

DEPARTMENT OF HEALTH RESEARCH BRIEF

Verbal Autopsy with Participatory Action Research (VAPAR)
Expanding the knowledge base through partnerships for
action on health equity
Series 1, Number 5, January 2018



‘Water is life’:

working with communities to develop local knowledge for action
to address water shortage

Lack of access to safe water poses significant risks to health and wellbeing. We worked with local communities in the MRC Wits/Agincourt Health and Socio-Demographic Surveillance System (HDSS) to develop routine surveillance data with local knowledge for action on priority health issues. In 2017, lack of water was nominated by communities as a priority topic. We held a series of community discussions on the drivers, impacts and needs around lack of water, and developed visual evidence on this topic.

Water sources and shortages

Water sources include taps in the house, yard and street, mobile tanks, cement and traditional wells and surface water (ponds, rivers and dams). Water is also sought from boreholes. However, borehole water was reported as a poor preference: it is saline, does not taste good and damages electrical equipment. Repeated and prolonged periods when piped water was unavailable were reported, as was the need to resort to unregulated sources known to be less safe.

Reasons for water shortages

- **Infrastructure:** was reported to be unreliable, service delivery inadequate, and reservoirs empty due to malfunctioning pumps. Delays in maintenance and vandalism of infrastructure also reported, the latter due to limited community ownership.



Picture 1: Mobile water truck

- **Poor governance and planning:** Participants related the infrastructure problems to the poor planning by water authorities the municipality and the water service provider (Department of Water Affairs). Furthermore, the community asserted that leaders do not know what is happening on the ground.
- **Mobile tanks:** were reported as a hindrance to provision of functioning taps. Mobile tanks are not always available due to lack of fuel, corruption by some drivers, and the water can be contaminated.
- **Droughts:** Water shortages exacerbated by droughts which result in depletion of underground water and evaporation of dams. Rivers were also reported to be intermittent owing to low annual rainfall.

Health and social impacts

- **Poverty and hunger:** Continuous shortages of water were reported as an overwhelming impediment that drives people into poverty. Participants reported hunger related to water shortage: it becomes difficult to prepare food without water, lack of ability to grow plants, work and effects

on children's education. It was also reported that, in dire circumstances, water is sold by mobile truck drivers in the community. With many households depending on government grants and high unemployment, buying water is often unaffordable.

- **Avoidable illness:** The absence of clean water poses multiple and significant threats to survival (see panel overleaf). Participants described significantly limited choices around using clean water.
- **Sanitation and hygiene:** reported to be considerably lower when there is no water, and that people compromise, sacrifice, and recycle water.
- **Stress and conflict:** Life was reported to be a continuous struggle without a reliable source of clean water, affecting relationships and leading to conflict, tension and division. Service delivery protests were described.
- **Educational and economic impacts:** The discussions recounted significant amounts of time spent fetching water. In this community, women and children bear the burden of collecting water.



Actions

- **Develop new partnerships led by community leadership:** The community identified the following stakeholders as important in solving the water problem through coordinated partnerships: Dept. of Water and Sanitation, Premier, Mayor, Municipality, councillors, community leaders (CPF, CDF, induna, chief), Rand Water, NGOs
- **Infrastructure:** Building dams and advancing technologies were identified as important. Participants recommended stopping mobile tanks and investing in household taps. People are healthier with water in each household, contamination of water from source to point of use is eliminated. Mortality and morbidity is reduced and people become more productive lifting themselves out

of poverty, and burden of disease is reduced. Families can use the time spend to collect water on income generating activities and food security improves as a result

- **Planning:** community based participants also recommended better planning to inform developments to infrastructure. Several suggestions were made including: inventories of households without water in the house or yard, detailed monitoring and reporting of water-related challenges in the community; fund raising to support the monitoring, planning and infrastructure development; fairer allocation of resources through multi-sector deliberation and partnerships; awareness campaigns and education around water access and water safety.

MCR/Wits Agincourt HDSS Surveillance Data 2014-15

Causes of all deaths

Infection	568
Non-communicable	573
Injury	107
Children <1 month	22
Maternal	20
Unknown	234
TOTAL	1524

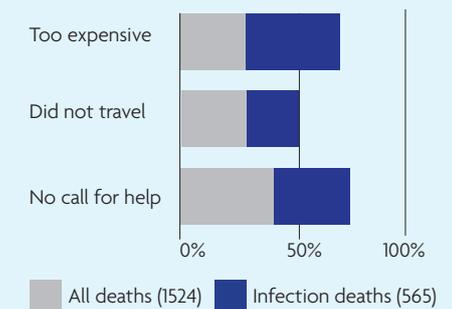
Deaths with possible link to water shortage

Acute respiratory, incl. pneumonia	213	**
HIV/AIDS related	185	*
TB	104	**
Diarrhoea	19	***
Other infection	8	**
Child <1 mo. sepsis2	***	
Sepsis (non-obstetric)	1	*

*May be related to water shortage **Likely to be related
***very likely to be related

- 1,524 deaths in the study area 2014-15
- Over 500 may have been due to, or influenced by, lack of clean, safe water

Circumstances of death



- All deaths: No call for help, not going to facility & health care too expensive 25-35% of circumstances reported.
- Deaths due to infections: No call for help, & health care too expensive over 30% of circumstances reported.

Visual evidence



Picture 2: Empty water tank



Picture 3: Laundry done in a river