TIMS

TB IN THE MINING SECTOR IN SOUTHERN AFRICA

Communication Strategy:

Tuberculosis in the Mining Sector (TIMS) Southern Africa Programme

November 2017

Contents

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AMIMO	Associação de Mineiros Moçambicanos (Mozambican Mine Workers Association)
ARASA	AIDS and Rights Alliance for Southern Africa
ART	Anti-retroviral therapy/treatment
CBO	Community-based organisation
CHAI	Clinton Health Access Initiative
COPD	Chronic Obstructive Pulmonary Disease
DOH	Department of Health
DOL	Department of Labour
DOMR	Department of Mineral Resources
FHI 360	Family Health International 360
IEC	Information, education and communication materials
IOM	International Organization for Migration
HIV	Human Immunodeficiency Virus
JHUCCP	Johns Hopkins Center for Communication Programs
KAP	Knowledge, attitudes and perceptions (study)
M&E	Monitoring and evaluation
MCH	Maternal and child health
MOH	Ministry of Health
MOHCW	Ministry of Health and Child Welfare (Zimbabwe)
MOHSW	Ministry of Health and Social Welfare (Tanzania)
NGO	Non-governmental organisation
NTCP	National TB Control Programme
OHS/OHSC	Occupational health and safety centre
PMTCT	Prevention of mother-to-child transmission
PSA	Public service announcement
SADC	Southern African Development Community
SBCC	Social and behaviour change communication
SRH	Sexual and reproductive health
STI	Sexually transmitted infection
TB	Tuberculosis
TEBA	The Employment Bureau of Africa
TIMS	Tuberculosis in the Mining Sector programme
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
URC	University Research Co.
WHO	World Health Organization

Glossary of terms

AIDS	A disease of the immune system due to infection with HIV
HIV	The virus that causes AIDS, which is the most advanced stage of HIV infection
Ideational barriers	Barriers that stem from holding certain ideas, attitudes or perceptions, as opposed to external, realistic or tangible barriers
Incidence	Number of newly diagnosed cases of a disease
Prevalence	Measure of disease that allows determining a person's likelihood of having a disease
SBCC	Social and behavioural change communication
Self-efficacy	A person's belief in own ability to succeed in specific situations or accomplish a task
Silicosis	A progressive disease that belongs to a group of lung disorders called pneumoconiosis, marked by the formation of lumps (nodules) and fibrous scar tissue in the lungs
Social determinants of health	Economic and social conditions and their distribution among the population that influence individual and group differences in health status
Social ecology model	A model for SBCC that focuses on the influence of the social environment on the thinking and behaviour of individuals
Social learning model	Theory that views life-learning as a social process, not an individual activity, through which humans learn from observing others and/or absorbing their experiences
Tuberculosis/TB	An infection caused by the bacteria Mycobacterium tuberculosis and Mycobacterium bovis

Figures and tables

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Executive Summary

The Tuberculosis in the Mining Sector (TIMS) Southern Africa Programme aims to reduce the burden of tuberculosis (TB) among mineworkers and in mining communities in 10 southern African countries through a package of strategic and service-based interventions. The countries are: Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

A component of this package is a communication strategy which strives to support health-seeking behaviour by increasing awareness and knowledge of TB – and the related diseases of HIV and silicosis – and addressing attitudes and social norms that may impede health-seeking behaviour.

The communication strategy is guided by a knowledge, attitudes and practices (KAP) survey of 10 500 mineworkers, ex-mineworkers, family members and community members in the 10 countries. This study, commissioned by TIMS and undertaken by Select Research, forms a strong evidence base for prioritising certain types of communication.

The strategy was developed by Meropa Communications in association with Genesis Analytics which undertook a literature review on major health campaigns conducted in the region and a series of key informant interviews to inform the communication strategy.

A limited range of communication materials has been developed and pre-tested with focus groups in order to facilitate implementation of the strategy. These materials have been designed as multipurpose tools for use in a variety of contexts and they employ different communication technologies. They also allow individual countries to customise some information in order to take account of variations in burden of disease, the existing knowledge of target audiences, and different emphases in their national TB programmes.

Method and approach

The communication strategy caters for audiences comprising mineworkers, ex-mineworkers, families of mineworkers, and mining communities (those near mining works as well as remote labour-sending areas).

In addition to the dedicated KAP study referred to above, the strategy has taken account of the data gathered by the TIMS epidemiological study and the TIMS review of the legislative frameworks on occupational health in the 10 countries, plus the information generated by interviews with 21 key informants from national TB programmes, international organisations and civil society organisations, including associations of ex-mineworkers and health communication organisations.

At a theoretical level, the strategy utilised the social ecology model of social and behaviour change communication. This model views the individual in his or her environment and considers the social pressures that may either support or block the individual's path to adopting health-seeking behaviours and adhering to them.

The strategy also relies on the social learning theory of behaviour change because it tackles the age-old problem of the knowledge-behaviour gap: how to convert reasonable knowledge about TB into positive, healthy behaviour. Motivation and self-belief in the effectiveness of one's own actions lie at the heart of bridging this gap.

In developing this strategy, the need for motivation was kept top of mind and the messaging focuses strongly on the benefits of treating TB and the considerable risks of neglecting treatment. Building the self-efficacy of mineworkers and mine communities is also given priority, both through improving the depth of information and through the use of role models in the communication tools created.

The evidence in brief

A concise, and necessarily selective, summary of the data and social analysis that informed the strategy is presented below.

The concrete reality: mining operations and burden of disease

The variations in the mining landscape are dramatic, both within and between countries.

Mineworkers on artisanal mines and those working on mines operated by multinational corporations inhabit different worlds. While both undertake dangerous, hard work, the resources available to the latter group are considerably greater and the real barriers to health-seeking action are lower.

Mineworkers and mining communities in all 10 countries are at substantial risk of TB and HIV, but the risk is significantly higher in some countries. Where specific TB incidence and HIV prevalence rates among mineworkers are available, these are invariably much higher than in the corresponding national population.

Exposure to silica dust does not occur in all types of mining. In some countries a serious silicosis problem has been established. However, poor data on silica dust exposure and silicosis make it

impossible to distinguish between the (genuine) absence of a problem in certain countries and the invisibility of a problem that actually exists. It is probable that some countries have hidden silicosis in their mines.

The reality of knowledge, ideas and social norms

According to the KAP survey, across 10 countries:

- The average level of knowledge about TB and how it is acquired was reasonable, at 69% and 74% respectively. Understanding of how to prevent TB was somewhat lower, at 62%.
- The average level of knowledge of HIV, its transmission and prevention was high, with more than nine out of 10 people scoring correctly on each question.
- Fewer than 20% of respondents knew about silicosis, its causes and means of prevention. Since silicosis is invisible for many years and irreversible, this extensive ignorance has far-reaching implications.
- In general, mineworkers and ex-mineworkers were more knowledgeable than their families and community members.

Unsurprisingly, only a small minority of mineworkers, ex-mineworkers, family and community members regarded silicosis as a serious health issue, while about eight out of 10 viewed TB and HIV as serious health issues.

While most respondents indicated they would visit a health facility if they had TB (98%) and felt they could count on family support (91%), only 50% would be prepared to tell others about their illness. Three-quarters thought their work would be affected if they were known to have TB, and 60% expected their social relationships would be affected.

Clearly, there is quite widespread fear of social isolation and the loss of work or earnings. It is likely that this impacts on how mineworkers and members of mining communities are likely to respond to TB.

In terms of social stigma, it is possible that the fear of rejection exceeds the reality – in other words, the barrier is one of perception. However, given the variety of mining operations and the lack of formal labour rights in many settings, the fear of losing income or being dismissed is a realistic fear in many cases.

Other social and cultural factors

A high proportion of mineworkers migrate over long distances – sometimes across national borders – to work on the mines. The family unit, which is conventionally the main source of support during illness, is fractured.

Many mineworkers live, work and relax in an environment which is owned and controlled by the employer. Domestic life is pared down to basics. Work and work relationships dominate. The culture is masculine: physical and mental toughness are required. Inevitably new sexual liaisons are formed with women living close to the mines.

The separation imposed by work migration may increase traditional gender-based inequality between mineworkers and their wives, and emphasise the dependency of the latter. Wives' influence on their husbands may be diminished and the role of the mineworker as the family's breadwinner more strongly defined.

Communication realities: language, literacy and access to media

Literacy rates in the countries served by TIMS range from about 60% to 90% and, according to the KAP study, 44% of all respondents said they had attended secondary school while a further 37% had elementary education.

On average, 85% of respondents said they preferred to receive health-related communication in their home language or a local language with which they were familiar. It was possible to identify one or two primary local languages for mining communities in each country. Key informants indicated that English was a second language for a large number of mineworkers in nine out of 10 countries, the exception being Mozambique where Portuguese served as a second language.

The KAP study asked respondents to identify effective channels for communicating with them on health matters, and on a regionwide basis, 73% mentioned radio and 60% health workers. However, Mozambican respondents differed from the rest in preferring television to radio.

Health communication landscape

A literature review established that general communication campaigns on TB and HIV had been undertaken from time to time in all 10 countries covered by the TIMS programme. Communication on HIV was more sustained and frequent, while TB interventions tended to be focused on the period around World TB Day in March.

National ministries/departments of health, multinational agencies, global NGOs and local non-profit organisations were all frequently mentioned as the initiators of these campaigns. While most communication interventions were national or sub-national, there were some outstanding examples of multi-country campaigns.

In some countries there had been TB and HIV campaigns addressing mineworkers and mining communities specifically, but this was not the norm in all countries.

Principles of communication

There is a basic philosophy that underpins the communication strategy and is embodied in five key principles:

Communication must be ***informative*** in order to deepen existing knowledge and fill major knowledge gaps that exist in some countries and on some subjects (for example, TB prevention and all aspect of silicosis). A certain amount of detail is needed in order for information to be ***credible and empowering***.

Communication should have ***emotional impact*** in order to ***motivate*** audiences and persuade them to prioritise ***health*** over other important aspects of life. It should use stories that people recognise as true, role models that they identify with (and can emulate), and plain language that resonates.

Communication should have a ***mobilising and social dimension***, involving community dialogues and events that bring people together. Our actions should break the silence and challenge the stigma: we should literally talk about the unmentionable.

Communication tools should be ***light on text, easy to customise and translate*** for various countries, and have a modular or "mix and match" character, so that countries can select the elements that are most relevant to their specific circumstances.

Communication should include ***advocacy*** to win the ***support of local-level opinion leaders*** for initiatives to tackle TB in the mining sector. These leaders may, in turn, become communicators and role models with the power to encourage attitudes, beliefs and practices that will assist in fighting TB, HIV and silicosis. They may also assist in reducing practical barriers to reducing TB and silicosis – for example, improving access to healthcare or strengthening occupational health and safety provisions.

Communication objectives

This communication strategy seeks to achieve the following objectives in relation to mineworkers and ex-mineworkers, their families and mining communities:

- Improve knowledge of TB and create awareness and understanding of silicosis.
- Increase self-efficacy and motivation to take action to prevent these diseases and seek appropriate healthcare. This is to be achieved by:
  - Increasing their perception of the risks of neglecting TB and silicosis.
  - Providing empowering information (see above).
  - Creating awareness of available health services.
  - Reduce the social stigma that persists in relation to TB and encourage a more conducive environment for treatment by:
  - Creating opportunities for open dialogue about TB, HIV and silicosis in communities.
  - Involving local opinion leaders in community activities on TB and silicosis.

The strategy addresses HIV specifically as a risk factor for TB but, in the light of major HIV campaigns in all countries and the high level of knowledge they have achieved, it does not seek to duplicate these efforts.

Messaging

Key messages ensure focus in communications and a firm link to strategic objectives. But they do not contain **all** the information that needs to be conveyed. Furthermore, key messages are not set in stone: they can be rephrased in different ways when they are used in various types of communication. More creative expressions of core messaging are critical for achieving emotive, impactful communication.

Message 1 relates mainly to the objective of reducing stigma which is a barrier to treatment.

Main message	**Mining communities must unite to fight TB**
Secondary messages	When we all show we want to end TB we give courage to individuals to get tested and treated. Mineworkers are not to blame for high TB rates in our communities. It is their conditions of work that increase the risk of TB. Every person who is treated for TB makes the world safer for all of us. Communities can help families deal with the hardship of illness.

Message 2 focuses on increasing risk perception by asserting TB is treatable – but adding that neglecting to treat TB is often fatal.

Main message	**Treat TB and save lives**
Secondary messages	Mineworkers and their families are very severely affected by TB. If TB is not treated properly or if it is treated late, the disease often results in death. If you show signs of TB, get tested quickly and, if diagnosed with TB, get treated. TB spreads easily but treatment stops people with TB infecting the family members and workmates.

Message 3 is dedicated to creating awareness of the danger of silicosis and a basic understanding of the disease.

Main message	**It's time to get serious about silicosis**
Sub-message	Silicosis is a severe lung disease that occurs in many kinds of mining. It is caused by breathing in dust produced by blasting, drilling or crushing rock containing silica. Mine owners and managers can prevent silicosis by good dust control. Prevention is the only real answer to silicosis. It cannot be cured and it may sometimes result in death. Silicosis can be relieved by measures that reduce strain on the lungs – preventing chest infections, not smoking, avoiding dust.

Message 4 seeks to overcome barriers to treatment by stressing the link between good health and a mineworker's ability to fulfil his role as breadwinner.

Main message	**Protect your health, protect your earning power**
Secondary messages	TB can usually be cured quite easily by taking medicine and workers can usually return to work during treatment. If you fail to treat TB you could shorten your working life and deprive your family of their breadwinner. Treatment is available at most government hospitals and clinics. [In specific communities: A new clinic in this area is geared to treat TB and related illnesses and to assist mineworkers and ex-mineworkers apply for compensation.]

