A Mining Health Initiative case study:

Newmont Ghana's Akyem Mine: Lessons in Partnership and Process

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Consortium

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
BCC	Behaviour Change Communication
CHPS	Community-based Health Planning and Services
CHW	Community Health Worker
CSR	Corporate Social Responsibility
DA	District Assembly
DFID	UK Department for International Development
DHMT	District Health Management Team
EITI	Extractive Industries Transparency Initiative
ERT	Emergency Response Team
ESR	Environment and Social Responsibility
HANSHEP	Harnessing Non-State Actors for Better Health of the Poor
HDI	Human Development Index
GHC	Ghanaian Cedi
GHS	Ghana Health Service
GIZ	Gesellschaft für Internationale Zusammenarbeit
HIV	Human Immuno-deficiency Virus
HSLP	Health, Safety and Loss Prevention
ICMM	International Council on Mining & Metals
IFC	International Finance Corporation
IMP	Influx Management Plan
I-SOS	International SOS
LLIN	Long Lasting Insecticide treated Nets
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MHI	Mining Health Initiative
MOH	Ministry of Health
MOU	Memorandum of Understanding
MP	Member of Parliament
NAGH	New Abirem Government Hospital
NGO	Non Governmental Organisation

NGRL	Newmont Golden Ridge Limited
NHIS	National Health Insurance Scheme
OICI	Opportunities Industrialization Centers International
OLIVES	Organization For Livelihood Enhancement Services
PAC	Project-Affected Community
PPP	Public Private Partnership
SRF	Social Responsibility Forum
STI	Sexually Transmitted Infection
TB	Tuberculosis
VAT	Value-Added Tax
VCT	Voluntary Counselling and Testing (for HIV)

EXECUTIVE SUMMARY

Newmont Mining Corporation operates two mines in Ghana. The Akyem mine, in the Eastern Region of the country, is the focus of this assessment. It is currently in the construction phase with plans to start production in early 2014.

As well as reviewing background documents, the assessment team conducted interviews with 26 key informants, representing 13 organisations. In addition, three focus groups were held to gather the views of a range of Newmont employees and community members.

The health programme at Akyem consists mainly of medical services and vector control efforts targeting employees and, to some extent, contractors; and of support to community health under a programme to manage and mitigate the impact of population influx to the mining area.

Overall, Newmont's health programmes inside and outside of the fence appear solidly designed with positive impacts already visible. Nevertheless, some improvements can be made, particularly with regard to proactive health systems strengthening and longer-term strategic planning.

Key strengths include:

- Provision of high-quality healthcare for staff and dependents and, to some extent, for contractors.
- Systematic application of lessons learned in Ahafo, Newmont's other mining site in Ghana, including through deliberate design and implementation of an influx management programme.
- Strong and consistent community engagement over a number of years, allowing ample time for consultation.
- Strong bi- and multilateral partnerships, including through a Tripartite approach to working with the local government (District Assembly) and project-affected communities.
- Rather than being defined too narrowly, health, HIV/Aids, water and sanitation are addressed in an integrated manner.

Key challenges are as follows:

- Insufficient consideration of health systems strengthening, manifested by a focus on infrastructure and gaps in joint planning and data sharing with the health sector.
- Year-by-year rather than longer-term planning, affecting both internal stakeholders and partners by causing quality assurance issues.
- Uncertainties in regard to budget and organisational structure of various aspects of the health programme, causing lack of ownership in some areas.
- No strategy to facilitate transition from influx management to development stage.

Therefore, it is recommended that Newmont:

- reinvigorates corporate support for the integrated health programme over the duration of the mine;
- actively considers health system strengthening in the design and implementation of both the internal and external aspects of the programme, including through joint planning, systematic

data sharing and consideration of approaches to ensure adequate staffing and drug supply for health facilities in the district;
- further assesses and improves cost-effectiveness of its community health programme, for example by managing it in-house; and
- clarifies and rationalises responsibilities, budgetary and otherwise, in regard to different elements of the health programme.

1. BACKGROUND AND PURPOSE OF THE CASE STUDY

Mining companies can play a major positive role in sustainable development. Many global mining companies recognise their social responsibility to actively contribute to health and development of the societies in which they operate. Moreover, the business case for investing in this area is strong. Therefore, many large mining companies offer health services not only to their immediate employees but support wider public and community health.

Mining health partnerships, whether more or less formal, are a key vehicle for maximising health outcomes and strengthening national health systems, while improving company productivity and community relations at the same time. A key aspect of such partnership approaches to mining health programming is engagement and collaboration with the public sector, which, besides delivering services, has an essential stewardship role to play in setting the framework for mining health programmes both inside and outside the fence. Thus it is good practice for mining health programmes to align with national health policies and plans. Partnerships with development agencies, communities and wider civil society are also an important aspect of mining partnerships for health.

The Mining Health Initiative has been commissioned by HANSHEP (Harnessing non-state actors for better health of the poor) to build understanding and foster agreement on standards for mining industry partnerships which can work to strengthen health services for underserved populations. The Mining Health Initiative will lead to enhanced understanding of on-going mining health partnerships and a set of good practice guidelines for mining health programmes for wide dissemination and application. Throughout the process the initiative engaged closely with the International Council on Mining & Metals (ICMM).[1]

The Mining Health Initiative has conducted a number of case studies of health programmes run by mining companies in sub-Saharan Africa. The purpose of the case studies is to document the reach and impact that has been achieved through such projects and examine the best ways in which these programmes can overcome practical challenges and achieve maximum effectiveness both in terms of costs and efficacy. The case studies have both descriptive and analytical components.

[1] For more information see http://www.icmm.com

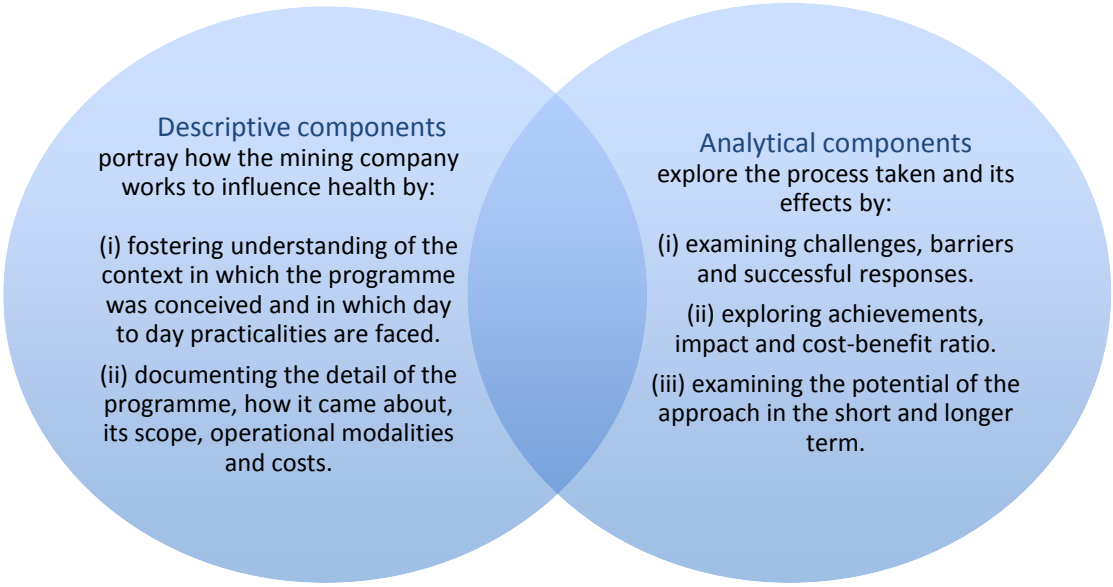

Figure 1. Objectives of the descriptive and analytical components of the case studies

There are a number of key audiences for the case studies with intended impacts:

- **The Mining Health Initiative and HANSHEP.** *Intended impact:* improved understanding of the scope, potential and most effective approaches for mining health partnerships; to inform future similar projects.
- **The donor community.** *Intended impact:* increased awareness of the potential for mining health partnerships as approaches to improving the health of hard to reach populations.
- **The mining sector.** *Intended impact*: increased awareness of the range of potential approaches and the opportunities for increasing impact and cost-effectiveness.
- **Other health sector organisations.** *Intended impact*: increased awareness of the opportunities for mining health partnerships and of how best such partnerships may work.

2. CASE STUDY METHODOLOGY

This case study was conducted by a team of two international public health experts. Following guidance by a senior Newmont staff member they focused on the company's second concession site in the Akyem region but also took into account Newmont's operations in the Ahafo region of Ghana.

The data collection and analysis process involved the following:

- Review of background documents
- Collection and review of health and health systems data at central, regional and district level
- Collection and review of company information relevant to employee as well as public and community health
- Interviews with 26 key informants, representing 13 organisations

- One focus group discussion with eight Newmont employees, including a staff union representative
- Two focus group discussions with 13 community members in total.

The present report was prepared jointly by the consultants after thorough discussion and analysis of the information and other inputs received.

A list of individuals interviewed can be found in Annexes A and B.

Constraints

The Department assigned by Newmont to host the case study in Akyem was highly supportive in accommodating the consultants and sharing documents throughout the mission. Nevertheless, the consultant team, despite making significant efforts, was not able to set up meetings with some key individuals both within and outside Newmont.

In addition, and partly related to IT system change issues, Newmont staff were unable to identify or share some key data, such as; statistics on consultations at the company clinic, trends in sick days, or other detailed data on the cost and benefits of medical services provided to employees at the Akyem mine.

