

## CASE STUDY

### **Newmont's integrated malaria, HIV/tuberculosis program at Batu Hijau, Indonesia**

Newmont brought in consultancy International SOS to operate a broad-based health service at its Batu Hijau mine in 1996. A number of highly successful workforce programs have been implemented over the last ten years - in conjunction with other specifically designed community health and wellness programs - to manage the negative impacts of HIV, tuberculosis and malaria.

#### **Background**

The Batu Hijau mine is a large copper and gold greenfields open-cast mining project located in a remote region of Indonesia, on the island of Sumbawa. The district was poorly developed with rudimentary roads and no effective services. At the time of early mine development, there was no local doctor-run health centre and only 6 poorly functioning primary health care centers. Production started in October 1999 after a 3-year construction phase.

#### **Malaria**

The integrated malaria management plan involved activities targeted at both prevention and treatment, including activities on and off the mine site.

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The main program elements were:

- Larvaciding and clearing of emergent vegetation at local mosquito breeding sites;
- Active screening of military personnel for malaria before entering the control zone;
- Distribution of bed nets ;
- Selective spraying of houses with insecticides;
- Training and management of local community volunteers to perform active and passive case detection in the community. Malaria treatment was provided for these cases by the government;
- Supporting government microscopy services; technical support and annual training was provided by the mine;
- Biannual screening of community primary school children in villages within the mine's direct influence area - and the provision of treatment if positive; and
- Proper case management in the facility clinic and first aid posts, supported by a quality medical evacuation service.

Finally the program was underpinned by strong management support, accurate and detailed monitoring and evaluation, workforce and community education and effective stakeholder engagement.

The program is achieving remarkable success - with a massive reduction in malaria prevalence in community schoolchildren from 47.3% during the wet season in 1999 to only 1.5% during the wet season in 2007. Some 2,105 children were surveyed in 2006 (*Figure 1*). In addition, the malaria incidence rate in the mine workforce dropped from 53 per 1000 employees in 1998 to 5 per 1000 in 2007 (*Figure 2*). The program covered a population of just under 20,000 people in 2007.

Figure 1

### Malaria Prevalence Rate - Community Children

% of primary school children surveyed in mine impacted community with malaria parasites in the blood (wet season surveys)  
PTNNT Batu Hijau Project, Indonesia



Source: International SOS Batu Hijau Malaria Control Program, 2008

Figure2

### Malaria Incidence Rate

number of cases at facility clinic / 1000 employees  
PTNNT Batu Hijau Project, Indonesia



Source: International SOS Batu Hijau Public Health Program Database, March 2008

## **HIV/AIDS and Tuberculosis**

HIV was identified as a potential workforce and community issue early on in the project due to the influx of migrant labour and increased economic activity – and an associated increase in commercial sex workers in the area. In addition, silica dust exposure and the housing of workers in barracks type accommodation in an area of high tuberculosis (TB) prevalence also had the potential to increase TB transmission, if left unmanaged.

Specific preventative activities were targeted at high risk groups

TB and HIV program activities were implemented as part of a broader public health agenda. The main objectives are:

- A focus on prevention from early in the construction phase and continued throughout the operational phase;
- To build community capacity through outreach programs and proper stakeholder engagement;
- To build workplace programs for treatment in line with government policy.

These programs could only be successful through strong mine management support - Newmont's team implemented an HIV policy based on International Labour Organization principles, and provided significant program funding. A Newmont public health office was set up and staffed with a doctor and various technical and non-technical support staff to deliver program activities both onsite and offsite. The program was underpinned by proper monitoring and evaluation and research was done through cross-sectional surveys.

A number of high risk groups for HIV were identified:

- Sailors and seamen from the port, as the project involved the construction of a port to allow shipping of ore concentrate;
- Commercial sex workers (CSWs) and men who have sex with men (MSM); and
- Commercial truck drivers.

Specific preventative activities were targeted at these high risk groups in addition to work done with community women's groups and school-age youth. Information was communicated through group and individual meetings, on radio and through posters and newspapers on a regular and defined basis.

Nearly 4,000 employees educated at induction

Activities targeting high risk groups included a vaccination/treatment program for CSWs and MSM done in conjunction with the government health service. Both these groups were vaccinated against Hepatitis B and treated for syphilis and sexually transmitted infections (STIs) in addition to being offered voluntary counseling and testing (VCT) for HIV. It was recognized that this could help protect the workforce, and slow the spread of sexually transmitted diseases.

To support sustainable interventions in the community, an education coordinator was funded by the mine and voluntary community cadres were enlisted to work in the areas of HIV and TB prevention

and active TB case detection. For example, the CSW/MSM sentinel survey in 2006 conducted 337 VCT HIV tests and found a number of new HIV positive cases. In addition 46 CSWs were vaccinated against Hepatitis B. In 2006, more than 80% of the community TB cases detected were identified through the cadres.

As male mine workers were identified as potentially being at high risk for HIV and TB, mine employees were educated at induction on HIV, TB and sexually transmitted infections (STIs). This was followed up with regular employee knowledge, attitude and behaviour surveys on HIV to monitor trends and adapt information. In addition, 'drop-in centres' were provided at the port and at the mine for employees to use for information gathering and confidential testing. Symptom screening was performed at induction and during occupational health medical examinations, and a workplace Directly Observed Therapy – Short Course (DOTS) program was initiated.

program staff have the responsibility to ensure that the fight against HIV, TB and malaria will continue in the district after Newmont has left - Newmont Public Health Malaria Control manager

Nearly 4,000 employees were educated at induction in 2006 and 10 new cases of TB in employees were detected onsite.

Important lessons were learned along the way – for instance, outreach programs educating people about HIV and STIs had to be culturally sensitive in a predominately Muslim community with cooperation from the local mosque and community leaders. Involving key stakeholders and understanding the relevance, utility, credibility and legitimacy of strategic objectives and planned actions was critical for a mining company involved in complex public health issues that impact on their operations. Aligning with government policy where possible and building partnerships and capacity in the community is essential.

As Newmont moves towards divestment in the project (as required by its contract), Dr Soebchan Rahim, the Public Health Malaria Control manager for the project, has confirmed that program staff 'have the responsibility to ensure that in line with Newmont's Corporate Social Responsibility to health, the fight against HIV, TB and malaria will continue in the district after Newmont has left'. Dr Rahim goes on to say that 'regular advocacy and communication especially with the district health office' and 'technical assistance in terms of skills and knowledge transfer' as well as 'strengthening of health promotion in the community' is more likely to result in sustainable programs and overcome constraints to good health.