Communication interventions

The strategy proposes a limited range of interventions that combine different communication channels and can be achieved even in settings with limited resources.

Some of the interventions should be implemented on a continuous basis as part of primary healthcare services delivered both in communities and in health facilities. Others are seen as clusters of activity that should be planned and organised once or twice a year in a concentrated campaign-style fashion.

Such "campaigns" should be implemented year after year in the same communities, varying the focus of messages and introducing some novel elements each year. Repetition and reinforcement are the key to sustaining and deepening knowledge – and building motivation for health-seeking behaviour.

Coordination of interventions

Mining activities tend to be concentrated in specific areas within the 10 countries and migrant mineworkers are also often recruited from particular localities. The interventions are therefore designed for local-level planning and management.

However, it is clearly better for TB communication to mineworkers and mining communities to be integrated with national TB programmes in all countries.

It is therefore proposed that the starting point for implementation is the communication committee of the national TB programme and that this structure identifies suitable implementation partners at local level. In districts where TIMS has established Occupational Health and Safety Centres, with community organisations undertaking advocacy interventions, these would be ideal partners in implementing this strategy.

Other logical local partners would include: employee health services on mines, district health authorities and relevant NGOs and CBOs.

Ongoing health information activities

Face-to-face communication with individuals, families and small groups of people by clinic staff, community health workers and peer educators is potentially a powerful form of increasing knowledge about TB, silicosis and the relationship of HIV to TB. The KAP study showed a level of trust in health workers to deliver relevant health information, and this is an asset that must be used.

This kind of communication can take place in the following situations:

- During outreach activities and home visits by peer educators and community health workers.
- In waiting rooms of community health clinics.
- Upon confirmation of TB diagnosis.
- During follow-up of contacts of primary TB patients.

Communication tools or materials can enhance the ability of health workers to undertake face-to-face communication. They make the worker's job easier and assist in keeping information accurate and messaging consistent.

Short-term, concentrated interventions

We commonly refer to communication activities as a "campaign" when we use several channels of communication and attempt to expose our target audience to repeated messages on our chosen topic during a limited period, usually a few weeks.

The strategy recommends that local-level campaigns in mining communities or mining workplaces be organised at least once a year – but preferably twice a year.

- The centre-piece of each campaign should be a community or workplace event, with educational talks, educational activities to cater for different age groups, and the opportunity to be screened for TB and tested for HIV. The reason for placing an event at the centre of the campaign is that it combats stigma by facilitating community participation and open dialogue, and normalises TB screening.

- There should be a build-up to the event. For example:
  - Unpaid interviews on TB and silicosis should be arranged with regional or community radio stations.
  - Unpaid public service announcements should be negotiated with regional or community radio stations.
  - Paid advertising or "live reads" on radio should be considered, if funding is available.
  - Posters or banners advertising the event should be displayed.
  - Schools, faith leaders, trade unions, and community organisations should be asked to mention the event and endorse it.

Advocacy activities

Effective intervention to address TB in the mining sector, and the largely hidden problem of silicosis, require leadership at national and community levels.

The communication strategy recommends that community leaders – for example, traditional leaders, elected local government representatives, prominent members of civil society and faith-based communities – be engaged to participate in communication activities related to TB and silicosis. Their open association with this cause can be a great asset in overcoming stigma.

Monitoring and evaluation

Impact evaluation, to establish change in knowledge, attitudes and behaviour, is extremely expensive and only warranted for large-scale, sustained campaigns with very large budgets.

A more appropriate level of M&E for the interventions envisaged in this strategy are output indicators and data on audience reach.

1. Introduction

The TB in the Mining Sector (TIMS) programme is a regional initiative, that spans 10 southern African countries: Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. It aims to improve the ability of these countries to respond to TB – and the associated diseases of HIV and silicosis – in mineworkers, ex-mineworkers, their families and mining communities.

The political mandate for the TIMS programme is the 2012 SADC Declaration on Tuberculosis in the Mining Sector, in which heads of state and their representatives committed to "promoting a supportive policy and legislative environment" in relation to TB, HIV and silicosis in the mining sector and the strengthening of programmatic interventions.

The TIMS programme has undertaken important research that has the potential to inform policy and legislation as well as the planning of programmes. In addition, TIMS is establishing occupational health centres in eight of the 10 countries in order to increase access to services for some mining populations and it is developing limited community outreach capacity in all 10 countries.

There is demonstrable evidence that social and behaviour change communication (SBCC) is an essential element of disease prevention and management. Securing the active participation of mineworkers, ex-mineworkers, their families and communities in TB programmes is likely to help reduce the incidence of TB and HIV among these populations and improve case finding and treatment outcomes. In order to achieve this level of cooperation, it is necessary to improve understanding of the diseases among those most affected, build positive attitudes and supportive social norms. Communication has the potential to contribute to these changes.

The prevention and management of silicosis depend critically on effective regulation by governments and good occupational health and safety practices on the part of mine management. Communication on silicosis aimed at mineworkers, ex-mineworkers and their families and communities is likely to have a limited impact, but it can create awareness of the disease and related workplace hazards as an important step towards improved dust control in mines, early detection of lung damage, and intervention to mitigate the impact of silicosis. In comparison to TB, silicosis has received much less attention in communication campaigns, and this has impacted on awareness and action on silicosis among different stakeholders and audiences.

To date, there have been few TB communication initiatives designed to meet the specific needs of southern Africa's mineworkers, ex-mineworkers, their families and communities although the deadly convergence of the TB, HIV and silicosis epidemics affects them uniquely and with terrible effect.

This TIMS communication strategy is an attempt to address this gap and it serves two purposes:

- It provides an evidence-informed approach to communicating about TB, HIV and silicosis in order to guide governments and civil society role-players in their ongoing communication with mineworkers, ex-mineworkers, and their families and communities.
- It also envisages some short-term communication interventions to support the work conducted by TIMS occupational health centres and community outreach teams.

This strategy does not specify a precise time period because it is expected that countries would implement it at a different pace. However, the strategy envisages a number of activities that would extend well beyond the time-span of the current phase of the TIMS programme, which ends in December 2017.

While the TIMS brief specified that the primary audiences for the communication strategy would be mineworkers, ex-mineworkers, their families and mining communities, the strategy occasionally identifies other critical audiences. This is in light of the fact that the changes that are required to combat disease do not always lie within the power of those most at risk of disease but with other important role-players, such as employers, health service providers and regulatory authorities. Advocacy interventions to influence such role-players are commonly part and parcel of many SBCC strategies.

Communication that is calculated to achieve change – change in knowledge, change in values and attitudes, and change in health-seeking behaviour or in occupational health practices – is always a gradual process which involves sustained activity over a protracted period.

Above all, it is often a social process rather than an individual one, and therefore requires an orchestration of complementary communication activities. SBCC that targets health-seeking behaviour change needs to be complemented by accessible, quality health services so that target audiences wanting to change behaviour are actually able to do so.

2. Situation analysis

2.1 Sources of information

The major research projects undertaken within the TIMS programme have provided important information for the development of this strategy.

- The epidemiological data that was compiled for every country indicated the relative severity of the TB epidemic in various countries, the extent to which it is driven by HIV and silicosis, the size and character of the mining sector, and (in a few cases) the heightened burden of disease among mineworkers and ex-mineworkers. This information indicated a considerable degree of diversity among countries and directed our thinking towards the development of a strategy that could be implemented with a degree of differentiation.
- The knowledge, attitudes and practices (KAP) survey provided quite detailed information on aspects of TB, HIV and silicosis that were widely understood by the priority audiences and highlighted important knowledge gaps. It probed some perceptions and attitudes to the three diseases, and explored several practices related to HIV-prevention and a more limited number of TB-related practices. The KAP study suggested major focus areas for SBCC. The convergence of data across most countries indicated that core messaging and content would serve well. But the data also revealed there is a need to cater for situations where knowledge and attitudes diverge from the mainstream.
- The legislative review provided clarity on aspects of the environment in which the communication strategy will unfold, revealing deficits in the regulation of working conditions and compensation for occupationally acquired TB and silicosis. It suggested that there might be very real limitations on the impact of communication about silicosis, particularly where small scale and artisanal mining is the prevalent type and working conditions are extremely difficult.
- The mapping exercise, which defined TB-in-mining hotspots by overlaying epidemiological data on geographic areas of concentrated mining activity, was valuable in terms of envisaging the relative usefulness of localised communication channels versus mass media-based approaches.

In addition, Meropa Communication's research partner, Genesis Analytics, undertook:

- A literature review which provided supplementary epidemiological information and identified communication programmes on TB, HIV and silicosis that have been conducted in the 10 countries and sought to establish which of these had specifically addressed mineworkers and mining communities. This review also included information on literacy levels and media consumption patterns in the TIMS countries.
- Interviews with key informants in government and civil society in all 10 countries. This elicited information on previous communication campaigns and current communication practices and needs, as well as provided assessments of the responsiveness of communities, including mineworkers, to national TB programmes and related communication campaigns. It explored the perceived enablers and barriers to health-seeking. These telephonic interviews were supplemented by a short questionnaire sent to all TIMS country coordinators which covered many of the same issues in a more compact manner (questionnaire contained in Appendix A).

2.2 The size and location of designated audiences

The populations of the 10 countries vary greatly in size and the epidemiological study indicates that the size of the mining sector in these countries also varies widely from 2 500 mineworkers in Swaziland to an estimated 1 500 000 in Tanzania.[1] This information on the size of the industry serves as an estimate of the size of one of our key audiences: current mineworkers.

The TIMS geospatial mapping project assists with identifying towns and districts where a large number of these workers are employed and by so doing also locates mining communities and some ex-mineworkers and families of mineworkers.

However, the widespread practice of migrating for mining work complicates the location of many ex-mineworkers, their families and the families of current mineworkers. Work migration is still a very common practice and it exists both in the large corporate mines and in artisanal mining. Where formal labour recruitment agencies, such as TEBA, have facilitated the migration process, information on labour-sending areas would be available. But where the process is less coordinated, individual mines, trade unions and associations of mineworkers and ex-mineworkers would be the most fruitful sources of information.

[1] PHRU. TB, HIV and silicosis in miners: epidemiological data on tuberculosis, multi-drug resistant tuberculosis, silicosis and HIV among miners and ex-miners in southern Africa. Johannesburg. University of the Witwatersrand; 2017.

Implications for communication

- The key audiences to be addressed are likely to be concentrated in specific localities rather than evenly spread across the population. Localised methods of disseminating information are likely to be most efficient.
- Information on the location of audiences is presently incomplete but is sufficiently refined to guide initial implementation with the assurance of reaching a significant number of the populations of interest.

2.3 Impact of TB, HIV and silicosis on intended audiences

Data on the burden of TB and HIV among mineworkers and ex-mineworkers is not available for all countries. National patterns of disease are used to provide a general indication of the level of risk of our audiences and in order to make comparisons across countries.

The data in this section comes from the referenced Literature Review (appendix B) that was undertaken to inform the development of the communication strategy. References include the most recent available country profiles by WHO, AVERT, the World Bank and other organisations.

All 10 countries in the TIMS initiative are seriously affected by TB and HIV although the burden of disease varies considerably. The highest incidence of TB among general population is in South Africa (834/100 000) and Lesotho (788/100 000), while Malawi has the lowest incidence at 193/100 000.[2] There is a considerable gap in all countries between incident cases and the number on treatment, although this also varies. Namibia and Zimbabwe report the best treatment coverage at 80% and 72% respectively, while Tanzania is estimated to be treating only 37% of TB cases and Lesotho only 45%.[3]

Where information on TB incidence among mineworkers exists (and this is patchy), it consistently reveals higher incidence in the industry than the national average. For example, in South Africa the figure has been estimated at 1 200 – 3 000/100 000. South Africa's mining sector reports treatment coverage of 89%.[4]

In terms of HIV prevalence, national rates range from a high of 28.8% in Swaziland (which is closely followed by Botswana and Lesotho at around 22%) to lows of 4.5% in Tanzania and 9.1% in Malawi.[5]

Information on HIV prevalence among mineworkers exists only in respect of South Africa, Tanzania and Zambia. In South Africa, it is substantially higher than the national figure for adults aged 15-49 (24% compared to 19.2%), while prevalence among mineworkers is nearly double the national average in Tanzania and about 50% higher in Zambia.[6]

Data on exposure to silica dust and prevalence of silicosis is not widely available. Existing information suggests that silicosis prevalence ranges from 0.1% in Zimbabwe to 32% in South Africa.[7] In South Africa, prevalence is highest among workers in gold mines, but platinum and coal mineworkers are also affected.

A small study in Tanzania has established that silicosis is present among gemstone mineworkers. This is an important factor because of the extremely limited provision of personal protective equipment in the small-scale mines.

Since gold mining also occurs in Mozambique, Namibia and Zambia, it is likely that workers in these countries are exposed to a considerable silicosis risk.

The mechanism of labour migration often displaces the disease burden from the site of mining to distant communities, sometimes across national borders. The slow-developing nature of silicosis means that there can be a long time-gap between exposure to hazardous conditions and clear evidence of disease.

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[2] WHO. World TB report country reports. Geneva. WHO, 2015.

[3] WHO, 2015.

[4] PHRU, 2017.

[5] UNAIDS Gap Report 2016 as reported in AVERT, https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa

[6] PHRU, 2017.

[7] PHRU, 2017.

Implications for communication

- Despite considerable variation in the disease burden across countries, all the identified audiences for this strategy are at serious risk of acquiring TB – not only do they live in countries with serious epidemics but their risk is much greater than the national average.
- The gap between TB incidence and treatment suggests some serious barriers exist to diagnosis and treatment.
- It is probable that a high proportion of mineworkers are at risk of silica dust damage but that this has not been well documented in southern Africa. It is apparent that the industry in most countries has not taken this risk on board.
- Audiences severely affected by TB and TB-silicosis may be displaced from the original site of infection or occupational damage. Communication activities will need to embrace labour-sending, workplace and peri-mining communities.
- Most of the 10 TIMS programme countries fall into the high HIV prevalence category, both in terms of target populations for the programme and the general population. Aspects of the TB/HIV co-morbidity are being addressed directly through this communication strategy. Additionally, existing HIV campaigns, some of which are targeted at the mining sector, may present opportunities for collaborations to address TB/HIV in the mining sector.

