

Overview of Preparedness and Response to Public Health Threats in Tanzania

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Digi Project – Northern Tanzania

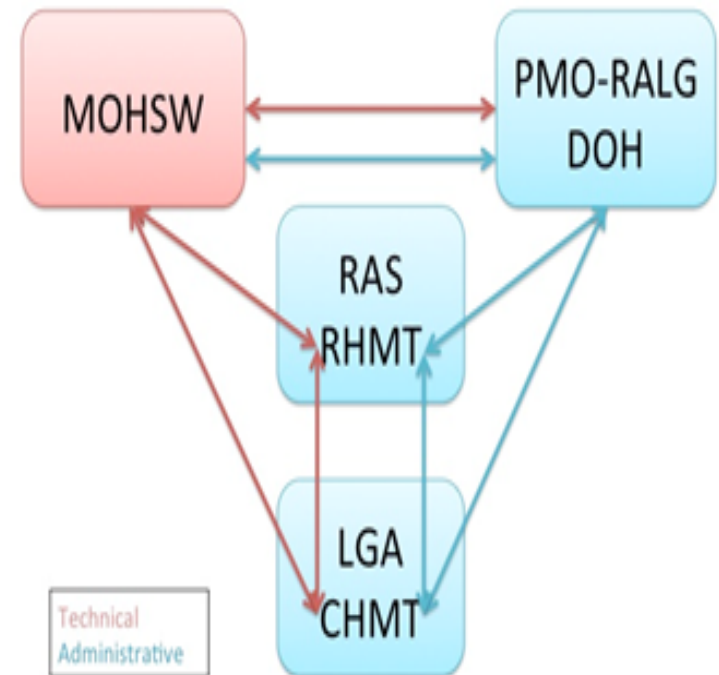
Background

- Guiding Policy: Health Policy 2007
 - Translated into Health sector strategy that guides overall health services
- Government functions are decentralized through Decentralisation by Devolution (D-by-D).
- Central level (MoH) gives policy direction & technical advise
- The PO-RALG oversee management & administration

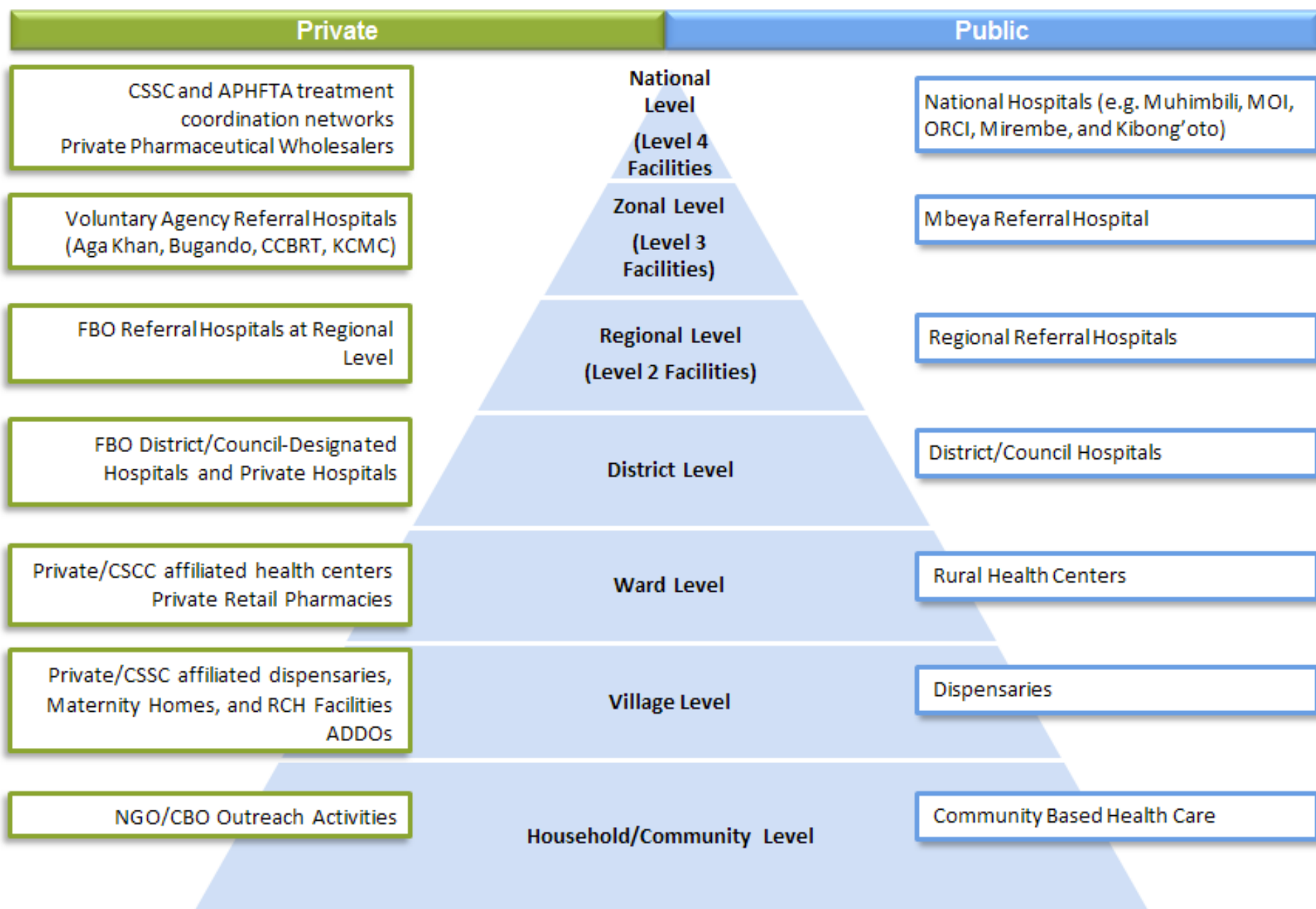
Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.