3. CONTEXT ANALYSIS

3.1. Company profile

Newmont Mining Corporation is headquartered in Colorado, United States, and has significant assets or operations in Australia, Canada, Ghana, Indonesia, Mexico, New Zealand, Peru and the United States. Founded in 1921 and publicly traded since 1925, Newmont is one of the world's largest gold producers and has approximately 43,000 employees and contractors worldwide.[2] In addition to gold, the company also produces copper.

Besides being the location of its main African operations, Ghana is also Newmont's regional headquarters for Africa. Exploration projects in the region include projects in Benin, Ethiopia and Mozambique.

In Ghana, Newmont has two major assets: the Ahafo mine in the Brong-Ahafo Region of Western Ghana, which started commercial production of gold in 2010; and its Akyem mine in Ghana's Eastern Region which is still in the construction phase and projected to start production in early 2014. The company's Ahafo operation and Akyem project in Ghana comprise about 20 per cent of Newmont's core assets worldwide.[3] In Ghana overall, Newmont has approximately 2,500 direct employees and 4,500 contractors.

Newmont's Akyem project is managed by Newmont Golden Ridge Limited (NGRL), the Newmont Mining Corporation subsidiary managing the Akyem mine. The project is located in New Birim District of Eastern Province. It is situated three kilometres west of the district capital New Abirem, 133 kilometres west of the regional capital Koforidua, and 180 kilometres northwest of the national capital Accra.[4] The map below shows where Newmont's Ahafo and Akyem mines are located in Ghana.[5]

[2] See corporate website http://www.newmont.com/about

[3] Newmont Mining Corporation (2011); Newmont Mining Corporation website

[4] Akyem Gold Mining Project (2008)

[5] Kapstein, E. and Kim, R. (2011)

Figure 2: Newmont mines in Ghana

Source: Kapstein, E. and Kim, R. (2011)

The table below shows the composition of NGRL's workforce on 30 September 2012. As can be seen from the table, approximately half of Newmont staff and contractors in Akyem are locals from the immediate communities around the site (local-local), while another 40 – 50 per cent are Ghanaian nationals. Despite these relatively high employment rates of individuals from project-affected communities, pressure to hire more local-local labour is one of the main issues Newmont is currently facing.

Table 1: Composition of the Akyem Workforce

TYPE (GEOGRAPHIC)	EMPLOYEES	CONTRACTORS
Local-Local	311 (56%)	1,653 (43%)
Ghanaian	213 (39%)	1891 (50%)
Expat	30 (5%)	260 (7%)
TOTAL	**554 (100%)**	**3,804 (100%)**

Newmont is the only gold company in the S&P 500 Index and Fortune 500. In 2007, Newmont became the first gold company selected to be part of the Dow Jones Sustainability World Index. Newmont believes that it demonstrates its commitment to sustainability through "high standards in environmental management, health and safety" for employees and by "creating value and opportunity for host communities and shareholders"[6]. Newmont's workplace HIV/Aids and malaria programme in Ahafo received a Workplace award by the Global Business Council on Health for its comprehensive coverage. It has often been cited as a high-impact programme[7].

3.1. Country information

Formed from the merger of the British colony of the Gold Coast and the Togoland trust territory, in 1957, Ghana became the first country in Sub-Saharan Africa to gain independence. Ghana endured a long series of coups before Lt. Jerry Rawlings took power in 1981 and banned political parties. After approving a new constitution and restoring multiparty politics in 1992, Rawlings won presidential elections in 1992 and 1996 but was constitutionally prevented from running for a third term in 2000. John Kufuor succeeded him and was re-elected in 2004. John Atta Mills took over as head of state in early 2009.[8] Ghana's current president is John Mahama, who took over the presidency on 24 July 2012 following the death of John Mills and was elected to office in December 2012.

Ghana's population is approximately 25 million, with a median age of 21.7. With an urbanisation rate of 3.4 per cent per annum, just over 50 per cent of people now live in urban areas. Life expectancy at birth is 61.45 years and is somewhat higher for women (62.7 years) than for men (62.2 years).[9]

In recent decades Ghana's economy has benefited from relatively sound management, a competitive business environment and sustained reductions in poverty levels. The country is well endowed with natural resources. Oil production at Ghana's offshore Jubilee field began in 2010, and is expected to boost economic growth. Gold and cocoa production and individual remittances are major sources of foreign exchange. Agriculture accounts for one quarter of GDP and employs more than half of the workforce as mainly small landholders. Good macroeconomic management, along with high prices for gold and cocoa, helped sustain GDP growth in recent years.[10] The mining sector contributed 6.3 per cent to Ghana's Gross Domestic Product and 43 per cent of the country's exports in 2009.[11]

Ghanaian labour law stipulates that companies must "provide for health needs" of their employees but does not specify whether this pertains to occupational health only, or to health more generally.

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[6] Newmont Mining Corporation website http://www.newmont.com/about

[7] See Annex C for more detail.

[8] CIA World Factbook on Ghana https://www.cia.gov/library/publications/the-world-factbook/geos/gh.html

[9] Ibid

[10] Ibid

[11] Kapstein, E. and Kim, R. (2011).

A government policy on health and safety that was shelved after having been drafted several years previously is now being submitted to parliament, with a new law being expected to emanate from this in the foreseeable future.[12]

Progress towards achieving the Millennium Development Goals (MDGs) in Ghana is mixed. MDG 1 (poverty and hunger) and 2 (education) have seen significant progress and Ghana is likely to attain them by 2015. Goal 6 (HIV/Aids and malaria) is potentially achievable; goals 3 (gender equality) and 7 (environmental sustainability) are likely to be partially achieved. Goals 4 (child health) and 5 (maternal health), on the other hand, are unlikely to be achieved despite showing marginal improvements.[13] Ghana ranks 135th out of 187 countries in the Human Development Index, just behind India, and is thus classified as a country of medium human development.[14]

Birim North District

In Birim North, the district in which Newmont's Akyem project is located, the population totals about 150,000.[15] Farming, i.e. the cultivation of cash crops such as cocoa, cola nuts, oil palm, citrus and rice, is the predominant economic activity. In addition, there are a few small-scale saw milling installations processing wood for the furniture and construction industries.[16] Newmont is the largest business operating in the district. A number of small-scale illegal gold mining operations have also emerged and recently been gaining increased media attention, partly due to their lack of health, safety and environmental standards, causing negative health impacts for mine workers and communities alike.

3.2. Health

Health status

On a national level, Ghana's under five mortality rate is 80[17] with a maternal mortality rate of 451[18] per 100,000 live births. HIV prevalence among antenatal women is 2.9 per cent. Malaria is the most common cause of morbidity and mortality. Other important causes of death across all age groups include HIV/Aids-related conditions and anaemia.[19]

Partly due to the population influx related to Newmont's operation in the district, Birim North is facing considerable challenges in regard to water, hygiene and sanitation. Reliable district-specific

[12] Interview with Ministry of Health Representative on 15 October 2012.

[13] UNDP Ghana website http://www.undp-gha.org/mainpages.php?page=MDG%20Progress

[14] See Human Development Report Website http://hdrstats.undp.org/en/countries/profiles/gha.html

[15] Newfields (2007).

[16] Kintampo Health Research Centre (2012)

[17] Ghana Health Service (2011).

[18] See Unicef http://www.unicef.org/wcaro/Countries_1743.html

[19] Ghana Health Service (2011)

health data is difficult to come by. A recent assessment found that 75 per cent of women in the district deliver in a health facility under supervision (i.e. a hospital or maternity home).[20]

Health System

The Ministry of Health is responsible for policy setting and resource management. The Ghana Health Service (GHS), largely responsible for implementation of health services, is composed of three administrative (national, regional, district) and five functional levels (adding sub-district and community). Each of the country's 110 districts is headed by a district director, supported by a district health management team (DHMT).[21] The DHMT is responsible for monitoring and supervising all health facilities in the district, including private health facilities such as the Newmont company clinic run by International SOS (I-SOS).

Birim North District has 15 health facilities, including one district hospital (New Abirim Government Hospital), 12 lower level health facilities known as Community-based Health Planning and Services (CHPS), one private not-for profit (mission) health centre as well as the Newmont I-SOS clinic located inside the fence of the mining area. Three reproductive and child health units are attached to CHPS facilities.

In 2009, New Abirim Government Hospital (NAGH) was upgraded from a health centre when Newmont supported the facility by building infrastructure and facilitating the provision of equipment.

A National Health Insurance Scheme (NHIS)[22] has been in place since 2003 when it was introduced as an alternative financing model to the "Cash and Carry System" that prevailed until that point. The NHIS aims to ensure universal access to quality healthcare, provide financial protection and improve health outcomes. The scheme covers direct costs of health services and medicines for most common diseases in Ghana. It is financed from a range of revenue sources, notably value-added tax (VAT) revenue, payroll deductions from formal sector workers and premium contributions from informal sector workers.

Data suggests that close to 50 per cent of the population was covered by the scheme by 2009. However, the National Health Insurance Authority recently changed its methodology for calculating 'active' members and estimated in its 2010 annual report that only about 34 per cent of the population was actively enrolled at the end of 2010.[23]

Individuals who are not exempt must pay an annual insurance premium in addition to a one-off registration fee. The official National Health Insurance Authority guidelines call for a range of premiums to be charged according to a person's income or wealth, ranging from 7.2 GhC (Ghanaian

[20] Kintampo Health Research Centre (2012)

[21] GHS website http://www.ghanahealthservice.org/aboutus.php?inf=Organisational Structure

[22] See NHIS website http://www.nhis.gov.gh for more information

[23] Blanchet et al. (2012).