2.4 The nature of the industry

The mining sector in southern Africa is heterogeneous in terms of scale of operation, formality of organisation, the nature of the workforce, and the types of minerals extracted. All these factors impact on the health and wellbeing of workers and on the approach to communicating about health.

The scale of mining ranges from massive operations by multinational resource corporations to mining on an artisanal scale. The latter typically fragments large numbers of workers and is often informal in nature and weakly regulated. Occupational health and safety measures are more likely to be in place at large mines, which are also likely to provide company health services to their workers. Artisanal mines are usually extremely hazardous working environments and do not provide healthcare.

Silica dust exposure and the risk of developing silicosis (with increased risk of TB infection) depends to a large extent on the mineral being extracted. Gold mining is strongly associated with silica dust exposure. But quartz rock may also be involved in other kinds of mining – for example, in the process of digging down to coal-bearing seams.

The nature of the labour force in terms of migrant versus local workers, permanent employees versus contract workers, and informal versus formal employment, has a huge impact on the socio-economic profile of mineworkers, their susceptibility to TB, the patterns of onward transmission, their health-seeking behaviour, their access to treatment, continuity of treatment and adherence to treatment. It is acknowledged that mines in the 10 countries employ female workers to varying degrees. In large-scale mines women constitute a small minority of workers but are much more numerous in artisanal mining. The social environment of a male migrant worker, living hundreds of kilometres from his family in an all-male hostel or with a second family near the mine, is quite different from that of a mineworker who remains resident with his family and goes to work daily at a nearby mine. The physical environment – including quality of housing – may also vary hugely and impact on the risk of TB acquisition and transmission. The negative repercussions for the female partners of mineworkers are significant, often making wives/girlfriends feel disempowered and trapped in a cycle of poverty and dependence on the male mineworker.

Implications for communication

The response of individuals to communication campaigns is influenced by social and cultural factors as well as by the material realities they face in adopting the advised course of action. Messaging and imagery used in materials need to take account of these factors – and in the instance of the TIMS programme, it must cater for the different circumstances that exist. Some material barriers to health-seeking behaviour cannot be remedied by communication alone – for example, barriers such as the loss of earnings during illness and the accessibility of TB services.

2.5 Regulatory environment and public healthcare systems

Countries differ in terms of their occupational health and safety legislation and their capacity to enforce this. The compensation of TB and/or silicosis as an occupational disease is not uniform across all countries covered by the TIMS programme and is generally very weak.

Countries also differ in terms of the delivery of healthcare services to mineworkers and their families.

TIMS will be making a contribution in terms of:

- Supporting the revision of occupational health and safety (OHS) legislation, facilitating better implementation of OHS measures and improving compensation systems.
- Increasing access to healthcare facilities that are equipped to offer occupational health services to mineworkers, ex-mineworkers, family members and affected communities via occupational health and safety centres (OHSCs).

However, strengthening of regulatory provisions will take some time. Furthermore, there is usually only one TIMS OHSC per country so this will relieve but not resolve the issue of poor access to OHS services.

Implications for communication

Communication is likely to have greatest impact where a lack of knowledge, negative attitudes, and weak personal efficacy are barriers to seeking and following treatment for TB, HIV and/or silicosis, and application for compensation.

However, where effective solutions are not available to target audiences, communication to these audiences may have a limited impact.

It is often valuable to combine awareness-raising among primary audiences while pursuing advocacy activities which engage decision-makers and seek specific policy and programmatic measures.

The communication strategy also makes recommendations for communication about the OHSCs / one-stop centres.

2.6 What we know about mineworkers, ex-mineworkers and their families

2.6.1 Overall reality

It is helpful when conceptualising how to communicate with specific audiences to attempt to envisage the big picture of their lives and not to view them purely through the prism of the matter we want to address.

The various TIMS studies hint at the experience of being a mineworker in southern Africa and this strategy expands briefly on these suggestions.

- Mineworkers perform physically demanding, dangerous work often in very tough conditions.
- They come from communities with high unemployment and low income levels and they are also only able to scrape out an existence on the money they make.
- Most have limited education and have acquired their skills on the job. They are equipped to work in mining and have few occupational alternatives.
- Each mineworker is likely to be responsible for maintaining several dependents.
- Many migrate from home in order to maintain their families and are prized in the family as breadwinners. This may impact on their perception of the risk of losing their ability to work while undergoing TB treatment.
- The migrant lifestyle of many mineworkers also affects the cohesion of families and communities in labour-sending areas and impacts on mineworkers' access to health-related information and services.
- Mineworkers often occupy an extremely masculine world, sharing accommodation, leisure hours and social habits, such as frequent and excessive alcohol consumption and smoking, with their workmates.
- Some migrant mineworkers establish a second family in a community adjoining the mine.
- All these factors compound the disadvantaged position of wives in labour-sending areas, who have more limited opportunities for education and work and struggle to understand the husbands' workplace or manage the process of compensation in case of his illness.
- The mineworkers' living environment, including the informal settlements they frequently live in and employment as temporary contract workers with little OHS support, are major risk factors for contracting TB and HIV.

This all suggests that the overwhelming priority of mineworkers is to keep body and soul together, to keep their jobs, and keep providing for their families. Everything else – including personal healthcare – is likely to be secondary.

2.6.2 Knowledge of HIV, TB and silicosis

All information in sections 2.6.2 to 2.6.4 is drawn from the knowledge, attitudes and practices (KAP) study commissioned by TIMS, unless otherwise indicated.[8]

Across the region there is high knowledge about TB treatment and its link with HIV in all specified audiences (mineworkers, ex-mineworkers, family members of mineworkers and others in mining communities). This is consistent with the fact that TB campaigns have tended to stress the fact that TB is curable and that medication must be taken for six months.

There is moderate knowledge of what TB is and how it is acquired, while understanding of ways to prevent TB is quite limited. Given that mineworkers, their families and communities are at high risk of acquiring TB, the data indicate a need to strengthen and deepen knowledge of TB beyond the common treatment messaging.

In general, the knowledge of mineworkers and ex-mineworkers is slightly higher than that of their family members and others in the community.

Table 1: Knowledge of TB

Area of knowledge	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
Correct knowledge of TB	68.6	47.2(Tanzania) 55.6 (Malawi)	93 (Zimbabwe)
How TB is acquired	73.9	54.8 (Malawi)	86.9 (South Africa) 86.7 (Zambia)
How TB can be prevented	62.1	47.8 (Malawi) 50.6 (Swaziland)	83.8 (South Africa)
How TB is treated	94.2	85 (Mozambique)	99.5 (Botswana) 99.5 (Zimbabwe)
Link between HIV and TB	88.4	82 (Tanzania) 82.2 (Mozambique)	98.1 (Swaziland)

[8] Select Research. Knowledge, attitudes and practices on TB, HIV and silicosis among key populations aged 15 – 59 years. Harare. 2017

Knowledge of HIV is considerably stronger than knowledge of TB in identified audiences across the region. The literature review of the communication environment (appendix B) shows that HIV is the focus of the largest health education and SBCC campaigns in most countries in the region and the results have been positive.

Once again, knowledge levels among mineworkers and ex-mineworkers are somewhat higher than those among family members and others in the community.

Assuming that national HIV campaigns will continue to reach these audiences, the figures indicate little need for a strong informational element on HIV in the current strategy. It is acknowledged though that there is a shift among HIV funders away from SBCC HIV campaigns.

TIMS should monitor this and adjust its strategies should this impact on HIV knowledge and behaviours among mineworkers.

Table 2: Knowledge of HIV

Area of knowledge	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
Signs and symptoms of HIV	92.2	73.9 (Namibia)	97.9 (Zimbabwe) 94.4 (Zambia) 94 (Mozambique)
How HIV is acquired	94.9	87.5 (Mozambique)	99.7 (Zimbabwe) 99.5 (Namibia)
How HIV is prevented	96.8	93 (Mozambique)	99.4 (Swaziland) 99.1 (Zambia) 99 (Botswana)

Silicosis is revealed as a major knowledge gap by the KAP study, even in countries where gold mining occurs and workers are at major risk of acquiring this incurable condition. Understanding of silicosis is almost non-existent in our specified audiences in Malawi and Tanzania, both gold-mining countries. Evidence of silicosis risk has also been established in the tanzanite mines of Tanzania.

Knowledge of silicosis is somewhat higher among current mineworkers than the average rate for all audiences, but hovers between 25% and 30%. It falls below the mean among ex-mineworkers, family members and mining communities.

It speaks volumes that only one in five mineworkers has a basic understanding of silicosis in South Africa, where the risk of silica dust exposure is well-established and the regulatory environment stronger than in the other countries.

There is a clear need to build awareness and knowledge about silicosis and its relationship to TB. Research also draws the link between silicosis and smoking and other lung conditions (COPD, lung cancer).[9]

Table 3: **Knowledge of silicosis**

Area of knowledge	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
Signs, symptoms of silicosis	18.9	1.1 (Malawi) 7.6 (Tanzania)	40.5 (Swaziland)
Causes of silicosis	17.7	0.2 (Malawi) 5.9 (Tanzania)	46.2 (Swaziland)
How silicosis is prevented	19.4	0.5 (Malawi) 5.9 (Tanzania)	44.9 (Swaziland)
Link between TB & silicosis	18.4	1.2 (Malawi) 6.4 (Tanzania)	47.5 (Swaziland)

[9] Lap Ah Tse, et al. Joint Effects of Smoking and Silicosis on Diseases to the Lungs. Plos.org. 2014.

2.6.3 Attitudes to TB, HIV and silicosis

There is a relatively high-risk perception in relation to TB, with about four out of five respondents indicating the disease is a major issue and that they themselves are at risk of infection. The variation among countries is quite large, however, and risk perception is lowest in countries with lower – but still significant – national incidence of TB.

A high proportion of respondents believe having TB would have an impact on social relationships and their working lives. Half would also attempt to keep the fact that they had TB secret.

There is clearly an underlying fear which could inhibit treatment-seeking and treatment-completion and therefore perpetuate the epidemic. It is not clear whether this fear is based on very real consequences – such as "demotion" at work, loss of bonuses, or loss of work entirely – or on the desire to avoid stigma in the form of social isolation among peers.

Attitudes to family members are reported to be positive and there is an expectation that the family would be a source of support during illness. Reported attitudes to seeking healthcare for TB are positive although there is a contradiction within responses in that fear of stigma attaches to seeking healthcare in about a quarter of respondents. This suggests that there might be an intention to seek care but this might not always translate into action.

Key informant interviews undertaken as part of the TIMS epidemiology and communication projects point to the presence of substantial stigma and peer group pressure which might inhibit treatment-seeking and completion. Some informants suggested that traditional beliefs and a preference for traditional medicines might also be a factor.

Informants mentioned that the association of TB with HIV might intensify stigma and the conflation of TB and silicosis might increase the dread of TB and negate messages that it is a curable disease.

While the great majority of respondents perceived HIV as a serious health issue, fewer than one in five was concerned about silicosis. This is consistent with the lack of awareness of silicosis.

Table 4: Attitudes, beliefs, perceptions and intention related to TB

Attitude, belief or intention	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
TB is a serious health issue	78.1	61.3 (Malawi)	95.2 (South Africa)
At risk of getting TB	84.2	77.6 (Tanzania)	97.5 (Swaziland)
Feel compassion for person with TB	73.3	65.4 (Mozambique)	93 (Swaziland)
Expect family support if got TB	91.3	84.5 (Mozambique)	99.5 (Botswana)
Think TB would affect social relations	60.1	43.9 (Malawi)	84 (Zambia)
Think TB would affect their work	75.3	60.9 (South Africa)	89.5 (Zambia)
Unwilling to let others know if had TB	50.1	38.5 (Malawi)	56.8 (South Africa)
Would visit a health facility if had TB	97.6	89.8 (Botswana)	99.6 (South Africa) 99.5 (Lesotho) 99.5 (Namibia)
Believe could access TB services without fear of discrimination	74.8	62.4 (Malawi)	94.7 (Botswana)

However, there is high support for the idea that mineworkers should undergo annual health checks.

Table 5: Attitudes, beliefs and perceptions related to HIV and silicosis

Attitude, belief or intention	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
Would visit a health facility	97.6	89.8 (Botswana)	99.6 (South Africa)
HIV a serious health issue	79.8	67.8 (Malawi)	91.9 (South Africa) 91.7 (Botswana)
Silicosis a serious health issue	18	0.9 (Malawi)	50.6 (Swaziland)
Mineworkers need regular medical checks	89.5	75.7 (Mozambique)	99 (Zimbabwe)

2.6.4 Behaviour related to TB and HIV

The KAP study explored relatively few behaviours in relation to TB. Virtually, the only action reported was having accessed TB services at a clinic and about four out of 10 respondents indicated they had done so. The rate of reporting ranged very widely among countries.

About two out of three respondents reported utilising clinics for HIV services, and the lowest country utilisation rate was significantly better than for TB. Reported rates of HIV testing were also high.

Self-reporting of sexual behaviour always has limitations in terms of reliability. The finding that one-third of respondents reported having sex with a non-regular partner is not surprising among populations where the breadwinner often migrates for work. These findings are consistent with other studies, such as South Africa's 2012 National HIV Communication Survey, in which one in five men reported having multiple sexual partner in the last 12 months.[10] Reported use of condoms during sex with a non-regular partner is high and consistent with reported knowledge levels of HIV and its transmission.

