance to vaccination was higher among students and younger HCWs.

A serological evaluation should be done at employment and pre-clinic course for all HCWs and vaccination should be done in-need. For this purpose, a specific department should be created in all hospitals.

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Yellow fever immunity assessment in Kedougou, South Eastern Senegal, in 2012



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Background: Yellow fever (YF) is an acute viral disease transmitted by mosquitoes of the genus *Aedes*. WHO estimates that 200,000 cases and 30,000 deaths occur each year in tropical areas of Africa and South America. Although there is no specific treatment for YF, outbreak can be avoided by the vaccination strategy integrating routine EPI and preventive mass vaccination campaigns to maintain a high level immunity among population. Although Kedougou (south - eastern) is known as an YF endemic area, no massive outbreak has ever been reported. Since 2007, gold mining has become the main economic activity in Kedougou and has led to increased urbanization, more activity in the forest and massive immigration of non-immune populations. A YF outbreak occurred in Kedougou in 2010 and YF seroprevalence was 58.8% despite the preventive immunization campaign carried out in 2007.

Methods & Materials: The sampling method was based on a two level cross sectional random cluster sample design adapted from WHO. Kedougou region was divided into 3 districts in which 40 villages were drawn at random, using the cumulative total population. Samples were tested for anti YFV IgG antibodies by ELISA, and neutralizing antibodies against YFV.

Results: The overall YF immunity seroprevalence in the region was 49.04% [39.3-59.5]. Salemata district presented the highest prevalence of neutralizing antibodies with 57.3% [47-67] ($p=0.0048$). The [31-45years] were better protected than children with a protective YF antibodies seroprevalence 57% [46.7-66.7] ($p=0.0019$). Also adults in Khossanto and Fongolimbi rural communities (gold mining sites) were significantly less immunized against YF than those in Kedougou town with respectively OR = 0.31 [0.16-0.58] and OR = 0.62 [0.39-0.97].

Conclusion: This study showed that the rapid decrease of YF immunity (49%) below the required threshold (80%) to prevent out-

breaks only four years after the preventive immunization campaign was due mainly to the increase of traditional gold mining which attracts non immune population in the region.

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Unintentional injuries among 9 to 12 grades schoolchildren in Sana'a Capital City, Yemen, 2012



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Background: Childhood injuries are growing public health problem representing about half of deaths among 15 to 19-year-olds. Schoolchildren are nine times more likely to sustain unintentional injuries. The aim is to describe unintentional injuries pattern and associated factors among schoolchildren in Sana'a city.

Methods & Materials: A school-based study conducted on 9–12 grades students through multistage probability sampling. Self-administered questionnaire used where students reported unintentional injury required medical attention in past 12 months. The questionnaire also covered demographic and socioeconomic characteristics.

Results: The annual overall injury rate was 48 per 100 students where boys had a significantly higher injury rate than the girls (57 vs. 43; OR: 1.6, $P < 0.0001$). Children with divorced parents has higher risk (62% vs. 47%, OR 1.9, $P < 0.05$). A significantly higher proportion of injuries in boys was caused during sport (24% vs. 6%, OR 5.3, $P < 0.0001$), while higher proportion of injury among girls was caused by burns (14% vs. 4%, OR 4.7, $P < 0.0001$). Injuries from falling down were commonest (48%) followed by transportation (13%) and burn (10%). According to the location of injury in males it occurred at school (32% vs. 23%; OR 1.6, $P < 0.05$) and way to-from school (26% vs. 15%; OR 2.0, $P < 0.01$) while most injuries in girls occurred at home (59% vs. 31%; OR 3.2, $P < 0.001$), and extremities were most frequently injured.

Conclusion: Unintentional injuries among schoolchildren should be recognized as public health concern in Yemen. Understanding pattern and socio-behavioral determinants will guide future interventions.

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