Cedi) for the "very poor" to 48 GhC for the "very rich".[24] However, given that accurate income measures are not generally available there is a tendency to charge a constant premium to all, typically around GhC 8 to 10.[25]

A recent study found that individuals enrolled in the scheme are significantly more likely to obtain prescriptions, visit clinics and seek formal healthcare when sick. This suggests that the government's objective to increase access to formal healthcare through health insurance has at least partially been achieved.[26]

[24] 1 US$ equals approximately 2 GhC. In other words, premiums range between close to 4 and 24 US$.

[25] Blanchet et al. (2012).

[26] Ibid

4. PROGRAMME CHARACTERISTICS

Newmont Golden Ridge Limited's health 'programme' consists of the company's efforts to ensure health and safety for its employees and contractors; of a community health programme currently managed as part of NGRL's influx programme; as well as a small employee well-being programme.

The community health programme is currently part of a designated programme to manage and mitigate the mine-induced impact of population influx into the Akyem region, the 'influx management plan' or IMP. A separate community development programme currently does not include health but will take over certain parts of the influx programme as the latter is going to end in 2013, around the time the mine is getting ready to start production.

4.1. Conception process

The employee well-being and community health programme at Akyem emanated from lessons learned at the Ahafo mine as well as several health impact assessments conducted in Akyem to inform the influx and community development programmes targeted at project-affected communities (PACs)[27] of mining. These were led by the University of Colorado in 2006 and Newfields, and environmental consulting firm, in 2007.[28] The latter study built on the earlier work of the University of Colorado and baseline data collected by Newmont as early as 2004 in the PACs who were consulted to assess probable impacts of the Akyem mine project.

Despite the early assessment work conducted in Akyem, the Ahafo mine project advanced before Akyem did, mostly due to delays in the permitting procedure for the Akyem mine. Therefore, Akyem's development was put on hold. By consequence, in addition to the generous lead time from 2004 onwards for Newmont to have been present and assessing the mine-affected area, Akyem also benefitted from the experiences gained in the implementation of Ahafo's health programmes. NGRL was able to develop a health approach for the PACs over approximately six years – with programme implementation not beginning until 2010.

4.2. Description of the health programme

Inside the fence

Inside the fence, **medical care is provided by I-SOS**, a global private healthcare provider. Through the I-SOS-run facility located at the construction camp, Newmont provides paid-for medical care to all direct employees. The I-SOS facility has recently been upgraded from a smaller facility that existed on the exploration camp site. When fully operational, the new facility will have a team of ten staff (including several national and international doctors as well as technicians) and provide a complement of services including occupational health services, first aid and stabilisation facilities, laboratory and x-ray services.

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[27] Officially, there are eight project-affected communities or PACs, including Afosu, New Abirem, Mamanso, Old Abirem, Yaayaaso, Adausena, Hweakwae, Ntronang, as well as a collection of smaller hamlets which do not constitute villages from within the mine lease area, which have been resettled. According to the Akyem Influx Management Plan, the population of the PACs, excluding inmigration, in 2012 was estimated at 23,832.

[28] See Newfield's website at http://www.newfields.com/ for more information

Between Newmont and its employees, health care provision is negotiated through two **collective agreements** with the junior and senior staff unions. These unions do not include expatriate staff.

In addition to direct Newmont employees, Lycopodium,[29] the **main contractor** overseeing the construction of the mine, also has an agreement with Newmont allowing their employees to access the I-SOS facility. For all other contractors, visits to the I-SOS facility are limited to those related to at-work illness or injury. However, there has been some slippage in terms of contractors visiting I-SOS for non-work related illnesses. As a result, Newmont is considering instituting a policy of back-charging contractors for this service, as all Newmont contractor contracts include a lump sum payment for contractor companies to cover health care for their employees.

NGRL contracts with contractor companies stipulate that the latter take responsibility for medical screening, medical evacuation, as well as services not related to occupational health, etc. Following the recent death of a contractor employee whose medical records had been inadequate NGRL has reaffirmed a request to contractors for submitting screening information.

Newmont provides international **medical evacuation** (medivac) for expatriates through their contract with I-SOS, The new I-SOS clinic is equipped to stabilise cases before evacuation by road or by air. I-SOS medivac facilities are located in France or South Africa. There is an onsite Newmont Emergency Response Team (ERT), equipped with an ambulance, who liaises directly with the paramedic working at the I-SOS facility.

Ghanaian Newmont employees are also entitled to health coverage for one spouse and up to five registered **dependents**, who are eligible to present at one of 11 health facilities in Ghana which are audited and recognised by I-SOS. These include four facilities in the immediate vicinity of the Akyem project, all of which are hospitals.[30] As most public health services are free at the point of access under the National Health Insurance Scheme, Newmont covers those services that are additional and not covered by the Scheme.

Outside of the medical care provided to employees and contractors, the company's **employee well-being** programming at Akyem has been piecemeal owing to the lack of designated budget for activities and clear departmental responsibility for the programme – though the programme does exist in Ahafo. Due to budget constraints, and a lack of ownership or prioritisation of employee wellness by Human Resources, as well as health-related departments, the employee well-being programme at Akyem is limited to condom distribution at on-site washrooms. Employee awareness campaign inputs are funded by Communications; and a one-off health screening conducted in Akyem in 2011 was covered by the Strategic Alliance partnership that Newmont has with GIZ (Gesellschaft für Internationale Zusammenarbeit) in Ahafo.

As part of **vector control** efforts, Newmont also provides three long-lasting insecticide-treated nets (LLINs) per year per employee as well as two cans of mosquito repellent per month to all direct employees. The exploration and construction camps as well as Newmont staff quarters (not private

[29] See the company's website http://www.lycopodium.com.au for more information

[30] Including New Abirem Government Hospital in Birem North (public), Holy Family Hospital in Nkawkaw (private non-profit), Kawhu Government Hospital in Atibie (public), and the Komfo Anyoke Teaching Hospital in Kumasi (public).

homes) are fogged and Indoor Residual Spraying (IRS) is conducted in these same locations on a regular basis.

New employee orientation and **annual health and safety refresher trainings**, obligatory for all Newmont employees, include awareness sessions on malaria and HIV. There are plans to include Hepatitis B and, for female employees, cervical cancer training, as well. This expansion of the health education package is based on lessons learned and good practice in Ahafo.[31] Moreover, one-off health awareness raising activities take place on certain days, such as those marking HIV, TB, malaria, etc.

Outside the fence

The key document guiding the early approach and design for Newmont's community health programme is the **Influx Management Plan** 2010 – 2012/2013[32] or IMP as referenced above. Building on previous years' experience, lessons learned from Ahafo, community consultations as well as health assessments conducted in Akyem, the IMP is designed to mitigate the impact of the Akyem mine at the outset, and provide the necessary foundations for Newmont to transition to development programming in the community once the mine comes online in 2013. Thematically, the IMP covers community needs pertaining to water, sanitation, health (including infrastructure), safety and security, and is compliant with the IFC's Performance Standards on Environmental and Social Sustainability.[33]

The IMP **activities are planned on a yearly basis with implementing partners and stakeholders**, including the local implementing NGO Organization For Livelihood Enhancement Services (OLIVES), the DHMT, and the District Assembly (DA). There is a reduced budget and workplan for 2013 to wind down influx mitigation activities, bringing the total forecast expenditure for the four years of the IMP to approximately US$ 5.19m.

Implementation of the IMP is overseen by the Community Development Department at Newmont Akyem (see Figures 2 and 3 below for an overview of the organisational structure). Currently, all community health activities undertaken by the IMP are **implemented by a local NGO, OLIVES**. The company's contract with OLIVES is renewed on an annual basis, and it is not clear that the community health segment of the IMP in 2013 will be implemented by OLIVES as in previous years.

All community health programme activities fall under the IMP and they are exclusively targeted at PACs. Since 2010, activities under the 'health' category of the IMP have focused largely on **infrastructure investments** at the local health centre, which has been upgraded to hospital as a result of Newmont's inputs as mentioned above. Complementing infrastructure, community

[31] Interview with Akyem Human Resources on 17 October 2012

[32] The IMP was originally developed to cover the period 2010 – 2012 but was later extended to 2013 due to delays in the beginning of implementation

[33] Specifically, the IMP addressees PS 1 and 2, which deal with minimising project-related impacts on workers and affected communities, as well as reducing influx-related threats to local community health and safety. See International Finance Corporation (2012) for details.

awareness programming on malaria and hygiene as well as bednet distribution have been implemented consistently by OLIVES.

Importantly, health also extends to other thematic areas of the IMP workplan, including **HIV and Aids, water and sanitation**. This can be seen in the following table:

Table 2: IMP Activities by Thematic Area, 2010 – 2013

Thematic Area	Activities
Health	Construction of staff quarters; maternity, male and female wards; upgrade of a clinic Provision of generators to local hospital Community awareness on hygiene and malaria prevention Distribution of LLINs
HIV and Aids	Teen HIV education centres Condom use/VCT promotion PLWHA support BCC/peer educators
Water	Drilling boreholes Training of water and sanitation committees Training on hand-pump maintenance Expansion of water supply systems in PACs
Sanitation	Promotion of household latrines Development of waste removal program Public/School/Food vendor hygiene education Construction of public latrines

As the workplan has been re-negotiated every year for the duration of the IMP, there has been some year-on-year variation in activities. When incorporating these thematic areas under the broad category of community health programming, 90 per cent of the IMP budget was dedicated to health or public health activities[34] – the vast majority being spent on infrastructure related to the upgrade of the New Abirem Government Hospital.