Table 6: Reported behaviour related to TB

Behaviour	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
Accessed TB services at clinic	37.3	8.4 (Malawi) 11.5 (Tanzania)	58.8 (Mozambique) 56.4 (Namibia)

Table 7: Reported behaviour related to HIV

Area of knowledge	Percentage able to provide correct answer		
	Regional average	Lowest	Highest
Accessed HIV services at clinic	63.5	38.4 (Tanzania)	85.9 (Botswana) 84 (Zambia)
Had HIV test in past year	65.7	52 (Tanzania)	88.7 (Swaziland)
Sex with someone other than regular partner in past year	29.4	17.6 (Malawi)	41.9 (Lesotho)
Unprotected sex with non-regular partner	11.8	5 (Mozambique)	30.7 (Malawi)

[10] Johnson S, Kincaid DL, Figueroa, ME, Delate R, Mahlasela L, and Magni S. (2013). The Third National HIV Communication Survey, 2012. Pretoria: JHHESA.

Implications of knowledge, attitudes and practices for communication

Knowledge-building through clear factual content is necessary in respect of TB and silicosis, their causes, their prevention, and relevant treatment.

Lower knowledge of TB prevention was prevalent across the region. Ignorance of silicosis is particularly marked in those mining contexts where it poses a risk and concerted efforts must be made to increase awareness and understanding of the disease.

Although critical actions to prevent silicosis are seldom in the hands of mineworkers themselves, their right to information about a major occupational health risk is clear.

HIV is the main driver of the TB epidemic in southern Africa and knowledge levels are high, suggesting that existing communication campaigns are reaching mining audiences. There would be little to be gained by duplicating this work and it is suggested that HIV messaging and content should not form a **major** pillar of the TB campaign, although the execution of this communication strategy includes messaging on the TB/HIV relationship. However, countries should ensure that planning for HIV communication continues to embrace mining communities.

Communication on TB should have strong motivational appeal and address barriers to health-seeking behaviour.

- Some of the feared consequences of having TB and/or silicosis are real. Instead of denying these, our approach should be to try and upweight the importance of dealing with TB.
- Stigma barriers can be tackled by inclusive communication interventions that encourage more open talk about TB and silicosis in mining communities and deepen discussions within families in order to strengthen the assumed support within families. Influential personalities and role models who resonate with audiences should be involved as much as possible.
- Misconceptions often play a role in stigma and addressing these by giving more detailed educational information is important.

The uneven pattern of knowledge and attitudes across countries must be accommodated by the communication strategy, which must be constructed in such a way that individual countries can emphasise the content, messaging and motivational approach that best fits their circumstances.

2.7 Gender and the mining sector

The mining industry – whether corporate or artisanal – is largely the preserve of men. While there are some women working on mines, they form a minority of the workforce. A strong masculine culture – which emphasises physical strength and mental toughness – pervades the industry. This is intensified where migrant mineworkers not only work in a virtually all-male world but often eat, sleep, drink and play in such a world as well. Peri-mining communities provide migrant workers entry into a more balanced society, mixed in terms of gender, generations and household types.

There is a sense that mineworkers feel they have to "man up" to meet the hazards of the job. This is reflected in the words of the song traditionally sung by Sotho migrants crossing the Caledon River to South Africa:

In crossing the river, I become a new man
Different from the one I was at home.
At home, I was secure
But now I am on this side
I am in a place of danger
Where I may lose my life at any time
So, prepare me for my death.

Now that I am this side
I assume a different attitude from the one
Where they are soft with other men.
This side they have to be tough to assume manhood
Not be soft like the women at home.
(From Another Blanket, published by AIM. Cited on www.sahistroy.org.za/pages/hands-on-classroom)

The fact that the primary audience for this strategy is an audience of relatively young men (as well as a significant number of older male ex-mineworkers) critically shapes the approach, the messaging and the "feel" of communication. There is clear evidence that driving health-seeking behaviour is a much bigger ask among men than among women.

In most societies men have poorer health outcomes than women and this is reflected in their shorter life expectancy. While this is partly due to men being exposed to greater risk – occupational risk as well as risks such as road traffic accidents, criminal violence and risks associated with habits such as heavy alcohol consumption and tobacco use – there is also evidence that men are less likely than women to seek assistance for health problems. This lower utilisation of health services by men has been particularly clearly reflected in sub-Saharan Africa in data on uptake of HIV testing, uptake of antiretroviral therapy (ART) and adherence to ART.[11] Experts attribute this reality to:

- The normative climate which creates an expectation that men will be tough, independent and able to withstand pain and danger.
- The failure of many health systems to create services that cater to the specific needs of men and provide an acceptable, comfortable environment for men. The fact that many public clinics are run entirely by female nurses and cater predominantly to the needs of young children and women of reproductive age can be a major deterrent to men approaching them.

Where health-seeking is made "normal" in mining contexts – for example, in company-sponsored HIV and TB screening and testing campaigns – participation is high. However, these kinds of interventions are not widespread or consistent in frequency. In addition, the rate of employment among men in Africa is higher than that of women and this reality reinforces the role of men as providers and breadwinners. The migrant labour system further emphasises this role because:

- Remittances from migrant workers are often the mainstay of labour-sending villages.
- The absence of migrant workers from their families curtails other aspects of their roles as husbands and fathers.[12]

As fulfilling the role of breadwinner becomes ever-more central to the workers' self-perception, anything that undermines that role – like TB, silicosis or another serious illness – represents an enormous threat and may not be acknowledged easily or dealt with rationally.

2.8 Education, literacy and language

Education, literacy and language fluency affect an audience's ability to access and consume information on health, but they are also among factors referred to as the social determinants of health. The relevance of these factors is highlighted by some of the TB/health communication and social mobilisation campaigns that have been implemented in the region or in individual countries forming part of the TIMS project.

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[11] Heestermans T, et al. Determinants of adherence to antiretroviral therapy among HIV-positive adults in sub-Saharan Africa: a systematic review. British Medical Journal. 2016.

[12] Rabe M. Being a father in a man's world: the experiences of goldmine workers. In Richter L and Morrell R Baba: Men and fatherhood in South Africa. HSRC. Pretoria; 2006

Education and literacy

The TIMS KAP study, the literature review on the communication environment and stakeholder interviews indicate a large variation in education levels of key audiences in various countries.

- Regionally, a minority (8%) of respondents in the KAP study reported having no school at all, ranging from 1% in Zimbabwe to 21 % in Botswana.
- Over a third (37%) of regional respondents said they had elementary education. Countries where the majority of the respondents only had elementary education were Tanzania (76%), Malawi (74%), Lesotho (66%) and Mozambique (63%).
- The largest proportion of regional respondents, 44%, said they had attended high school. This ranged from 20% in Tanzania to 75% in Zimbabwe. High school education was reported by 64% of Namibian and Zambian, 58% of Swazi and 54% of South African respondents respectively.
- Higher education, including college attendance, featured among a small minority. Regionally, the figure was 12.5% and it rose to 20% in South Africa and Zimbabwe, 19% in Zambia and 16% in Botswana.

National literacy levels in the 10 countries are provided in the table below, from highest to lowest. The literature review suggests that in a number of countries, literacy is higher among males than females, reflecting social norms and economic circumstances that contribute to gender inequality.

Table 8: Literacy rates among population older than 15 years who can read and write

Country	Literacy rates (%)
South Africa	93.7
Botswana	88.5
Swaziland	87.8
Zimbabwe	86.9
Zambia	85.0
Namibia	76.5
Lesotho	75.8
Tanzania	70.6
Malawi	65.8
Mozambique	58.8

Language preference

Scores of languages are spoken across the 10 TIMS programme countries and there is a limited overlap between countries, although the same language is generally spoken by mineworkers, ex-mineworkers and their families and communities from the same locality.[13]

The KAP study indicates that 85% of respondents preferred receiving information in a local language. This is supported by the literature review and stakeholder interviews that suggest that, while English is a second language for many people in seven of 10 TIMS programme countries, it is not viewed as the primary language in any of them.

English was considered a second language by a relatively high proportion of respondents in Namibia, Zambia, South Africa and Zimbabwe.

English was not considered useful at all in Mozambique, where Portuguese is the second language.

Primary local languages in the 10 countries are as follows:

- Botswana: Setswana
- Lesotho: Sesotho
- Malawi: Chichewa
- Mozambique: Changane
- Namibia: Oshiwambo/Afrikaans
- South Africa: Sesotho/isiZulu/isiXhosa
- Swaziland: Siswati
- Tanzania: kiSwahili
- Zambia: Bemba
- Zimbabwe: Shona

2.9 Media consumption

Information gathered through the TIMS programme correlates the target audiences' lower education and literacy levels with the type of media they consume.

Audio-visual sources of information – particularly radio (reported to be the preferred means) and interpersonal communication – reached the majority of people across all 10 countries. The TIMS KAP study findings were backed by the communication literature review and interviews with key stakeholders.

[13] TIMS key informant interviews and literature review for communication strategy, 2017.

Overall, radio and communication with health workers scored the highest regionally and in most of the TIMS project countries, as illustrated by the table below using data from the TIMS KAP study. Stakeholder interviews and the literature review of the communication environment suggest that television is regionally the second most preferred mass medium, while health workers were seen to be influential interpreters of health information heard on radio. Print media including newspapers and small media (leaflets, pamphlets) were the least favoured source of information.

Use of the internet and mobile phones to access information was inconsistently mentioned and did not appear to be regularly used, with the cost of data sited as a major obstacle. WhatsApp was the most frequently used social media method.

Table 9: Effective and trusted sources of information

Source	Regionally	Noted variations
Most effective	Radio 72.7% Health workers 59.9%	TV in Mozambique (72.3%) Health workers in Zambia (65.9%) and Zimbabwe (77.5%)
Most trusted	Radio 31.3% Health workers 30.5%	TV in Mozambique (31.2%) Health workers in Zambia (36.8%) and Zimbabwe (54.2%)
First source of TB/HIV information	Health workers 48.3% Radio 47.3%	TV in Mozambique (57.2%)

2.10 Health communication landscape

Some of the experiences and learnings from good international practice on communication and advocacy interventions to address TB have been documented by the Stop TB Partnership.[14] Several relevant approaches support some of the recommendations on interventions included in this strategy. Notably:

- Multi-sector community networks in Brazil and the Philippines served as change agents for improving social and TB treatment support. Experiences showed how this can reduce stigma.
- Community-level TB interventions in the Dominican Republic were supported by creating coalitions between local HIV/AIDS-focused NGOs and CBOs. Their existing knowledge on HIV/AIDS was enhanced with knowledge and resources for communicating about TB. The organisations further trained community health workers and health promoters who worked to make TB services more appealing and patient-friendly. The experience illustrated how CBOs with community mobilisation experience can be enabled to address other health priorities,
- Fragmentation between TB and HIV services in high co-infection areas in Malawi was addressed through an integrated programme with service and IEC components. It deployed community volunteers, facilitated improved TB screening and treatment, strengthened referral processes and expanded the scope of home-based care to address TB in addition to HIV. The experience illustrated the benefits of integrating TB and HIV services and communication and mobilisation activities.
- A national initiative in Mexico used a patient-centred approach to reduce stigma and deployed patients as participants and influencers in media and interpersonal outreach. It was extended into activities aimed at the political and faith-based sectors. The experience highlighted the impact of tailoring advocacy, communication and social mobilisation activities to suit the needs of different target audiences. The involvement of TB patients as authentic voices helped in reducing stigma.

Similarly, the 10 TIMS programme countries have all had health communication/social mobilisation campaigns on topics including HIV, TB, malaria, and maternal and child health (MCH). Campaigns were implemented by health ministries, national TB programmes, various international agencies, local non-profit organisations and the private sector.

The TIMS literature review of the communication landscape highlighted the prominence of HIV campaigns for the general population. Available data suggests that six of the 10 TIMS programme countries have also implemented TB campaigns aimed at the general population, and five have conducted TB campaigns in the mining sector. Few have undertaken communication initiatives on silicosis. A summary of the relevant country campaigns is contained in the table below.

[14] http://www.stoptb.org/assets/documents/resources/publications/acsm/ACSM_final_24%20Nov.pdf

Table 10: Summary of health communication campaigns in 10 countries

Country	Summary of health/HIV/TB campaigns
Botswana	Health communication provided by MOH, various donor groups including UNDP, UNICEF and NGOs. TB campaigns limited with exception of communication as element of TB Care II and Stop TB Partnership. Six HIV campaigns aimed at general population. "Choose Life" was part of One Love 10-country HIV campaign and achieved good results.
Lesotho	Health communication mainly about HIV, MCH and sanitation. Provided by MOH and its Department of Health Education, Kick 4 Life Club, LETLAMA and Phela Health & Development Communications. In 2016, there were TB in mining sector campaigns by CHAI/Mineworkers Development Agency and World Bank's four-country social mobilisation initiative. Neither has been formally evaluated. Part of three-country ARASA campaign in 2008 which targeted ex-mineworkers, strengthened links between associations and partners. Part of One Love 10-country HIV campaign (by Phela) and showed good results especially among youth. TB included in HIV/TB 2016 campaign by MOH's Department of Health Education. Used Z-card booklet and was shown to increase knowledge.
Malawi	Health campaigns mainly focused on HIV and related issues, also MCH, nutrition, tropical diseases and malaria. Guided by National Health Communication Strategy and Malaria Communication Strategy. Led by MOH and supported by agencies including JHUCCP. General TB campaigns included TB Care II's "Better Safe Than Sorry" imitated that ran in 2014 and aimed to identify and treat TB early among school teachers and learners. No mining-specific TB communication. Part of One Love 10-country HIV campaign (by Pakachere). Was heard on radio by 97% of men and 90% of women.
Mozambique	SHR, HIV and malaria campaigns implemented by agencies including JHUCCP and UNICEF. mCenas campaign on SHR made use of SMSs which helped increase knowledge. Challenge TB (a multimedia USAID campaign also implemented in other African countries including Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe, as well as in other countries and regions) provides ongoing HIV and TB counselling and testing in Tete (coal mining), Sofala, Zambezia and Nampula provinces (none are TomTom hotspots). IOM's "Healthy Holidays" campaigns aimed at migrants; also work in Gaza district (and Tanzania). AMIMO, working with TEBA, has TB and silicosis communication campaign targeted at mineworkers and families – advise TV and radio reach these audiences. Part of 3-country ARASA's 2008 campaign, targeted ex-mineworkers, strengthened links between associations and partners. Kenmare Moma Development Association provides HIV/malaria testing for mining communities in Moma district. TV used in multi-media mix by Soul City and JHUCCP campaigns.
Namibia	MOH with UN and other agencies and NGOs runs infectious diseases and MCH campaigns, also HIV and malaria. TB campaigns limited – ran by Challenge TB and Stop TB Partnership. Project Hope in 2008 in two northern regions focused on TB and HIV, targeted at general population. Part of One Love 10-country HIV campaign (by Desert Soul Health & Development Communications) had good evaluation results.
SA	Robust health communication, multiple campaigns on HIV, TB, STIs, MCH ran by DOH, DOMR, agencies, private and NGO sectors. Number of TB initiatives targeted at general population, eg URC's We Beat TB part of Kick TB campaign, TB Free. TB and silicosis campaigns in mining sector – ran by government (DOH, DOMR, DOL), industry, National Project for Elimination of Silicosis (DOL). Masoyise iTB led by DOMR, running 2016-18, increase screening and testing for TB among mineworkers. Part of World Bank's four-country TB social mobilisation campaign in mining sector, delivered mainly through mobile clinics. Part of One Love 10-country HIV campaign – had good evaluation results.