Additional activities which are not part of the IMP workplan, are also underway. This includes an agreement with seven other parties related to the provision of medical care and equipment to the New Abirem Government Hospital by the Willamette Valley Medical Center in Oregon, USA. The end goal of this agreement is to create a partnership between the two facilities, and Newmont has committed to providing the logistical support for this programme, including water, sanitation and electrical inputs for the clinics when there are visiting medical teams, and to facilitate the transport of medical equipment and supplies from Oregon to Ghana. Newmont has also committed, in partnership with the DA, to developing and supporting a waste removal system and landfill site for the PACs to ensure proper disposal of community waste.

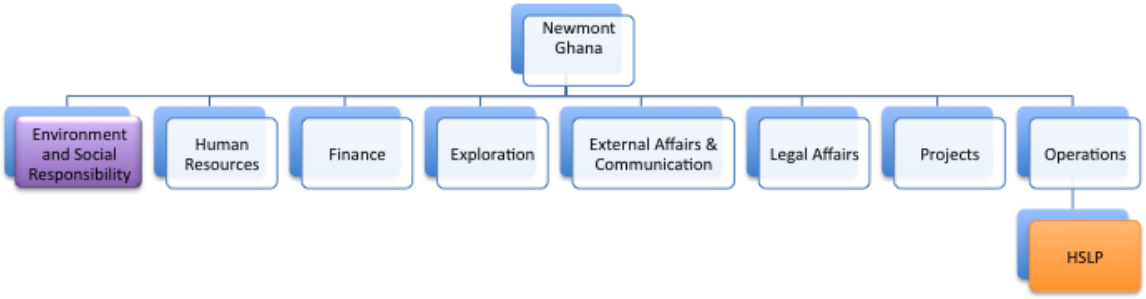
4.3. Programme management structure

Below is an outline of Newmont Ghana's overall organisational structure. The two departments most relevant to the company's health programme, namely Environment and Social Responsibility (ESR) and HLSP, are marked in purple and orange respectively. Newmont Ghana's organisational structure

[34] See section 6 on Programme Costs

is decentralised to each mining site, with the Accra-based Regional Vice Presidents responsible for Ghana as well as other actual or potential Newmont projects in sub-Saharan Africa[35].

Figure 3: Newmont Ghana Organisational Structure

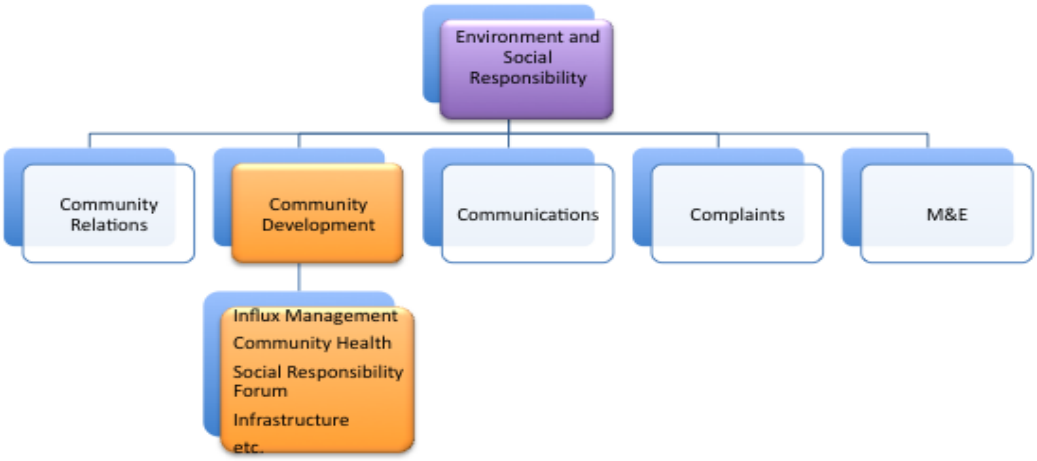


The Health, Safety and Loss Prevention (HSLP) department oversees employee health on-site, including the management of the I-SOS clinic facility, the ERT, and management of contractors with regard to compliance on health and safety. HSLP also conduct regular refresher trainings on safety in the workplace, and there are monthly thematic workshops on health-related issues for all staff and contractors, including malaria prevention as well as STI prevention and awareness.

The chart below is an indication of the organisational structure of the ESR department at Akyem, i.e. of those units responsible for implementing the external part of the health programme. It can be seen that responsibilities for influx management, community health, the social responsibility forum and health infrastructure all lie with the Community Development Department.

[35] The organisational charts provided here were developed by the consultant team (following interviews with Newmont staff) and make no claim of being complete or correct.

Figure 4: ESR Structure at Newmont Akyem



Condom distribution is currently being paid for by the Community Development department, which is where the budget and oversight for the employee well-being programme sit, due to historical reasons going back to the organisational structure at Ahafo. Discussions are ongoing about where and how the programme should be located in Akyem.

The organisational structure is currently in a state of flux. Further changes are expected with the transition from the IMP to development programming in 2013-14.

4.4. Outlook

The IMP expires in 2013, and the mitigation component of community development will close. In place of mitigation will be development, drawing on lessons learned from the Newmont Ahafo Development Foundation (NADeF).[36] Autonomous from Newmont, but financed by revenues from Newmont's gold sales from Akyem, the Foundation will contribute US$ 1 per ounce of gold sold, and, in addition, 1 per cent of annual net profits from the mine. NADeF has accrued over US$ 7.4m through this financing mechanism during the past three years.

Following the format of the NADeF, the Fund will be established in 2014 and finance community-proposed development projects in the PACs, with allocations for each community. A Sustainable Development Committee in each village will oversee the design and proposal of community projects. An endowment fund will also be established, allowing the community to withdraw from the fund to finance community projects, but restrict access to the capital investment, ensuring longevity of this investment past the life of the mine.

[36] http://www.nadef.org

An Akyem Social Responsibility Forum, currently meeting to resolve issues related to local employment and Newmont's Social Responsibility Agreement with the community, will provide the basis of cooperation and management of the Akyem Foundation. The existence of this fund will not preclude further Newmont community investments, including those in health, but serve to complement these with community-led activities.

Given current efforts by Newmont to cut costs, including through decreases in budgets for ESR in Akyem, it is uncertain which Newmont community health projects will go ahead past the IMP.

5. PARTNERSHIPS

Recognising the value of partnerships for programme implementation and sustainability, Newmont has a number of short- and medium-term partnership agreements, both multi- and bilateral. This is true particularly at the mine level, i.e. for its Akyem mine.

At the central level, Newmont responds to invitations and calls for meetings by relevant line ministries, such as the Ministry of Health. However, there is no regular engagement and no formalised partnership agreement beyond those contracts and agreements that respond to legal and regulatory requirements.

It is worth noting that Newmont in Ghana has been mentioned by both government partners and communities as taking a pro-active approach to partnering and engagement, including with the health sector.[37]

The company's partnerships are described and their history and governance structures explained briefly below. The majority of partnerships that are directly relevant to health programming are based on multi-stakeholder rather than bilateral agreements.

5.1. Multi-stakeholder partnerships

Tripartite Approach

The 'Tripartite approach' is used both for the IMP and other community development projects. It is an 'approach' rather than a formalised agreement in the stricter sense of the term. The approach involves direct collaboration by Newmont with the District Assembly and communities on specific activities. While Newmont typically provides material support to the partnership, the District Assembly brings in technical assistance, and communities contribute labour. Where communities are not able to mobilise adequate labour at the time requested they are asked to contribute a costed monetary equivalent of the required labour. The Tripartite approach is seen as an important vehicle for ownership and sustainability by communities and local authorities.

In terms of governance, mechanisms applied depend on the project in question. Projects may range from building latrines in the community to refurbishing local health centres. Depending on the type

[37] Newmont also manages relations with various authorities and regulatory bodies responsible for environmental and social affairs, such as the Environmental Protection Agency at central level. These were not covered in any detail by the assessment.

of collaboration there may be weekly meetings in addition to ad-hoc meetings that take place as required, for example when an urgent issue arises.[38] NGRL's Influx Coordinator tracks progress.

Partnership to support New Abirem Government Hospital

In 2011, NGRL signed an MOU to strengthen health service provision at NAGH, the only hospital in the district. Newmont's role is to provide a generator, borehole, water pump, electric transformer and overhead tank, and to pay for shipment of equipment and medical supplies from the United States to Akyem.

Together with Newmont, the following institutions are also party to this agreement, which covers the 2011 to 2015 period:

- Willamette Valley Medical Centre – provision of equipment, medical supplies and technical support
- New Abirem Government Hospital – maintain, manage and monitor use of the donated equipment and "organize resources" to enable the provision of clinical services
- Ghana Hope Foundation – coordinate and facilitate transport and logistics
- Ntiamoah Foundation Limited – mobilise resources and provide accommodation and ground transport to medical teams from abroad
- Birim North District Assembly – coordinate consultation and facilitate provision of human resources to NAGH
- Abirem Traditional Authority – mobilise communities to support the services
- District Health Directorate – the role of the Health Directorate is not specified in the MOU.

Akyem Social Responsibility Agreement

In July 2012 NGRL signed the 'Akyem Social Responsibility Agreement' with the Birim North District Assembly as well as "the Chiefs and People of the Akyem Mine Local Community".[39] The agreement is termed up to the end of the construction phase in 2013, and subject to review thereafter. As part of the agreement NGRL commits to:

- sustainable economic and social development of the "community and its environs",
- consultation on issues of mutual interest,
- information sharing, and
- conflict resolution through discussion and negotiation "based on tolerance and patience".

A Social Responsibility Forum (SRF) is the main governance and implementation mechanism for this agreement. In 2011 there were 57 members, in 2012 there are 68. The standing committee meets at least twice a year. The Forum includes the following members:

[38] For example, during the consultant team's visit Newmont called the District Assembly officer for environmental protection to an urgent visit to a community where inappropriate waste dumping was discovered that was deemed to negatively affect health in several communities.

[39] Newmont Golden Ridge Limited (2012).

- Appointed external moderator
- NGRL: ESR manager and community development manager
- Government: Local member of parliament; District Chief Executive and District Coordinating Director of District Assembly
- Communities: Local chiefs and traditional leaders; representatives of women's groups, youth groups, etc.

The Social Responsibility Agreement was signed following community demonstrations regarding employment of local community members. Therefore, along with the Social Responsibility Agreement, a second agreement signed between NGRL, the Akyem mine local community and the Birim North District Assembly covers questions of local employment. According to this agreement, Newmont must source 100 per cent of unskilled labour from the local community. As for skilled labour, applicants with comparable qualifications and experience who are "validated community citizens" shall be given preference. Overall, the target for 'local-local' employment is 35 per cent, with a goal of achieving 50 per cent within ten years of commencement of gold production.

5.2. Bilateral partnerships

District Health Management Team

The main part of NGRL's partnership with the DHMT is covered by the above-mentioned agreement to support the district hospital.

The DHMT has supervisory responsibility for all health facilities in the district, including NGRL's company clinic run by I-SOS. Mutual responsibilities include supervision and data sharing. Nevertheless, no supervision visit of the I-SOS facility appears to have taken place so far. Moreover, while the DHMT does receive data regarding consultations at the company clinic (and has pointed to a new online system which permits real time access to data), within both Newmont and I-SOS there appears to be uncertainty about who in the company actually shares this data, and at what level the data get shared.

At the time of the consultants' visit, the DHMT was working on a new proposal to Newmont to request support for several health facilities.

Birim North District Assembly

The Birim North District Assembly is the government's representation in the district. Together with several dozen technicians responsible for planning, budget, administration, personnel, engineering, water, sanitation, education and health, there are also 38 elected members. These, together with the district MP and the DA's Chief Executive, who is appointed by the President of Ghana, vote on key decisions, such as those concerning budget.

Newmont is in regular contact with the DA as part of its Tripartite approach mentioned above. Specific agreements cover certain parts of this collaboration: for example, a three-year MOU between NGRL, the DA and a private contractor, ZoomLion, regulates Newmont's support to waste management under an expanded sanitation programme in the communities. Vector control for malaria is another area in which Newmont collaborates with the DA, for example, when identifying and taking action against mosquito breeding areas.

5.3. Sub-contractors

Newmont has two main sub-contractors in regard to community and employee health around the Akyem mine, namely OLIVES and I-SOS.

OLIVES

OLIVES is the only NGO currently operational in the area around Newmont's Akyem mine. It has 32 staff, half of whom are technical. OLIVES also has a smaller office in Ghana's Western region, with five additional staff.[40]

OLIVES has been contracted by NGRL to implement Newmont's influx management and community development activities since February 2009. In health, these include health education, distribution of bed nets, training of peer educators and hygiene training.

The NGO was set up specifically to serve Newmont. It is a spin-off of OICI (Opportunities for Industrialization Centers International),[41] a US-based NGO that used to work with Newmont both in the Akyem and Ahafo regions. Contract negotiations and planning are done on a bilateral basis without significant involvement by the DHMT or other stakeholders.

OLIVES in Akyem currently receives funding exclusively from Newmont. Contracts are awarded on a year-by-year basis. Governance mechanisms include weekly, monthly and annual reports to NGRL as well as weekly activity plans to provide an opportunity for Newmont representatives to join and monitor the activities conducted. In addition, meetings are held as necessary on an ad-hoc basis. OLIVES submits monthly invoices to Newmont.

International SOS

I-SOS is a global health service provider specialised in operating company clinics and assisting companies in medical evacuations. I-SOS is rapidly expanding around Ghana and besides serving Newmont's Ahafo mine also runs a number of other (mining) company clinics around the country.

Newmont's contracts with I-SOS are negotiated individually by each project site, such as the Akyem mine. At Akyem, the I-SOS staff liaise directly with the NGRL's HSLP Department which manages employee and contractor occupational health and safety. NGRL's current contract with I-SOS is for three years, but can be re-visited if either party feels that the conditions surrounding the contract have changed. I-SOS feels that, given the expanding range of services provided, contract negotiations may be required before term.

5.4. Future partnerships

Newmont is currently planning to establish a Foundation and an MOU has already been signed to this effect. While Newmont will have a seat on the Foundation's board, the Foundation will be run by a committee composed of community members.

[40] See OLIVES' website http://olivesgh.org/

[41] See OICI's website http://www.oici.org/

Potential NGRL partnerships in regard to health include a partnership with Shell. Shell supports major corporate customers with relatively small levels of support (in the area of US$ 20,000 per annum). The partnership with NGRL is likely to focus on road safety.

GIZ, an existing partner in the Ahafo mine where it co-funds Newmont's employee health and wellbeing programme, has expressed interest in entering into a similar strategic alliance with NGRL.

6. PROGRAMME COSTS

6.1. Inside the fence services

Beneficiaries

According to the contract between NGRL and I-SOS, Newmont covers all operating and overhead costs related to the medical service. Currently, NGRL employs 554 staff (524 of whom are Ghanaian) and related contractors employ roughly 3,804 additional staff. It is estimated that, on average, Newmont employees have three registered dependents eligible to attend the affiliated hospitals in the area, but not at the I-SOS clinic at the construction site.

These figures would indicate that Newmont medical coverage under their I-SOS contract extends to 2,096 Ghanaian employees and dependants; approximately 30 expatriates; and on-site, occupational-health related medical care for 3,804 contractors. Newmont also provides for other medical coverage for contractors by earmarking about one per cent of contracts for health. In total, the Newmont Akyem project provides healthcare for approximately 5,930 direct beneficiaries. These numbers are summarised in the table below.

Table 3: Beneficiary Numbers by Category

BENEFICIARY CATEGORY	NUMBER
Newmont Staff	554
of which Ghanaian	(524)
of which Expatriate	(30)
Contractors	3,804
Eligible for I-SOS clinic on-site (staff and contractors)	**4,358**
Newmont Staff dependents (on average 3 per Ghanaian staff)[42]	1,572
TOTAL direct beneficiaries of healthcare covered by Newmont (staff, dependents and contractors)	**5,930**

Staff at the I-SOS clinic at the construction site see approximately 15-20 patients per day, a number that is expected to increase once the new facility is fully staffed. This is in addition to those Newmont employees and dependents seen at the registered hospital facilities off-site.

[42] The Akyem mine is a no-family duty station and hence expatriates' dependents are not included

Total cost

Newmont's Akyem health programme includes the following cost centres:

Table 4: Recurrent Health Costs Inside the Fence

ITEM	SOURCE	COST in US$ per annum
I-SOS facility on-site	HSLP	
Management contract (including staff, drugs and medical supplies, etc.)		1,370,000
ERT (including staff and ambulance)	HSLP	300,000
Vector control (LLINs, mosquito repellent, IRS)	HSLP	120,000
Employee well-being (condoms)	Comm Dev	1,600
Dependents' health expenses	HSLP	350,000
Medivac	HSLP	50,000
Total inside the fence recurrent health costs per annum		**2,191,600**

Total costs per annum amount to almost **US$ 2.2 million**. In addition, NGRL invested **US$ 700,000** in building and infrastructure and **US$ 350,000** in equipment on a one-off basis**.**

Besides the management contract, which amounts to almost US$ 1.4 million per annum, other important recurrent cost centres are ERT and health expenses for dependants' totalling US$ 300,000 and US$ 350,000 respectively. Costs for vector control amount to US$ 120,000 and medivac totals about US$ 50,000.

Condoms are available for employees in the staff washrooms at the exploration and construction camps. They are procured using the Community Development budget at a cost of GHC 1,000 per box of 7,200 condoms. The site goes through an estimated 3.3 boxes of condoms annually, at a cost of GHC 3,333 (US$ 1,725).

Cost per beneficiary

Based on the number of beneficiaries, cost per person per annum using the I-SOS on-site clinic service is approximately **US$ 314.**[43] Total recurrent health costs per beneficiary, including dependants as outlined in Table 3 above, are **US$ 370.** Without dependants, annual cost per beneficiary (staff and contractors) amount to **US$ 423**[44]**.**

[43] This figure is calculated by dividing the total cost of the I-SOS service by 4,358, the number of eligible beneficiaries.

[44] This figure is calculated by subtracting dependents' health expenses from total recurrent health costs and dividing the result by the total of eligible staff and contractors.

Based on the current rate of consultations, the on-site clinic provides for between 4,695 and 6,260 consultations per year or a staff/contractor utilisation rate of between 1.08 and 1.44.[45] Based on the total annual contract value of the I-SOS agreement, and including operational and overhead costs, one I-SOS consultation costs Newmont between **US$ 208 and US$ 276**. Note that this unit cost does not include those consultations reimbursed at I-SOS-affiliated health facilities in the area for beneficiaries and staff consultations outside of working hours.