Country	Summary of health/HIV/TB campaigns
Swaziland	Government/MOH and agencies and NGOs run mass media campaigns on HIV, TB, MCH, malaria, guided across sectors by National Strategy for Social and Behaviour Change Communication. In 2016, USAID-supported SIAPS (Systems for Improved Access to Pharmaceuticals and Services) with Swaziland National AIDS Program and NTCP introduced Sentinel Site-based Active Surveillance System for ART and Anti-TB treatment. TB in mining sector: part of four-country World Bank project and three-country ARASA's 2008 campaign, targeted at ex-mineworkers, strengthened links between associations and partners. Part of One Love 10-country HIV campaign (by Lusweti) – 80% brand reach, radio strongest (no change in condom use).
Tanzania	MOHSW's 2015-2020 Health Sector Strategic Plan IV guides health initiatives. Health communication mainly on HIV and MCH, led by agencies eg JHUCCP and UNICEF. Challenge TB had social mobilisation campaigns for general population, utilising print, radio, events and social media (FB). Barrick Gold Mine, EngenderHealth mining Lake Zone Health Initiative for HIV and TB. IOM's "Healthy Holidays" campaigns aimed at migrants (also in Mozambique).
Zambia	Government and USAID, Chemonics developed Communications Support for Health Program (CSH) to inform SBCC on malaria, HIV, TB, MCH, SHR. Using mobile technology to create communication networks. FHI-led Zambia Prevention Initiative ran 2010-14, using small groups for social mobilisation and HIV prevention. No information available on mining sector campaigns. Part of One Love 10-country HIV campaign – 80% brand reach, radio heard by 61% of adults.
Zimbabwe	MOHCW, National AIDS Council, Global Fund, PEPFAR, Soul City and other agencies support HIV, TB, MCH, SRH programmes. TB Care II runs initiatives in mining sector and communities including clinics, social mobilisation and training of health workers. Sandvik Mining have ongoing HIV awareness campaign in Unki, Mimosa, Ngezi, Shangani, Bindura mines/regions – showing 95% VCT results.

Two recent campaigns are of particular relevance for the TIMS communication strategy.

One Love was a large-scale, regional campaign implemented in the 10 TIMS countries over different periods.

In Lesotho, Malawi, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe, it was produced by Soul City and in-country NGO partners. In Botswana, Mozambique and Namibia the key messages were incorporated into local multimedia productions under different brand names. The campaign aimed to reduce new HIV infections through encouraging positive behaviour change, increasing dialogue about HIV, empowering women, and creating supportive environments. Various communication channels were used: TV, films, radio, talk shows, public service announcements (PSAs), billboards, social mobilisation, community dialogues and trainings. The campaign used mixed materials, advocacy and social mobilisation.

One Love was evaluated in eight of the 10 countries, using a quantitative household survey and a qualitative component which consisted 89 focus groups in each country. The overall evaluation found that the campaign reached approximately 27 million people in the eight countries, 20 million of whom were able to recall the campaign slogan without prompts. The reach of the campaign varied between rural and urban areas, but was still high in rural areas (which are often very difficult to reach) ranging from 87% in Swaziland to 37% in Namibia. In all but one country (South Africa), most people were exposed to the campaign via the radio, closely followed by TV and print media.

Additional findings were:

- Regionally the campaign was associated with increases in condom use, HIV testing and knowledge levels, shifts in attitudes and norms, and greater interpersonal communication.
- The campaign had less consistent impact in terms of reducing multiple sexual partners, though impacts were measured in some countries.
- The regional nature of the campaign, including consistent messaging, was recognised and well received by target populations.
- A range of skills and capacities were built within partner organisations.
- Outcomes suggest that a regional approach with consistent branding and messaging across borders has several benefits including greater health impacts.

The **World Bank funded a four-country TB social mobilisation campaign** in 2016, which was implemented in mining communities in South Africa, Mozambique, Swaziland and Lesotho and aimed to create social change in communities and support processes that encourage health-seeking behaviour. Working with other key stakeholders, including TEBA, the initiative developed, translated and distributed multimedia collateral, and worked with mobilisers to sensitise communities prior to outreach and to conduct social mobilisation in target communities. Some of the relevant conclusions and lessons of the initiative include:

- Information gathering included a mapping of existing efforts, suggesting these needed greater coordination particularly where different organisations were working in same communities and aiming to reach same audiences.
- Existing strategies all featured deployment of community health workers who engaged communities in focus group or home-based settings – although not specifically targeted at the mining communities.
- Traditional IEC materials such as posters and flyers were frequently produced without much effort being directed towards innovative tools.
- Border posts and hard-to-reach labour-sending areas that were often neglected should be included in future social mobilisation efforts.
- TB awareness should be sustained as opposed to being a secondary, short-term activity of HIV awareness drives.

Implications for communication

The execution of the communication strategy takes account of the implications of the bias of the mining sector towards male young mineworkers and older ex-mineworkers. This reflects in the messaging aimed at influencing self-perception, and recommendations for interventions that can provide additional opportunities where the programme encompasses health-seeking interventions. Both workplace and community-wide settings, such as faith-based, educational, social and sports events, would be appropriate platforms.

The TIMS programme and other partners should build on the previous practices of joint coordination of health initiatives at country and regional levels so that mineworkers, ex-mineworkers and their families and communities can be reached through multiple sources of information and services – including the border posts relevant to migrant mineworkers.

Relatively low levels of education and literacy suggest that the TIMS programme should prioritise oral communication through the medium of radio and interpersonal communication, centring on health workers. Materials should have a strong visual character. This should be supported by a greater mix of methods that includes television and printed materials. All communication should be conducted in local languages and use local idioms.

3. Theoretical approach to communication

Evidence generated by the TIMS programme indicates that the programme needs an established social and behaviour change communication (SBCC) approach in order to go beyond knowledge-building and make an impact in terms of strengthening attitudes and beliefs conducive to disease prevention and health-seeking behaviour among designated audiences.

It is proposed that a combination of two models be used to guide interventions and the creation of communication materials:

- The first is the **social ecology model** which views members of the primary audience within the social environment which they inhabit and suggests interventions that impact not only on the individual but also on significant others in their lives. This approach seems well-suited to TIMS' desire to communicate to a set of inter-related audiences comprising mineworkers, ex-mineworkers, their family members, and the wider mining community.
- The second is the **social learning model** which assists in closing the gap between knowledge acquisition and behaviour change by providing an understanding of how people learn to behave in a wide variety of situations and what determines whether they simply "file" this information away or put it into practice. Many of the facilitators and barriers to action lie in the social realm (for example, in our relationships with family and friends, employers, workmates, members of our clan or religious group) and in the public realm (for example, in the rules and laws that apply, bureaucratic processes, service options at our disposal, and dominant cultural practices that may be mediated by leaders or the mass media).

The social ecology model and social learning theory are clearly complementary and offer a conceptual approach that translates quite easily into practical interventions.

3.1 Social ecology model

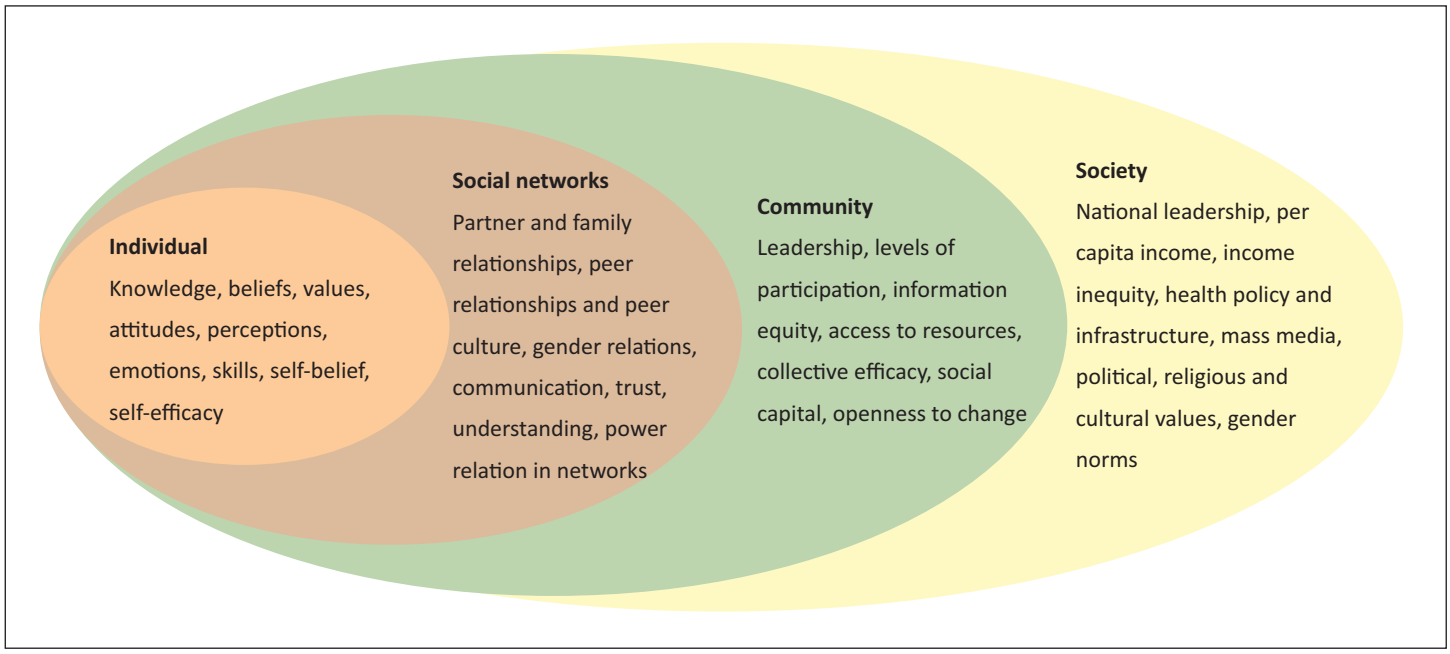
The social ecology model for SBCC focuses on the influence of the social environment on the thinking and behaviour of individuals.[15]

This influence is exercised through social institutions – for example, the family, the school system, religious organisations, business entities, governments, and the mass media – and the culture that these institutions represent. Culture refers inclusively to the way the written and unspoken rules that organisations and communities follow, the values they treasure, the manner in which they communicate and the rituals they observe.

Social ecological approaches are widely applied to a variety of social issues. In SBCC it has become usual to define four social spheres: the individual, family and peer networks, the community, and the broader society.

[15] Storey D and Figueroa ME. Towards a global theory of health behaviour and social change. In Obregon R and Waisbord S (eds). The handbook of global health communication. John Wiley & Sons; 2012

Figure 1: Social ecology model and communication for behaviour change



Not only does one system nest within a bigger, broader system but there is a hierarchy of power, with the outer spheres representing more powerful social organisations. It is extremely difficult for an individual to change his or her behaviour if this runs contrary to his/her family and peers, the broader community and, indeed, the entire society.

In reality, people often find themselves in situations where they are subject to conflicting pressures to adopt or refrain from a particular course of action. There is often a process of considering and reconsidering options and perhaps sourcing additional information or consulting a trusted family member or friend. SBCC strategies usually seek to impact both on the primary audience and on influencers in order to align opinion behind the desired course of action.

This strategy to impact on influencers should extend to social institutions and opinion leaders at community and society-wide levels in order to influence and begin to reshape relevant aspects of social, political and/or cultural life. Integrated communication programmes commonly have an advocacy component aimed at:

- Securing policy changes or programme enhancements from governments.
- Influencing the custodians of culture and public opinion – traditional leaders, educators, the media, and iconic cultural figures – to take the lead in terms of reinterpreting or altering social norms.

3.2 Social learning theory

While the social ecology model provides guidance on what to do and where to intervene, social learning theory elucidates how to go about this.

The main premise of the theory is that life-learning is a social process – not an individual activity – and that we learn a tremendous amount from observing others or absorbing their experiences.[16]

Albert Bandura, the sociologist most strongly associated with the theory observes that it would be "exceedingly laborious, not to mention hazardous" to learn purely from personal trial and error. He argues that: "Most human behaviour is learned observationally through modelling: from observing others one forms an idea of

[16] Bandura A. Social learning theory. Prentice-Hall, Oxford; 1977.

how new behaviours are performed and on later occasions this coded information serves as a guide for action."