6.2. Outside the fence services

Beneficiaries

Based on the IMP, the entire PAC population in 2010 was estimated at 22,266; in 2011 at 23,036; in 2012 at 23,832; in 2013 it is projected at 24,657.

Total costs

Newmont budgeted US$ 5 million for its influx management programme, with the District Assembly and community contributions amounting to 175,000 and 10,000 respectively. This is shown in the table below.[46] These updated figures represent a global increase in the budget of 64 per cent, from what was initially envisioned in the draft IMP. Newmont's contribution to the IMP activities has also risen from US$ 2.7million to US$ 5.0million.[47]

Table 5: Influx Management Budget 2010 – 2013

SECTOR	TOTAL US$	NGRL	DA	Community
Health	1,534,000	1,529,000	5,000	0
HIV/Aids	438,000	438,000	0	0
Water	1,810,000	1,740,000	70,000	0
Sanitation	873,000	763,000	100,000	10,000
Security	530,000	530,000	0	0
TOTAL	**5,185,000**	**5,000,000**	**175,000**	**10,000**

Source: NGRL Influx Management Plan 2010 - 2012

The local NGO OLIVES has been responsible for implementing the community health and awareness aspects of the IMP since its inception. In 2011 and 2012, OLIVES budgeted US$ 319,394 and US$ 334,335 respectively to implement the community development portions of the IMP, which largely

[45] Utilisation rate is calculated based on the number of outpatient consultations per person per annum, using the number of consultations per year divided by the total population served. In the case of the on-site I-SOS clinic, there are currently 15 – 20 consultations per day. Over one year, there are 365 days over 52 weeks, but we do not include Sundays in the total number of consultations over one year, as the clinic is closed except for emergencies. As such, there will be 313 (365 – 52) days with 15 – 20 consultations, or between 4,695 and 6,260 consultations per year. Based on current HR figures, there are 4,358 staff and contractors currently eligible to access the I-SOS clinic. Given the range of current consultations, the utilisation rate of the clinic is between 1.08 and 1.44, or between 108 and 144 consultations per 100 staff/contractors per year.

[46] The figures provided are revised forecasts

[47] Comparison taken from the Newmont Golden Ridge Limited Draft Influx Management Plan Akyem Project 2010 – 2012.

concern community sensitisation and awareness trainings for the five thematic areas of the IMP (health, HIV/Aids, water, sanitation and security). According to the IMP workplan for 2010, US$ 317,000 was earmarked for OLIVES-led community development activities. In 2011, for instance, OLIVES spent US$ 194,756 on the health-related segments of the IMP, including water and sanitation.

As part of the IMP budget, Newmont has also earmarked funds for an expanded sanitation programme, in a Tripartite agreement with the PACs and the DA. This three year MOU covers those activities listed in Table 6 below.

Table 6: Sanitation Programme Cost Summary

DESCRIPTION	COST in US$
Evacuation of existing landfill sites	100,000
Regular removal of trash from PACs, including large refuse bins from ZoomLion	50,000
Development of new landfill site	400,000
TOTAL COST	**550,000**

Source: NGRL Influx Management Plan 2010 - 2012

Moreover, Newmont also has commitments to the agreement with the Willamette Valley Medical Center programme bringing specialised medical care and equipment to NAGH in the form of logistics and transportation. Under this agreement, cost of logistics (generator, borehole, etc.) was covered by the influx budget. Figures were not disaggregated for these activities.

An annual breakdown of known costs shows that the four year IMP costs Newmont an average of US$ 1,250,000 per annum. The sanitation programme, envisioned across three years, will average 183,333 US$ per annum.

Costs per beneficiary

When the IMP closes in 2013, the IMP forecasted population for the PACs is estimated to be 24,657. Based on these total population figures, the IMP as a whole, after four years of implementation, will have cost Newmont approximately US$ 213 per person, and the sanitation program as a whole US$ 24 per person. This equals 53 and 8 US$ per person per annum respectively.[48]

6.1. Programme Financing

Though Newmont provides the vast majority of financing for its inside and outside the fence health programming, there are a variety of arrangements with partners to share responsibility for inputs into the health programmes.

NGRL's inside the fence medical services programme is 100 per cent financed by the company, and there are no employee contributions to the health services employees or registered dependents benefit from.

[48] The use of the average PACs population from 2010 – 2013 is an approximation of the denominator for the sanitation programme costs, which span a slightly different timeframe from the IMP – both in terms of duration and start date.

Outside the fence services fall under the Influx Management Plan, which is 87 per cent financed by Newmont, 8.5 per cent financed by the District Assembly, and 4.5 per cent financed by the community through in-kind as well as cash contributions.

The health-related infrastructure development undertaken by Newmont in the community, including upgrading of the New Abirim Government Hospital and provision of improvements in the area of water and sanitation are 100 per cent financed by the Community Development budget.

The Akyem Development Foundation, when it comes online in 2014, will finance additional community-led development projects related to health and other community priorities.

6.2. Cost effectiveness

Inside the fence, the quality of services appears high and the new clinic recently established demonstrates Newmont's prioritisation of employee health and safety. There is a sentiment that Newmont contractors are getting a 'free ride' with consultations and access to the on-site I-SOS clinic. This may be the case, and if healthcare is provided for as a lump sum in all Newmont contracts with contractor companies, there is almost certainly inefficiency in the cost structure of the inside the fence programme.

Outside the fence, the extensive assessments and research done by the Akyem project prior to the IMP has led to well-targeted mitigation activities, particularly for health. However, it is not clear that the partnership with OLIVES is cost-effective. OLIVES, as the only NGO in evidence in the area, commands a virtual monopoly over the provision of community trainings and awareness sessions. Interviews with OLIVES' staff indicated that the NGO regularly under-spends allocated budgets and over-delivers on targets – suggestive of a poorly-aligned budget forecasting and planning system which may be indicative of slippage in cost-effectiveness. For instance, OLIVES noted that the bednet campaigns, composed of 2,500 bednets, are provided at a cost of US$ 13 per net – whereas a standard insecticide-treated net is normally sold on the global market at US$ 5.

As such, the activities designed and planned by the Newmont IMP are appropriately targeted and conceived but they would likely have a higher impact if the overhead costs incurred by OLIVES for the implementation of some of Newmont's community health activities were removed, and these activities were subsumed by existing Newmont in-house capacity. This appears to be the line of thinking looking towards 2013, when Newmont anticipates conducting many of the health-related activities for the IMP in-house.

Given the imperative of reducing the operating budget of the Akyem project, **efficiencies could be gained** in a number of ways: through identifying ways to ensure implementation of community health activities outside a monopolistic situation; by reigning in unnecessary and unchecked expenses by contractors using the I-SOS facility; and through systematic monitoring and evaluation of cost effectiveness. Lessons learned in other settings also suggest that investments in prevention

activities among employees, if appropriately designed, are cost-effective in terms of reducing employee illness and illness-related costs for their employers.[49]

7. PROGRAMME BENEFITS AND IMPACT

While a number of assessments have been conducted that describe and analyse *potential* health impacts of the Ahafo mine, no assessment has been conducted to establish its positive or negative *actual* impact on health. Moreover, as the mine is still under construction and production has not yet started, impacts are likely to change in the foreseeable future. Nevertheless, there are indications that the overall impact of Newmont's Akyem health programme is positive.

7.1. Overall health impacts

Data collected by the DHMT suggest that utilisation of health services has increased considerably in recent years. From 2009 to 2012, the number of OPD visits per capita more than doubled from 0.44 to 1.1 OPD visits.[50] In absolute terms there was an increase in half-year OPD attendance from 19,000 to 43,000. While consultations increased, the number of malaria cases decreased from 2009 to 2011. The increase in 2012 is likely to be a reflection of the lack of testing available rather than of the real situation. Severe malnutrition also saw a decline from 6.6 per cent to 2.5 per cent between 2009 and 2011. Moreover, anecdotal evidence also suggests that malaria incidence has decreased, HIV awareness has increased and that health infrastructure and equipment in the district have improved. The table below summarises key health statistics provided by the DHMT.

Table 7: Key health statistics for Birim North district

HEALTH STATISTIC	2009	2010	2011	2012
OPD visits per capita half year (full year estimate in brackets)	0.22 (0.44)	0.25 (0.5)	0.35 (0.7)	0.52 (1.1)
OPD attendance (absolute – half year)	19,000	21,000	30,000	43,000
Malaria cases half year	10,440	8,993	7,668	11,601[51]
Severe malnutrition	n.a.	6.6 %	2.1 %	2.5%

This data is corroborated by data collected by NGRL itself. This data shows that average monthly malaria incidence has decreased from 2.62 in 2010 to 0.74 in 2012.

These significant improvements may be due to a number of factors that may or may not be linked to the mine. They include NGRL's support to health infrastructure and health education as well as the

[49] Mining Health Initiative (2012).

[50] The half year figures provided by the DHMT were doubled in order to facilitate national and international comparison. In 2010, OPD visits per capita in the Eastern region stood at 1.1, up from about 0.95 between 2007 and 2009 (Ghana Independent Health Sector Review 2010).

[51] During the period in which these figures were calculated no rapid diagnostic testing for malaria was available. Therefore, the number of malaria cases is inflated.

company's efforts to mitigate potential negative impacts in regard to water and sanitation. At the same time, improving health data may reflect increases in the uptake of the national health insurance scheme or other health promotion activities by the Government of Ghana.

One indication for at least a share of positive trends being attributable to Newmont's health programmes is the fact that Birim North is faring comparatively better than other districts in the region, both in regard to outcomes as well as coverage. According to the DHMT, Birim North was recently awarded the "best performing district" in the Eastern Region.[52]

In contrast to positive evidence there is also anecdotal evidence that teenage pregnancies and STIs, including HIV prevalence, have increased in the district. HIV prevalence is estimated at 2.0 per cent compared to 1.4 per cent several years ago[53].

7.2. Employees and families

Employees

Employees and their registered dependants (one spouse and up to five children can be registered as dependants per employee) enjoy a comprehensive package of healthcare. While data is difficult to find, particularly to confirm attribution of impact to employee status, anecdotal evidence suggests that employees have easy access to quality care, thereby facilitating utilisation and improving health status. Overall, employees seem to be satisfied with the health benefit package offered by Newmont.

NGRL has been collecting data in regard to sick days but due to a recent IT problem caused by a systems change, this data was lost. Therefore it is not possible to analyse trends in sick days which would be useful for assessing cost savings and the positive impact of investing in health and the benefits for the company.

When comparing Akyem with the Ahafo mine, it is worth noting that at the same stage of project development the Akyem mine saw 79 per cent lower malaria incidence than the Ahafo mine, thus indicating a positive impact.[54]

Contractors

Given the scope of this assignment and the number of contractor companies working for Newmont on the Akyem project, it has not been possible to investigate the mine's health impact on contractors. Nevertheless, it has become apparent that some contractors, such as Lycopodium, an Australian company contracted by Newmont to construct the mine's processing facility and site infrastructure (including power, water supply, accommodation, roads and mine facilities), enjoy

[52] Evaluation of capacity development at district level of the health sector in Ghana, 2006–2009 Evidence-based case study, Centre for Health & Social Services, Dec 2010.

[53] Interview with DHMT on 17 October 2012.

[54] The Ahafo project stage in 2004-06 showed an average incidence of 7.24 whereas the Akyem 2010-12 project data show an incidence of 1.58.

similar benefits to direct Newmont employees. This includes pre-employment medical screening and full access to the company clinic for any kind of medical problem, even if not related to occupational health.

7.3. Communities

Newmont in Akyem has identified eight PACs as well as a number of hamlets and individual residences. One community (and the hamlets and individual residences) was identified for resettlement.

From a community point of view, the net impact made by Newmont appears to be seen as positive. Community members interviewed expressed clearly that overall they appreciated the presence of Newmont. Positive impacts mentioned are the creation of employment opportunities as well as the upgrade of health facilities. Negative impacts mentioned largely centred around water and sanitation. Nevertheless, community members pointed out that Newmont was putting in place a number of measures to address and mitigate these, including through waste management, construction of private and public toilet facilities and installation of an effective water provision and distribution system.

Several community members stressed that it was too early to assess overall impact and that a final judgement could only be made once gold production had started. They also pointed out that while communities had received a good amount of information, some assessments and reports they asked for – and in which they had participated in - were withheld on the basis of being “too technical”.

The following positive and negative health impacts warrant attention:

Positive

- Creation of employment and income generation opportunities which allow community members to pay their annual contributions to the National Health Insurance Scheme.
- Newmont’s contribution to improvement and extension of health facilities, including the upgrade of the local clinic (New Abirem) to a district hospital.
- Support for improved sanitation through contributions towards public and private toilet facilities.
- Provision of bednets for malaria prevention.
- Attempts to mitigate negative impacts on water supply, for example through the creation of additional boreholes.
- Attempts to mitigate waste management issues that have worsened due to population influx.

Negative

- Preferential treatment of Newmont staff, including both direct employees and contractors, (who are all considered ‘Newmont employees’ by the community) and thus longer waiting times for community members at health facilities, such as the New Abirem Government

Hospital, the clinic nearest to the exploration and mining site, thereby driving community members away to other facilities.

- Issues with increased dust and air pollution which community members feel are not being addressed.
- Increased distance to the district hospital for community members who have been resettled.
- Hampered access to plants for traditional medicines due to deforestation, particularly for the resettlement community.

7.4. Mining company

Overall it can be said that Newmont's significant investments in influx management and community health, along with consistent engagement and consultation with communities, appear to have paid off when it comes to community goodwill and ensuring social license to operate. Newmont's investments in health, water and sanitation are visible and have been clearly communicated to communities, thus minimising resistance and maximising opportunity. Outside Akyem too, Newmont appears to enjoy a good reputation with regard to social responsibility more generally.

It is worth mentioning that at its Ahafo mine, Newmont found that investments in employee health lowered malaria incidence by 44 per cent within one year, and that new STIs decreased by 50 per cent. This resulted in savings due to lower absenteeism and reduced healthcare costs.[55]

7.5. Local government and health system

The local government and health system have both benefited from improvements in infrastructure as well as the provision of technical assistance in the areas of health, water and sanitation. Newmont has complemented, and in some cases temporarily taken over, government responsibilities in regard to infrastructure development as well as in planning, contracting and monitoring the provision of social services.

In terms of negative impacts on the health system it is worth noting that the considerable population influx appears to have caused stress on the capacity of local health facilities, both directly due to increased catchment sizes, as well as indirectly due to increases in dust and air pollution as well as increased road traffic.

[55] Mining Health Initiative (2012)

8. PROGRAMME STRENGTHS AND CHALLENGES

8.1. Strengths

Benefits and impact

- Newmont invests a considerable amount of money in healthcare for its employees, their dependants and contractors.
- Overall, Newmont's health programme in Akyem appears to have had a positive impact, not only mitigating potential negative health impacts due to population influx and mine construction but actually improving some aspects of health, such as malaria incidence, and also including improvements in the social determinants of health.
- The company's activities with regard to health, water and sanitation have contributed to strong relationships with communities and other stakeholders, thus ensuring a social license to operate.
- Employees and their dependants enjoy access to a comprehensive package of health services. Moreover, by making health case provision to employees an explicit clause in contractor contracts, Newmont can be said to be prioritising not just occupational health but contractor health more generally.
- By contributing to the improvement of health infrastructure and equipment, and through the support of various health education and promotion activities, Newmont positively affects community health.

Applying lessons from Ahafo

- The Akyem health programme has benefited greatly from lessons learned in the Ahafo mine. This has been facilitated by the fact that several ESR staff have moved from Ahafo to Akyem. Perhaps the most important difference between the two programmes is the fact that influx management has been systematically, strategically and comprehensively addressed in Akyem from the outset. This has included designated budgets and personnel, as well as communication to partners and other stakeholders about the influx management programme. Importantly, it has meant making a clear conceptual distinction between influx management and community development, even though both include health, water and sanitation.
- A number of approaches that were successful in Ahafo have been or are being replicated: they include the establishment of a development foundation for Akyem and the Social Responsibility Forum.
- The Akyem programme has been able to benefit from experiences in Ahafo in a number of additional ways. For example, community leaders and other key community stakeholders were taken to Ahafo for a visit to learn about the impacts of mining.

Stakeholder engagement

- A systematic and consistent Tripartite approach has enshrined working in partnership as a key principle and strengthened relationships with key stakeholders, particularly local government (District Assembly) and communities

- Partly by design, and partly by necessity, community engagement has been strong and consistent. This has helped the company to continue dialogue and identify solutions in times of crisis, such as when demonstrations regarding local employment issues were severely affecting work at the Newmont office.

Integrated approach

- Rather than being addressed through an all-too-narrow lens, health is embedded within a wider development approach that also emphasises strengthening water and sanitation systems.

8.2. Challenges

Health systems strengthening

- NGRL's community health programme has focused on infrastructure development and supply of equipment, rather than on a more comprehensive approach to health systems strengthening that includes ensuring that health facilities are adequately staffed and equipped with appropriate drugs and medical supplies. While some efforts have been made to ensure Newmont's contributions are complemented by partners, notably the DHMT, there is no evidence that the government has been able to match increasing patient numbers and expanded physical facilities with increased human capacity to manage these.
- The community aspect of NGRL's health programme has been all but outsourced to OLIVES. While governance and reporting in this partnership appear transparent, and no accountability issues have become apparent, reliance on one single implementing partner can be assumed to increase costs and decrease bargaining power when it comes to negotiating a value-for-money package of health activities.
- Newmont has no regular engagement or systematic institutional links with the health sector at the national level. This potentially results in the company being unable to maximise generation of information, government goodwill and opportunities for partnership.
- Health-related data generated by Newmont or I-SOS is not systematically and comprehensively shared with the health sector. Where data is indeed shared, for example when it comes to consultations at the I-SOS clinic, responsibilities and organisational policies are not clear to all staff concerned.
- In the case of OLIVES, contract negotiations and planning appear to be done bilaterally rather than with significant involvement by the DHMT or other stakeholders, with potential negative consequences for ownership and sustainability

Long-term strategic planning

- Planning of the community aspect of NGRL's health programme appears to be done on a year-by-year basis, rather than following a wider overall strategy and longer time horizon. This in turn affects partners' ability to plan effectively.
- As the influx management plan comes to an end and 'development' programming is starting to be emphasised more, a transition strategy to frame how health activities, for example, will be managed and continued into the next phase seems lacking. This may be causing inefficiencies and makes identifying gaps and overlaps difficult.

- The budget for health appears fragmented, and it seems that even directly concerned staff find it difficult to provide a clear overview of relevant budgets and commitments.
- The current imperative to cut budgets, including for employee well-being and community health, indicates room for improvement in regard to corporate support.