This modelling by observation may be "live", as in the skills learnt at home by modelling ourselves on parents or siblings, and in the knowledge and skills acquired at schools, sports clinics and universities. Or it may occur through some form of documentation – films and other video products, audio recordings, books and other written media. In this process, we not only learn what to do and how to do it, but also what the likely consequences of specific courses of action are.

Whether we simply "bank" knowledge or put it to practical use depends on many factors:

- How well it fits in with the knowledge, beliefs and values we have already absorbed.
- Whether the likely consequence of action is positive or negative. In our interests or not in our interests. Likely to win approval or likely to evoke criticism.
- What the prospect of success is. This relates to having the basic skills and resources required to undertake the intended course of action.
- What self-belief or "agency" we have. Many factors may undermine the individual's confidence to take action – including poverty, gender discrimination, lack of education.

Bandura argues that the conversion of learning into behaviour is always a function of three factors: the individual, the behaviour, and the environment.

Communication can increase the probability of learning converting to behaviour change by addressing the individual (usually in the primary audience) and addressing others in his or her social environment.

When addressing the individual, communication seeks to build the individual's **self-efficacy** and **motivation** for change.

Self-efficacy is a combination of competency and self-belief. People tend to select the challenges that they will take on and dismiss undertakings that they do not believe they will be able to achieve. A central feature of transformational communication is to boost self-efficacy, to encourage people to believe they can do more than they previously considered they could do.

Motivation is closely linked to the expectation of being rewarded or deriving some benefit from the action under consideration. Often there are pros and cons to an action and the individual's assessment of how these factors stack up will be critical in determining his/her behaviour.

Communication can assist by upweighting the perceived benefits of health-seeking behaviour. It can do this at a rational, cognitive level by providing more detailed and possibly more credible information about the prevention and treatment of diseases.

But, very importantly, creatively executed communication instruments can also strengthen motivation by connecting emotionally with the audience:

- By utilising role models with whom members of the intended audience strongly identify, it may be possible to generate support for the action. The messenger in this instance may add major impact to the message.
- By depicting some of the benefits – including emotionally charged consequences, such as the impact on loved ones – communication instruments can make benefits more real and immediate.

In other words, the communication and social mobilisation process can create some short-term rewards for healthy behaviours that normally only pay off in the long-term. Slimming programmes and interventions to combat various addictions utilise this approach. More directly related to HIV prevention, there are now programmes in the area of behavioural economics that are addressing behaviour in relation to savings with, for example, condom use.

Communication can also upweight health-seeking behaviour by highlighting the negative consequences of failing to take appropriate action or sustaining unhealthy practices. This is clearly possible when dealing with TB which is often fatal if left untreated and silicosis which is incurable and becomes more severe with continued dust exposure.

However, the use of negative messaging is a major debate in health promotion circles. There is a view that this is counterproductive as it can induce a degree of anxiety that is crippling and prevents rather than encourages health-seeking behaviour. However, there is a body of evidence that suggests how fear can be motivating – but only if members of the target audience:

- Trust that the proposed solution is effective.
- Have the self-efficacy to put the solution into practice.[17]

There needs to be a careful construction of messages so that the fear induced is counter-balanced by trust in the solution and self-efficacy. Studies have found that change is most likely to occur where both the degree of fear and the level of self-efficacy are high.

Pre-testing of messages is extremely important when fear-inducing tactics are employed to ensure that the audience feels motivated rather than discouraged.

It should be noted that some behaviours carry inherent rewards for individuals and they will pursue these actions in the face of opposition from family, friends and, even, people in authority. This is often the case when issues are strongly value-based – for example, matters of social justice, politics and religion.

Motivation can also be addressed by creating a more sympathetic social environment where individual health-seeking actions are likely to be rewarded rather than punished.

- Communication directed at the social network surrounding the individual and his/her community may contribute to shifting attitudes and, where relevant, reducing stigma.
- A particularly helpful approach is to introduce communication activities that create public conversations, lift the veil of secrecy over sensitive issues, and encourage many private conversations. Skilful and informed facilitation of these processes can help to replace misconceptions with fact and mediate clashes of values and attitudes.

Where barriers to action are not in the ideational sphere but are concrete – for example, lack of access to TB and occupational health services or weak legislation on compensation of occupational illness – communication has a role to play in mobilising public opinion to achieve change. In the HIV field, provision of PMTCT and ART was profoundly influenced by advocacy.

[17] Witte K and Allen M. A meta-analysis of fear appeals: implications for effective public health campaigns. Health Education and Behaviour, 2000; 27; 591.

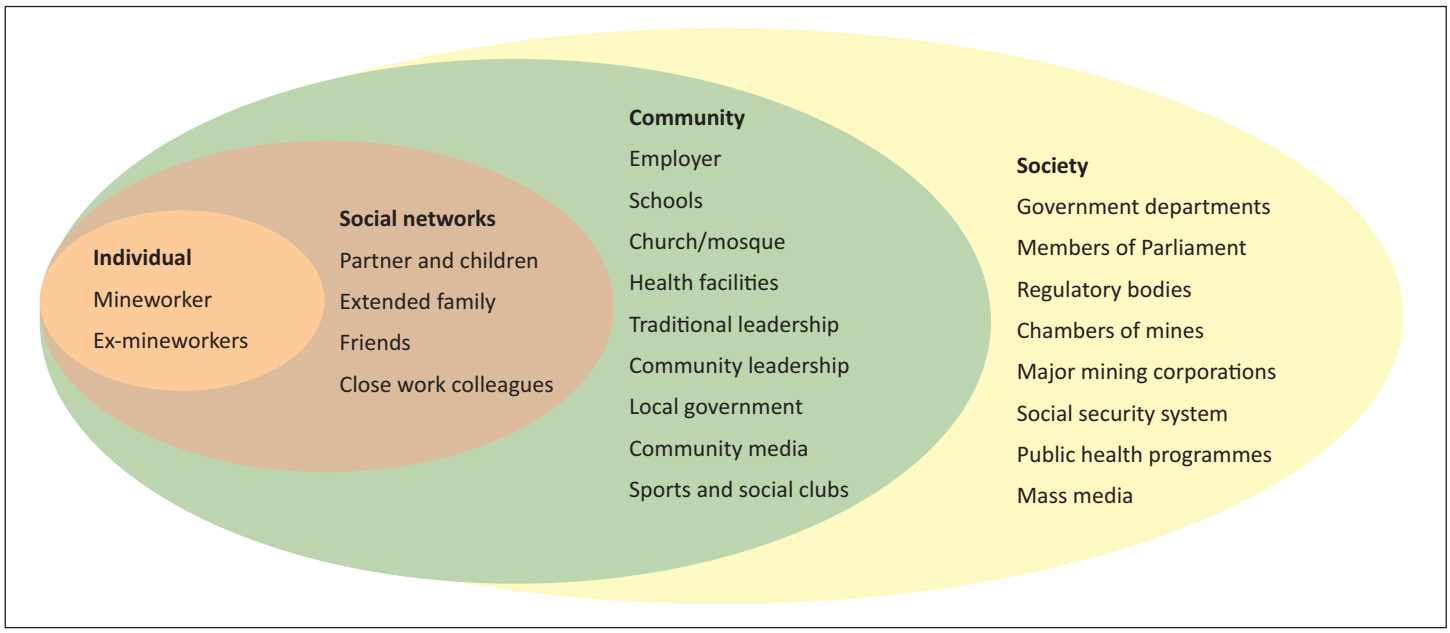
3.3 Audiences and influencers in the social ecology of mining

To facilitate the application of this model, its proposed that the stipulated audiences for the TIMS study be classified for the purposes of this strategy as follows:

- Individual mineworkers and ex-mineworkers: the individuals at the centre of communication and the primary audience.
- Mineworkers' families, close friends and colleagues: the social networks immediately surrounding mineworkers and ex-mineworkers constitute a highly significant secondary audience.
- Mining communities of various sorts: labour-sending, peri-mining and workplace communities.
- National influencers.

If we follow this approach, the social ecology model can be populated with mining sector role players in the manner illustrated below.

Figure 2: Mapping of audiences and influencers in mining communities



4. Basic principles of this communication strategy

- Communication on TB, silicosis and related risk factors in the mining sector needs to be **informative** and seek to contribute to the **building of self-efficacy**. It must build on existing knowledge of TB and fill a knowledge vacuum that exists in relation to silicosis. It must strive to convey information in an interesting, user-friendly, credible, relevant, honest and memorable manner.

- Communication should have the **emotional impact** to motivate audiences to prioritise protection against TB and silicosis over other pressing concerns. It must use:
  - Credible models and stories that audiences can identify with and emulate.
  - Value-based messaging that appeals to audiences.
  - Image-rich formats that convey unspoken social messages.

- Communication should have a **mobilising and social dimension** that enables workers, families and communities to join together to deal with TB and silicosis in a way that may contribute to the **breakdown of stigma** and the **redefinition of social norms**.

- Communication tools should:
  - **Avoid dense text** unsuited to literacy and education of primary and secondary audiences.
  - Be easy to **customise and translate** for various countries.
  - Have modular "mix-and-match" properties so countries can **combine different elements** and use them in a **context-specific** manner.
  - Be multipurpose so that a **few tools** can be used on **multiple platforms** and in **varied activities**.

- Communication should aim beyond the primary and secondary audience in order to **secure the support of influencers** and opinion leaders at community level and in society more generally in order to:
  - Leverage leadership to **encourage attitudes, beliefs and practices** conducive to preventing and treating TB, silicosis and HIV.
  - Bring their **influence to bear on other barriers** to health-seeking – such as lack of reasonable access to health services and poor occupational health and safety observance.

5. Communication objectives

The overall business or programmatic objectives of an organisation are always the foundation on which communication objectives are built. Ideational barriers to behaviour change, as identified in the situation analysis, inform the process of deriving communication objectives.

Communication objectives are usually framed in terms of building knowledge and self-efficacy, shaping attitudes, beliefs and perceptions, and motivating behaviours that contribute to the achievement of the organisation's broader objectives. This approach has been adopted in the current strategy and is summarised in Figure 3 (see next page).

Objective 1

To increase **knowledge of TB**, its transmission, prevention and treatment among mineworkers, ex-mineworkers, their families and mining communities and develop **self-efficacy** for TB prevention and treatment-seeking. (This objective would be applied in a context-specific manner, allowing for different patterns of baseline knowledge in various countries.)

Objective 2

To increase **risk-perception** related to consequences of ignoring symptoms, delaying treatment and interrupting treatment in order to **motivate mineworkers** to prioritise treatment despite a number of ideational and practical barriers to treatment.

Objective 3

To increase **knowledge of silicosis**, its nature, its causes, primary and secondary prevention, and management among mineworkers, ex-mineworkers, their families and mining communities in contexts where silicosis is an occupational hazard.

Objective 4

To establish **open discussion on TB** and (where relevant) silicosis among mineworkers/ex-mineworkers and their family members and introduce public dialogue on these subjects in mining communities in an attempt to reduce social stigma.

Objective 5

To **mobilise community leadership** in support of TB and (where appropriate) silicosis communication activities in order to contribute to a reduction in stigma and the development of attitudes conducive to treatment-seeking.

Objective 6

To create **awareness of the new one-stop** occupational health centres in selected mining communities and increase uptake of the services offered to mineworkers, ex-mineworkers, family members and local residents.

Objective 7

To strengthen the **capacity of clinic and community-based health workers** and peer educators to conduct **information and dialogue session**s on TB and silicosis, and build community confidence in healthcare providers.

Objective 8

To increase **national dialogue on TB and silicosis** in the mining sector and advocate for stronger measures to prevent silicosis, better health services to treat mineworkers, ex-mineworkers and their families, and compensation of mineworkers, ex-mineworkers and their dependants for TB, silicosis and TB/silicosis.

Achieving these communication objectives will support the overall project objectives.