Organisational structure

- Responsibilities for health within NGRL appear divided and not entirely conclusive; for example, the debate about where the employee health and well-being programme should be located – and indeed how it might be funded – has not been resolved despite there being a strong business case for investing in employee well-being.
- Moreover, there is no systematic link between the internal and external aspects of Newmont's health programme in Akyem.

9. CONCLUSIONS AND RECOMMENDATIONS

Overall, Newmont's internal and external health programmes in the Akyem region appear solidly designed and are appreciated by employees and communities alike. The company's efforts to engage stakeholders and involve communities seem to have been effective, particularly in regard to health, water and sanitation. Not least from a communications and public relations point of view, it is a great achievement that community leaders and other community members are able to recall several health-related programmes and activities supported by Newmont. The fact that both main beneficiary groups of the programme – employees and community members – feel that Newmont is positively affecting their health, can be considered a success.

Nevertheless, some improvements are possible, particularly in regard to pro-active health systems strengthening and longer-term strategic planning, and in regard to management of certain aspects of the programme. Key recommendations are as follows:

Strategic planning. Longer-term strategies and funding commitments help internal actors and external partners alike to plan strategically and comprehensively, and to assess impact over time. Therefore it is recommended that Newmont empower its respective departments through a long-term commitment to health and well-being both inside and outside of the fence, and thus help them work with external partners in strategic rather than ad-hoc alliances. This also means planning jointly with key government partners, such as the DHMT and the District Assembly, and aiming to fit into their longer-term plans for development in the district as much as possible.

Corporate support. Long-term strategic planning requires appropriate corporate support – one of the lessons learned in Ahafo is that such support is required for effective planning and generating an impact. For example, Newmont found that investments in employee health in its Ahafo mine significantly lowered malaria incidence and STIs, which resulted in savings due to lower absenteeism and reduced healthcare costs. Therefore it is recommended that Newmont strengthen its corporate support for such investments and realises their value in generating a positive impact and improving cost effectiveness.

Cost effectiveness. Given the imperative of reducing the operating budget of the Akyem project, ways to decrease inefficiencies to relieve funds for other important areas, such as employee well-being, should be identified. This may include in-house management of some or all community health activities as well as considering ways to ensure Newmont does not pay 'double' for contractor health by making I-SOS services available to them free of charge while also making contract contributions to contractors' healthcare. Importantly, cost effectiveness must be systematically monitored, evaluated and documented.

Health systems strengthening. Newmont has invested considerably in building and strengthening infrastructure for health, including water and sanitation, and in providing equipment. Health infrastructure and equipment are key elements of national health systems. However, they cannot function without the less visible but perhaps even more important elements of the system, namely human resources as well as drugs and medical supplies. Therefore, Newmont should consider supporting human resources for health, for example by sponsoring or otherwise supporting training for health professionals. Where it cannot directly provide such support, Newmont should identify

ways to ensure that its partners are able to staff and supply the facilities it builds, for example by making this an irrevocable part of partnership agreements.

Newmont should also continue to analyse potential negative impacts on the health system and use the data thus collected in decision-making. For example, it may be worth investigating what support health facilities such as the New Abirem Government Hospital may need in order to be able to serve communities and Newmont 'employees' alike, without undue preferential treatment of one or the other.

Data sharing. Feeding data into national health management information systems is another key aspect of health systems strengthening. Therefore it is recommended that Newmont establishes an institutional culture of sharing data with key stakeholders, particularly the DHMT, District Assembly, the National Malaria Control Programme, etc. This includes sharing of data with communities who have already complained about not seeing reports on the basis that they may be 'too technical'.

Continued support. Newmont has been successful in ensuring community goodwill and a social license to operate. However, as the construction phase and the IMP come to an end, and thus fewer employment opportunities and less funding are going to be available, there is a real risk that this headway will be lost. Moreover, the start of the production phase may bring additional challenges, which may affect community members' goodwill. Therefore there is a strong case for Newmont to continue prioritising investment in community health and development throughout the life of the mine.

Organisational structure. When it comes to health and development, NGRL's organisational structure is currently in a state of flux. This is a challenge, not least because there are indications of certain aspects of the health programme, such as employee wellbeing, not being sufficiently prioritised and resourced. Moreover, links between the internal and external aspects of the company's health programme are not sufficiently strong and strategic, thereby potentially causing missed opportunities in regard to effectiveness and efficiency. Nevertheless, a dynamic organisational structure also represents an opportunity as the ESR department, and specifically those units dealing with influx management, health and development, may benefit from a rationalisation process. Importantly, such a process must give substantial consideration to the transition from influx management to development, and how such transition can best be managed.

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Newfields: http://www.newfields.com/

11. ANNEXES

Annex A: Persons interviewed

Organisation	Name	Function
Accra level		
Newmont Accra office	Mr. Yaw Antwi-Dadzie	External Affairs Manager
	Mr. Randy Barnes	Regional Vice President – Environment and Social Responsibility (ESR)
	Ms. Adiki Ayitevie	Director, External Affairs and Communication
DFID Ghana	Dr. Caroline Sunners	Health Adviser
	Mr. Joe Rolling	Senior Programme Officer
GIZ – Regional Coordination Unit for HIV & TB	Mr. Maxwell Hammond	Component Manager DPP Ghana
Ministry of Health	Dr. Edith Clarke	Program Manager, Occupational & Environmental Health Unit
Shell Ghana Limited	Mr. Kwabena Owusu Ampong	Mining Sales Team Leader
The Ghana Chamber of Mines	Dr. Toni Aubynn	Chief Executive Officer
Akyem level		
Newmont Akyem office	Mr. Patrick Griffiths	Regional Director Human Resources
	Ms. Esther Aboagye	Site HR Manager
	Mr. Paul Apenu	External Affairs Manager? Community Development Manager?
	Ms. Linda Nyanor	Coordinator, Community Health and Wellbeing Programme
	Mr. Felix Apoh	Social Responsibility Manager
	Mr. Dave Smith	HSLP Project Manager
	Mr. Philip Agyapong	Community Relations Manager
District Assembly	Ms. Mavis Frimpong	District Chief Executive
	Mr. Daniel Aboagye	Technical Adviser Sanitation

Organisation	Name	Function
District Health Management Team (Birim North)	Ms. Mary Andoh	Deputy Director of Nursing Services
	Mr. Isaac Obeng Tandoh	Health and Information Officer
Eastern Communities	Ofori Akwasi Amanfo	Community Leader
International SOS	Dr. Kaye	Chief Medical Officer
New Abirem Government Hospital	Mr. Clement Marfo	Former Administrator (now with regional hospital)
	Ms. Sarah Aboagye	Administrator
Organization For Livelihood Enhancement Services (OLIVES)	Mr. Moses Ogoe	Executive Director
	Mr. Solomon Isaac Faibil	Finance & HR Officer

Annex B: Focus group participants

Newmont employees

Name	Department
Prisca Oteng Acheampong	HR
Margaret Saajah	Mining
Maud Dugbah	Site Services
Mavis Adjei-Darko	HSLP
Michael Amoako	Geology
George Asare	Site Services
Theophilus Oduro-Bonsu	Mining
Bernard Asuh	ESR

Community focus group 1

Name	Community
Abdulrahmani Amina	Afosu
Georgina Yaa Serwah	Afosu
Wiafe Boateng	Afosu
Madam Rolanda Awupolimage	Mamanso
Agnes Winifred Oduro	Afosu
Richard Opoku Mamanso	Mamanso

Community focus group 2

Name	Community
Fosuah Elizabeth	Adausena
Kofi Darfour	Adausena
Bernard Owusu Boateng	Hweakwae
Moses Adjatey	Resettlement Village
Kwasi Akyeampong	Resettlement Village
Solome Akakpo	Resettlement Village
Isaac Adjooda	Resettlement Village

Newmont's award-winning HIV/Aids and malaria programme[56]

In 2010, the Global Business Coalition on HIV/Aids, Tuberculosis and Malaria named Newmont Ghana's workplace programme on HIV/Aids and malaria as the best in the Workplace Category. The programme has been recognised for its comprehensive coverage, reaching employees, their families as well as contractors. An integrated approach to disease prevention put HIV/Aids, malaria education and screening at the heart of the company's healthcare and safety services for its workforce.

Programme impact

The impact of the programme has been significant. For example, the average monthly incidence rate for malaria in 2006 was eight per cent of the Ahafo mine's 3,300 employees and contractors. In 2009, this dropped to a monthly average of 1.8 per cent. By integrating HIV testing with other health services—such as blood pressure and blood sugar tests—the company has seen a dramatic increase in HIV testing and counselling.

Partnerships

The International Financial Corporation injected an $81,000 grant in 2007, in recognition of the programme's early success. This led to a widening of the programme by partnering with the Ghana Health Service. The partnership with the Ghana Health Service has provided training to 100 peer health educators, who conduct training with fellow employees during normal meetings such as monthly safety briefings. The peer educators provide prevention and treatment information to more than 10,000 people each year.

Success factors

With financial support from the International Finance Corporation, Newmont provided HIV/Aids education to employees of the small and medium enterprises with which it works. In one instance, after a one-day training of suppliers and vendors, nine of the ten participating companies committed to establishing their own HIV/Aids in the workplace programmes.

Moreover, two major mining companies in Ghana, Newmont and AngloGold Ashanti, came together to share best practices with each other and with small Ghanaian businesses. This knowledge-sharing partnership has allowed both companies to develop smarter programmes that built on each other's lessons learned.

[56] Adapted from the Global Business Coalition for Health website. See http://www.gbchealth.org/award/57/