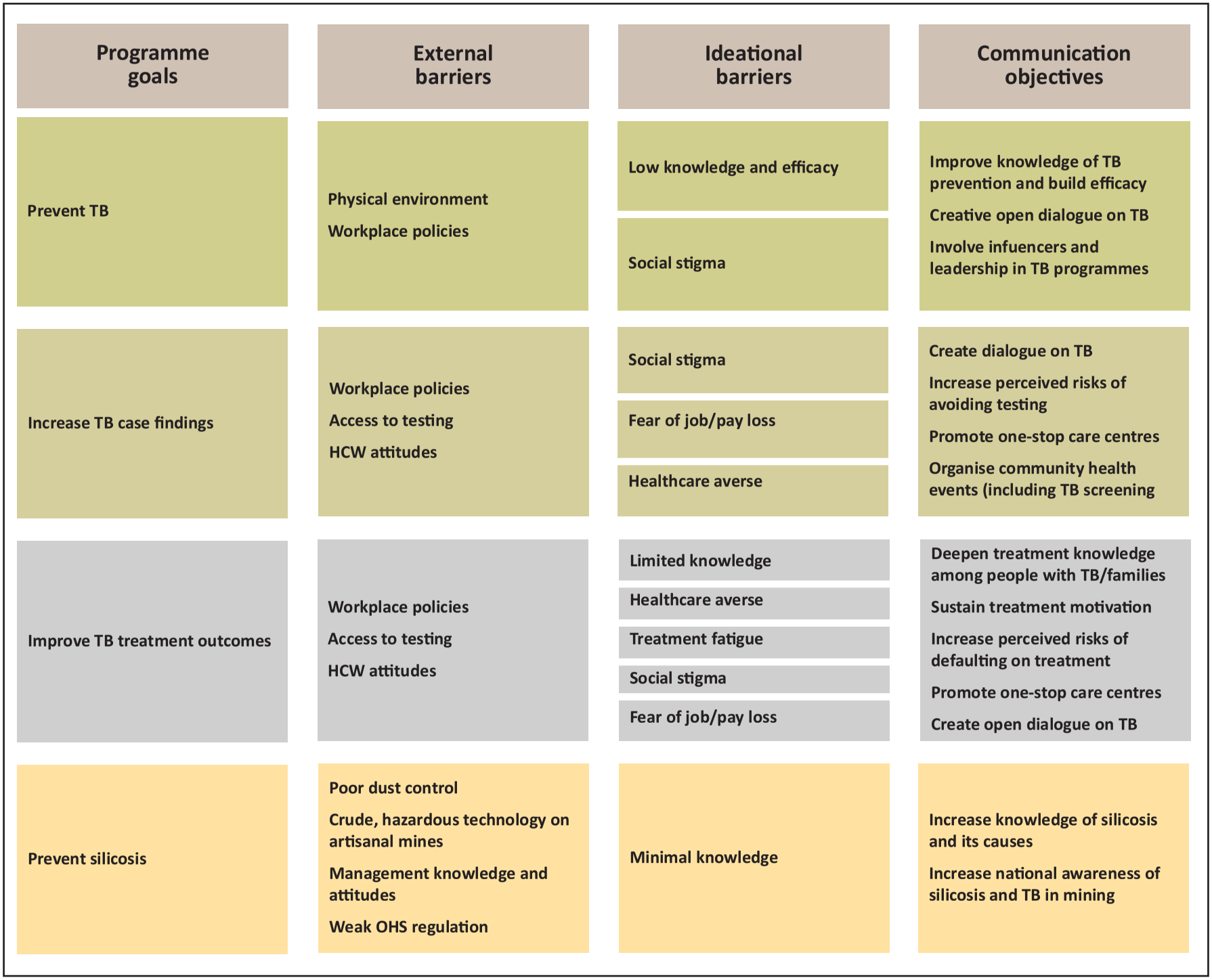


Figure 3: Derivation of communication objectives from TIMS programme goals and situation analysis

6. Messaging

The communication strategy applies the following principles to the TIMS programme messaging:

- It suggests a limited number of key messages: in this case, there are four key messages, broadly dealing with: knowledge on TB and silicosis in relation to the mining communities, the effect of HIV and silicosis on TB, and the involvement of all role-players in reducing stigma and improving health-seeking behaviour.
- Each key message has a main message and at least one tier of sub-messages.
- The messages combine factual statements with motivational elements in order to address both knowledge and action gaps.
- Messages are not necessarily creative. The final execution of the message, while staying true to the meaning, might have much stronger appeal. It is also possible for some aspects of the message to be conveyed or reinforced by the use of images and sound.

Message 1

Objective	Create open dialogue and reduce stigma. Soften gender norms that inhibit treatment-seeking and completion.
Main message	Mining communities must unite to fight TB
Secondary message	When we all show we want to end TB, we give courage to individuals to get tested and treated. Mineworkers are not to blame for the high TB levels in our communities. It is their conditions of work that increase TB risk. Every person who is treated for TB makes the world safer for all of us. Communities can help families deal with the hardship of illness.

Message 2

Objectives	Deepen knowledge of TB. Build self-efficacy for prevention & testing. Increase risk-perception. Reduce male treatment aversion. (Context specific)
Main message	Treat TB and save lives
Sub-messages	Mineworkers and their families are very severely affected by TB. If TB is not treated properly or if it is treated late, the disease often results in death. If you show signs of TB, get tested quickly and if diagnosed with TB, get treated. TB spreads easily but treatment stops people with TB infecting family members and workmates.

Message 3

Objective	Create awareness and understanding of silicosis (context-specific)
Main message	It's time to get serious about silicosis
Sub-message	Silicosis is a severe lung disease that occurs in many kinds of mining. It is caused by breathing in dust produced when blasting, drilling or crushing rock containing silica. Mine owners and managers can prevent silicosis by good dust control. Prevention is the ***only real answer*** to silicosis. It cannot be cured and it may sometimes result in death. Silicosis can be relieved by easures that reduce the strain on the lungs – preventing chest infections, not smoking and avoiding dust.

Message 4

Objective	Reduce male treatment aversion. Promote one-stop OHS centres (context-specific)
Main message	Protect your health, protect your earning power
Sub-message	TB can usually be cured quite easily by taking medicine. Workers can usually return to work during If you fail to treat TB you could shorten your working life and deprive your family of their breadwinner. Treatment is available at most government clinics and hospitals. [In specific communities: A new clinic in this community is geared to treat TB and related illnesses and to assist mineworkers and ex-mineworkers apply for compensation.]

7. Communication structures and capacity

Communication on TB (and silicosis) in the mining sector should be aligned with the broader communication activities of national TB programmes in all countries within the programme.

7.1 National TB Communication Committees

Most programmes have a National TB Communication Committee or similar structure and this should be the focal point for reviewing this strategy, selecting its most useful elements for implementation, and overseeing the production of materials.

In some instances, this will involve adaptation, customisation and translation of the "starter pack" of communication tools provided by TIMS. In other cases, countries would generate new tools from scratch.

The committee would be responsible for:

- Producing a one-year plan for implementation of all or some of the activities suggested in the strategy.
- Mobilising the financial and human resources required to undertake the planned activities.
- Overseeing the customisation, translation and reproduction of materials provided as a "starter pack" along with this strategy.
- Ensuring local implementation capacity exists in communities that will be the focal point of this strategy and good liaison mechanisms with local implementers.

It is advisable for the Communication Committee to take the major decisions but create a task team to focus on the implementation details of activities specifically in the mining sector. This task team could draw in important role-players from the sector and benefit from their knowledge. In-person workshops and webinars should be considered for engaging with the TB Communication Committees and providing them with in-depth understanding of the communication strategy and recommendations for use of its messages and tools.

7.2 On-the-ground implementation capacity

This strategy combines use of mass media with community activities and enhanced communication in clinical settings. Implementation will require people with different skills and our approach is to identify and include people who already have these skills and fulfil health promotion and education roles. The intention is to provide new thinking and new tools that could take the performance of existing teams to a different level.

In addition, these tools, with careful training, could be used by organisers and activists who are passionate about the wellbeing of mineworkers and their families but have previously lacked the knowledge and resources to play a community health role.

It is possible that some of this training could be delivered by means of demonstration videos distributed on digital platforms.

Some categories of implementers are listed in table 11.

Table 11: Potential implementers of interpersonal communication

In labour-sending and peri-mining communities	In workplace-based mining communities
Primary health clinic nurses	Workplace clinic nurses
Community/village health workers	Health and wellness programme providers
Ex-mineworkers serving as peer educators	Health and wellness programme providers
Health promoters, advocates and members of CBOs and NGOs	Trade union shop stewards
	Mineworkers' association organisers

8. Major communication interventions

This section **paints the big picture** of the communication strategy **major interventions** that bring together communication tools (explained in greater detail in the next section) and the sequence they should ideally follow so that they build on each other and be mutually reinforcing. The community-based events distinguish between three community environments:

- Labour-sending communities populated by mineworkers, ex-mineworkers and their families and communities. It provides a location for periodic access to mineworkers who spend most of the year away in the mines.
- Mining workplace communities where mineworkers work and reside apart from families.
- Peri-mining communities populated by mineworkers, ex-mineworkers, families and community members not directly involved in mining.

Table 12: Major communication objectives

Major intervention	Objectives	Strategic rationale	Communication tools
Mass media interventions: advertising (paid/sponsored)	Improve knowledge of TB prevention Improve self-efficacy in seeking treatment Create open dialogue on TB Increase awareness of silicosis and TB in mining Increase knowledge of silicosis	Improved knowledge of risks and mitigating strategies precedes changes in attitude and behaviour	Radio public service announcements (PSAs) Scripts for live reads by presenters Media interview guide with factsheet and question-answer document
Mass media intervention: editorial (unpaid/free)	Create open dialogue on TB Increase national awareness of silicosis	Improved knowledg of risks and mitigating strategies precedes change in attitude and behaviour	Media interview guide with factsheet and question-answer document Video footage
Advocacy outreach to community leaders	Moilise local leadership in support of TB (and siliciosis) programmes	Community leades act as 'gate keepers' and influencers	MixnMatch flip-chart (presentation)
Community-based events: mining workplace communities	Create open dialogue on TB Mobilise local leadership in support of TB (and silicosis) programme Reduce healthcare averson among mineworkers Improve knowledge and increase risk-perception related to TB Build self-efficacy for TB screening, testing and treatment Build knowledge of silicosis and its prevention	Approaching mineworkers as a group reduces fear and stigma and helps overcome barriers	Brief for event organisers Factsheet MixnMatch flip-chart Billboards Video footage
Community-based family day events: labour-sending	Create open dialogue on TB Mobilie local leadership in support of TB (and silicosis) programme	Minworks and ex-mineworkers will be more likely to improve health-seeking behaviour if attitudes in family/ communitity are supportive	Brief for event organisers Factsheet MixnMatch flip-chart Billboards

Major intervention	Objectives	Strategic rationale	Communication tools
	Reduce healthcare aversions among mineworkers Impove knowledge and increase risk-perception related to TB Build self-efficacy for TB screening, testing and treatment Build knowledge of silicosis and its prevention	Mitigate TB among families/communities of mineworkers and ex-mineworkers	
Community-based family day events: peri-mining communities	Create open dialogue on TB Mobilise local leadership in support of TB (and silicosis programme Reduce healthcare averson among mineworkers Improve knowledge and increase risk-perception related to TB Build self-efficacy for TB screening, testing and treatment Build knowledge of silicosis and its prevention	Facilitating dialogue and better support structures in communities removes barriers to imroved health-seeking behaviour	Brief for event organisers Factsheet MixnMatch flip-chart Billboards Video footage
Health worker intervention in communities and clinics	Reduce treatment aversion Improve knoledge of TB and silicosis (where applicable) Create open dialogue on TB Deepen undertanding of treatment among individuals with TB and their families	Trusted messengers Critical in interpreting and deepending information given through other channels	MixnMatch Flip-chart Video footage
Digital	Build capacity of health workers and peer educators to communicate on TB and silicosis Sustain tretment motivation in people with TB Reinforce knowwledge gained at community events	Cost-effctively increases reach of existing materials Allows for individual's engagement with information Reinforcement and continuity for identifiable members of of primary audiences	Video footage Infographics

For illustration purposes, **an example of an implementation plan** with timelines and sequencing is provided here. It should be noted that some activities are time-bound, such as holiday campaigns, which should take place during the end-of-year festive season. Other activities should be ongoing. The first quarter can begin at any time, depending on the country. Family-day events should happen at least twice a year – such as in March (around World TB Day) and the second time in September. The plan should also be context-specific: not every community needs to have every kind of activity or event eg labour-sending communities will not need to have a mine-based workplace event. But all communities should aim to have at least one but preferably two major events a year.

Intervention	**Q1**	**Q2**	**Q3**	**Q4**
Convening of coordination committee				
Communication capacity building (health workers and peer educators)				
Mass media: advertising (paid/sponsored)				
Mass media: editorial (unpaid/free)				
Community leaders outreach				
Mine-based community events				
Labour-sending: family-day events				
Peri-mining community events				
Health worker interventions				
Digital				

9. Communication channels and tools

The channels of communication are chosen on the basis of their:

- Capacity to reach and secure the attention of target audiences.
- Potential to achieve a motivational impact on the audience.
- Suitability to convey desired messages and content.

The most appropriate channels for the various audiences to be targeted for TIMS' purposes are outlined below. The insights of key informants and results of the KAP study, reviewed in the situational analysis, have been influential in informing these channels, which fall into three broad categories: i) mass media – print, radio and television; ii) interpersonal – individual, small groups and communities; and iii) electronic and online communication.

Tools that will be developed through this phase of the TIMS programme have been designed to **suit a particular communication channel** – but they were also conceived with the intention of being **multi-purpose**, easily reformatted and reused, which would increase their utilisation, durability and cost-effectiveness. Because of budgetary constraints, not all the tools included in the previous section on major interventions could be produced at this time. All the tools will need to be customised to suit country specifics and translation into relevant languages.

9.1 Approach to mass media

The rationale for using mass media is rooted in the geographic diversity of the target audiences, the relative cost-effectiveness of this medium for reaching large numbers of people in return for a modest per unit cost, efficiency in relation to resources needed to conduct them, and the potential to replicate similar approaches, messaging and content across different countries. It is also able to reach mineworkers and ex-mineworkers beyond the hotspots identified by the TIMS programme, and to influence the broader public climate.

However, the activities and costs associated with producing and placing communication materials across the three different mass media platforms vary greatly in a number of ways.

It is necessary to distinguish between editorial or 'free' and advertising or 'paid' mass media use.

Editorial media publicity relies on editors and journalists utilising the communicator's information in their news reporting. It is considered a more credible form of mass media use than advertising, where the message is controlled by the advertiser/communicator. But editorial publicity also relies on a high level of skill on behalf of the communicator, constant sourcing of news angles and information to feed to the media, and availability of appropriate spokespeople for interviews. Hence the volume, content and quality of coverage and messaging fluctuates and this would affect the programme's impact if it was the only mass media tactic used.

For these reasons, the communication strategy needs to include **advertising**. It allows TIMS and other implementing partners to have greater control over messages, and when and where they are carried.

Usually, though, buying space on mass media channels is costly – and especially so if one considers the magnitude of the TIMS programme and dispersed location of key audiences. Depending on budget availability, radio interviews and slots can also be sponsored, which would make it more appealing for the radio stations to run and assist with increasing the availability of airtime. Here are three recommendations that can be included in media plans:

- Relevant mass media, and particularly national broadcasters which have a public education mandate, should be engaged in negotiation and requested to, where possible, donate or significantly reduce their prices for covering the supplied content.
- Community radio stations have significant reach across much of the region, can be targeted at the hotspots, and are impactful as they broadcast in local dialects and are relevant to their communities. However, they tend to be resource-limited and cannot fund production and flighting of materials.
- Major TB or TB/HIV campaigns planned by NTCPs or other partners can also leverage investments by negotiating for the messaging and content to address TB in the mining sector.

TIMS communication research highlights that radio is the most accessed and preferred mass media channel for primary audiences across the region, except in Mozambique where television was indicated to be more popular. Regionally television is the second most preferred medium. It is also clear that story-telling is a powerful tool. While there are likely to be budgetary and scope limitations, it should be used as much as possible.

These conclusions provide the basis for the strategy to advocate that **radio should be the primary mass media channel** – but that opportunities to use content in television format should also be sought, particularly in Mozambique.

Radio should be used to:

- Increase awareness and knowledge on TB (and silicosis) in the mining sector among target audiences and the general public. Radio PSAs and interviews would be suitable ways to communicate this.
- Change attitudes towards social stigma and undertake open discussions.

To achieve this, a more creative approach to messaging and message delivery, such as through storytelling and careful selection of who delivers the message, should be adopted. This will aim to go beyond just improving knowledge, as outlined by communication objectives 1-3, and explore other challenges and barriers to improved health-seeking attitudes and behaviour (aligned to communication objectives 4-8).

Because of the high cost of advertising on **television**, this channel should primarily be used for editorial purposes. This can be done through inviting TV news crews to cover mine or community-based activations and events. Where television channels have studio-based live or pre-recorded programmes, it would be possible to field spokespeople who could use the interview materials which were developed for radio interventions. Video content produced through the TIMS programme can also be provided to the stations.

In most TIMS countries, **print media** would only be useful to reach stakeholders and influencers of primary audiences, such as policy makers, employers, major regional role players such as TEBA and mineworkers' and ex-mineworkers' associations, and healthcare professionals. It should therefore be part of the communication mix, especially for advocacy purposes.

Mass media communication tools

Materials produced through this strategy include the development of examples with "characters" and broad story lines which can be adapted and implemented by local partners.

The rationale is to have some stories which help target audiences identify with real issues, such as weighing the risk of losing income in the short-term against the more long-term risk of doing nothing to tackle TB, and thereby risk losing the family's main source of income.

Scripts for live reads to be used by radio presenters (possibly also TV). Their broadcast should be supported by negotiated payment so that they are repeated as often as possible in order to reach target audiences a number of times. Most individuals need to hear this kind of information several times before it is understood and absorbed.

A **media interview guide** with factsheet and question-and-answer sections.

These can be used for live (with or without listener call-ins) or pre-recorded interviews. They will provide radio presenters and spokespeople with content to be covered.

Spokespeople for these interventions can be health workers and other influencers such as NTCP and community leaders and employers. Involving mineworkers and ex-mineworkers would boost authenticity and resonance with key audiences.

Broadcast-quality documentary/story-type **footage** serves to facilitate the development of locally relevant materials by TIMS and partners. Audio PSAs would be extracted from video stories.

9.2 Interpersonal communication

While it is more time/resource-intensive than mass media, interpersonal communication enables deeper interactions with target audiences. This often **underpins communication for social and behaviour change**.

Regional communication research findings suggest that information received by primary audiences through media needs to be discussed further in person. Interpersonal communication was reported to be an important and trusted channel. It would be in the form of:

- One-on-one discussions, such as between health worker and patient.
- Small groups.
- Community dialogues, events and screening.

Health workers were identified as the most suitable individuals to facilitate these discussions and help the target audiences develop more complete understanding. Their efforts should be supported and amplified by partners, NTCPs, agencies and local NGOs/CBOs – and particularly those that are part of the TIMS programme.

Thus, this strategy recommends to provide nurses, community health workers and health promoters and mobilisers with communication tools and training for interpersonal engagement with target audiences. In some countries, such as Lesotho and Zambia, ex-mineworkers have been trained as health promoters. The same materials should be available to local NGOs/CBOs and mine-based health programmes.

Once they have the information and materials, health workers can also be a resource for educational media initiatives. Radio call-in interviews are opportunities for listeners to get answers to questions and concerns, with the added value of the discussion being heard by others with similar interests and needs.

Recommended types of interpersonal communication:

- Advocacy with **community leaders.**

  Leaders in mining communities and workplaces need to be part of plans and programmes for working with target audiences as they act as gate-keepers and influencers. It is likely that the level of interest and support will vary across the region and within countries, and that it will be higher in places that have already been sensitised to TB, TB/HIV and silicosis. It is noted that workplace communities are very different across the region and within some of the countries. In some, they are large mining "villages" with residences, a clinic and a shop, for example. In the case of artisanal mining, they are smaller, more informal and less permanent. In such cases, the regional representative of a mineworker association may be the only existing resource to involve.

  Local NGOs/CBOs, mineworker associations and health workers would be suitable individuals to engage with leaders in areas that are anticipated to be receptive to hosting activations and events. Additional national advocates may be invited to take part in outreach to leaders in communities where there has been less work done. Additionally, being exposed to mass media campaigns prior to being directly engaged would help to create initial awareness among the leaders.

  The MixnMatch flip-chart (in the form of a presentation, if needed) and videos should be used as communication materials during this outreach.

- **Peer education** and TB (and HIV and silicosis) screening programmes in the mines.

  These have previously been implemented in most of the formal mines in South Africa and other countries including Botswana, Malawi (uranium mines) and Zimbabwe, and are shown to encourage TB testing and adherence to treatment. Previous campaigns, such as Brothers for Life, indicate that men respond well to role-modelling. As the majority of mineworkers are men, this is likely to be an effective approach. As a group-based activity, it also reduces stigma by promoting openness and dialogue.

  The TIMS programme would provide new communication tools, with deeper messaging that also addresses silicosis, which has scarcely been done till now.

- **Community events.**

  This approach provides easy access to health workers and NGOs, and enables sharing of information in an inclusive and interactive environment. They provide opportunities for influencing both mineworkers and their families. Findings about some of the characteristics of family and social relations that prevail among mineworkers and ex-mineworkers, families and communities suggest that fear of repercussions and perceived lack of support for health-seeking behaviour are barriers that need to be overcome. Education and screening campaigns targeting migrant workers during holiday and peak travel times (December/January), which were implemented by the IOM, were recognised as valuable in Tanzania and Mozambique.

Family day activations with education and screening for peri-mining and labour-sending communities are particularly recommended. Addressing mineworkers in that context strengthens family structures and takes advantage of the mineworkers' positive perception that their family is likely to support them if they need to take treatment (TIMS KAP study).

- These events should be hosted in busy sites such as taxi ranks, clinics, schools and churches.
- The aim should be to hold at least two of these a year – perhaps in the second and fourth quarters, ie in March and September.
- A December/January campaign should be hosted in labour-sending communities to include migrant mineworkers and make use of this unique opportunity when the migrant mineworkers are in their family/community setting.

The programme for these events could cover not just TB/HIV/silicosis, but also other health conditions relevant to the community, eg malaria.

The brief for event organisers will help guide relevant organisations how to go about organising these events.

■ **Door-to-door campaigns.**

These are effective in reaching remote communities and facilitates their access to information. The most efficient way to pursue this would be to collaborate with organisations that have been doing this work – for example, in South Africa it is done by ward-based community health teams. Where community health workers and peer educators are doing this work, they will have to be equipped with tools and trained to use them.

The MixnMatch flip-chart for health workers was designed as a tool for engagement and education in these situations.

■ **Clinic-based health promotion.**

This activity is essential, as it would enhance all other mass media and interpersonal communication discussed above. It could involve:

- Educational talks for patients in waiting rooms. Community health workers and peer educators can be trained in the use of the MixnMatch flip-chart for this purpose, and where possible, show videos either on screens or mobile devices.
- During consulting sessions between healthcare provider (nurse/doctor) and patient. It is recognised that resources and healthcare provider's time are limited in many locations. The MixnMatch flip-chart and videos would provide useful materials for use in clinics.

Interpersonal communication tools

This strategy recommends the development of regional materials which can be adapted and used for interpersonal communication in each country.

As discussed elsewhere in this document, the knowledge gaps differ per country so these would need to be tailored to allow countries to include what is relevant to them. They will also need to be translated in whole or some of the keywords (a glossary).

MixnMatch flip-chart for use by health workers, as well as others who would conduct outreach and education, including mine- and community-based peer educators, counsellors and members of NGOs/CBOs.

The recommended design is for it to be file-bound and with modular content that allows for it to be customised by the country/community. It is primarily intended to be printable so it can be taken to events, but should also be available in electronic format for use on tablets and mobile phones, or projected as a presentation during small meetings – such as during community leader outreach.

The printable version would be able to stand on a table, with one side containing simple and graphics-driven content facing the listener, and the back side with more explanation facing the health worker/educator.

Brief for event organisers which NGOs, mineworker associations, peer educators, government departments and other partners can use to request and promote community- and workplace-based activations and events. It would be easily email-able.

9.3 Online and digital

This platform is evolving and becoming more important in the region. Access is mainly through mobile devices, although cost of data and sophistication of the devices are significant factors. The TIMS programme's potential use of the platform would need to make it affordable for the end-user to download the information.

In some countries, data costs are lower and it is easier to access, and in others, those with more resources such as health workers and NGOs/CBOs may be able to use the materials during their engagement with target audiences.

Communication research findings suggest that **WhatsApp** is a popular form which can be leveraged, provided it is possible to access mobile phone databases that are being developed through TIMS and others partners, such as TEBA, and to find innovative ways to assist primary audiences with covering expensive data costs.

An important characteristic of video format is that materials can be reformatted for use on digital platforms. A project called Psybergate, backed by the South African Council for Scientific and Industrial Research (CSIR), is expanding the use of IPTV (internet protocol television) through a smart mobile phone app as the means to enable **free-to-viewer access for educational video** material. The method uses low bit rates and works without buffering. Like WhatsApp, the method relies on availability of users' mobile phone numbers. Users can be based in both urban or rural areas. They would receive instructions on how to download the app and thereafter be provided with timing of broadcast.

The costs for setting up the app and data for the users' access to the broadcast can be sponsored. Psybergate's other features are:

- Reach low bandwidth areas
- (Near) unbroken streaming – no re-buffering
- Ultra-low data rates - low cost to viewer
- Any quality-cost ratio per channel
- Social media interactivity
- Video-on-demand
- Precise analytics.

This or a similar channel would also lend themselves to hosting and broadcasting short training videos or presentations aimed at assisting clinic and community health workers in the use of other communication/education materials.

Online and digital tools

The **MixnMatch flip-chart visuals** could be animated into **infographics** with either text or sound (or both), and along with videos, uploaded to Youtube and different mobi sites and made into low-res files that can be shared through WhatsApp or other applications.

The TIMS programme should work with relevant partners to support the development of a **database of mobile phone** numbers for mineworkers and ex-mineworkers, to be used for group messaging with materials or IPTV notices.

9.4 Summary of communication tools to be developed through the TIMS programme and their possible uses

Table 13: Summary of communication tools

Tool	Uses	Who could use it
Scripts for live reads	National/regional/community radio	Radio presenters
Media interview guide with question-answer doc	All mass media (primarily broadcast)	Media Spokespeople including HCWs, NTCPs, NGOs/CBOs
Mini stories in audio-visual format	Television and online media Digital eg Youtube Mobile platforms (in low-res format)	Media Health programmes Community leaders
MixnMatch flip-chart	Community outreach Clinic-based health promotion Mine-based health promotion Infographics for digital distribution	Health programmes in communities and mines Healthcare and community health workers Peer educators NGOs/CBOs NTCPs
Brief for event organisers	Organising community and workplace events	Health programmes in communities and mines Healthcare and community health workers Peer educators NGOs/CBOs NTCPs

10. Monitoring and evaluation

In light of capacity limitations, costs and timelines associated with evaluation of outcomes, it is proposed that the implementation of the TIMS programme communications should be tracked via outputs and reach.

Outputs would encompass all communication activities that are part of the implementation plan within the country (or district/province, depending on where most of the target audiences are situated), while the reach of most communication interventions can also be conveniently monitored and reported on. In South Africa, for example, figures for listenership, viewership and circulation of different media channels are available.

The communication coordination committee should provide an M&E framework that is suited to the country's conditions and resources. What it could cover is illustrated in table 14.

Table 14: Components of the M&E framework

Output/activity	Indicator (mainly)	Reach (mainly)
Radio public service announcements	Frequency of flighting the PSA during a campaign	000s of listeners reached by that media channel over campaign
Live reads	Frequency of the presenter reading the script during a campaign	000s of listeners reached by that media channel over campaign
Media interviews (paid/free)	Number of interviews per quarter/year	000s of listeners reached by that media channel over quarter/year
Community and workplace events	Number of events held in a year	Number of people who attended the event Number of people who got screened/referred
Clinic education	Number of clinics that conduct education in district/province	Number of people seen in clinics in district/province who could have been exposed to education
Evaluation of educational sessions	Scores on end-of-session quiz	% of audience with score above 60%
Door-to-door outreach	Number of outreach sessions during the year	Number of households visited Number of people who got screened/referred
Digital dissemination	Number of times materials were disseminated	Number of recipients
Evaluation of communication materials by sample of users including health workers, peer educators and CBOs	Form to be completed	Analysis of replies and recommended amendments if needed

In addition, some of the communication objectives in this strategy relate to increasing knowledge and reducing ideational barriers to health-seeking behaviour. As is evident from other health programmes, building knowledge and changing attitudes and behaviour take longer and repeated interventions and campaigns. In time, the TIMS programme impact in the areas of knowledge, attitudes, perceptions and behaviours could be measured against the 2017 KAP baseline. Considering the costs associated with such a study, it is advised it should only be conducted following intense sustained communication.

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