Relations between levels of management In a health sector

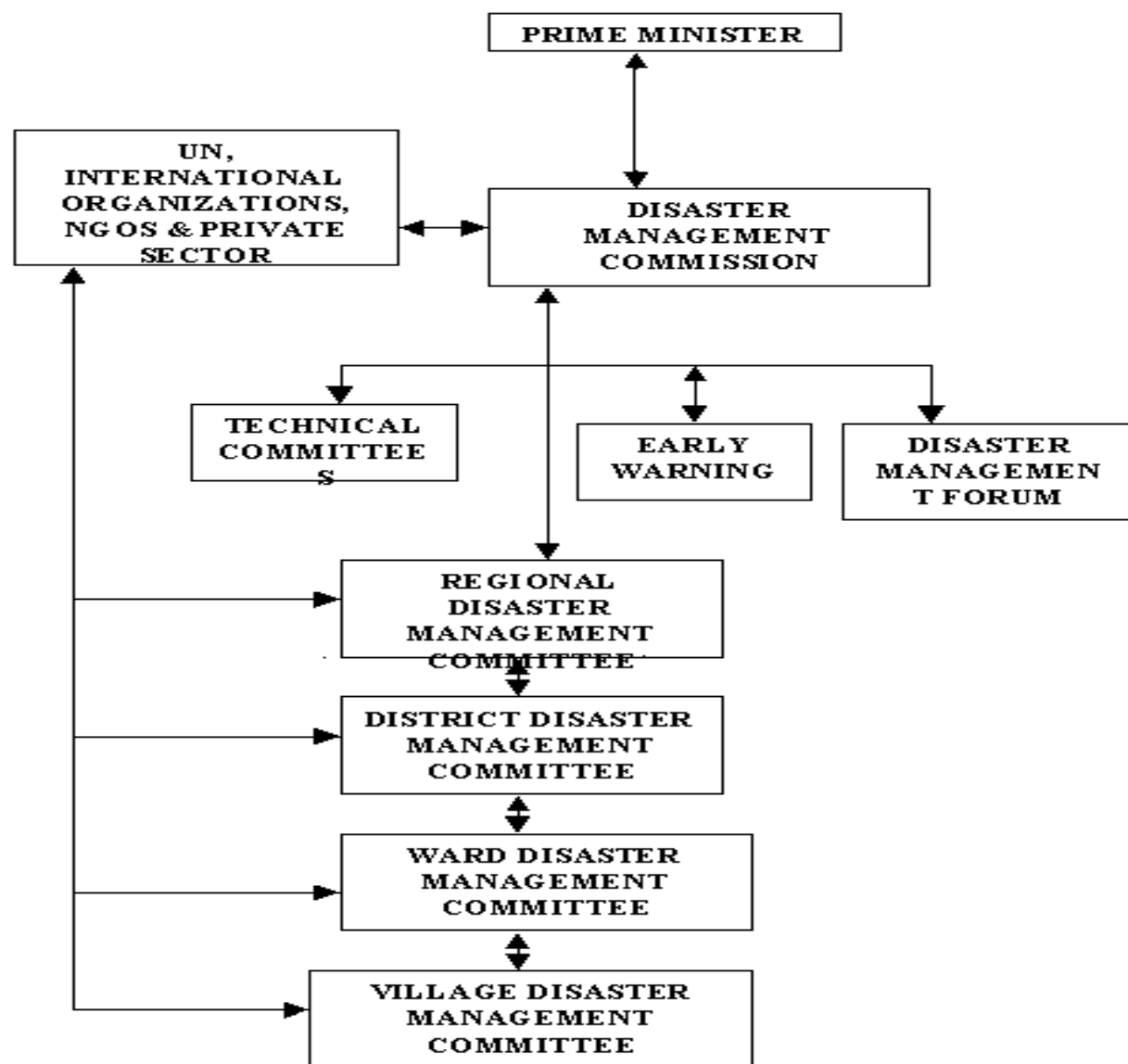


The health care pyramid in Tanzania



Tanzania Disaster Management Framework

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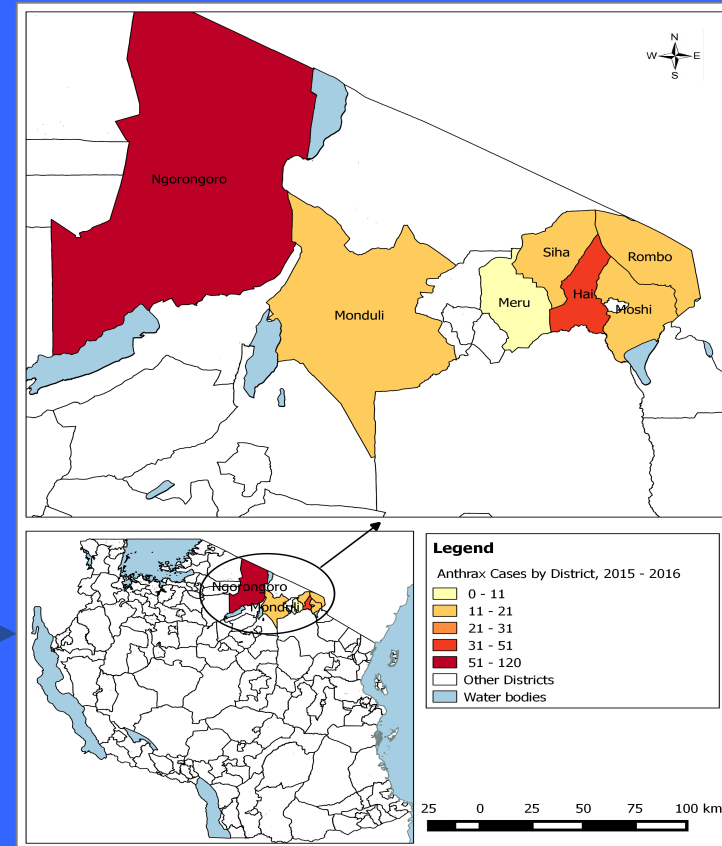


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Guidelines and Procedures in Place

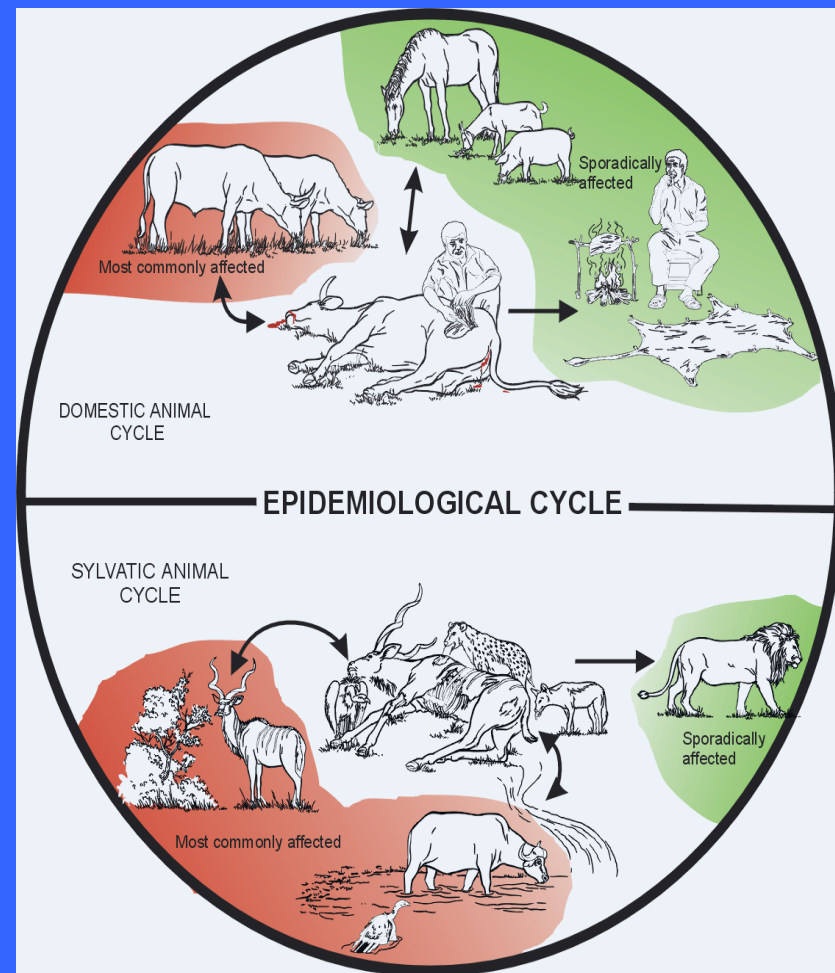
- Disaster Relief Coordination Act. No. 9 (1990)
- Public health Act, (2009)
- National Operations Guidelines (2003)
- Disaster Management Policy of 2004
- International Health Regulations 2005
- Integrated Disease Surveillance and Response (IDSR), revised in 2011 (in line with IHR)
- Emergency Communication Strategy (2012)
- National Emergency Preparedness and Response Plan (2012)
- Framework for cross border Surveillance & Response (2012)
- National Laboratory Policy
- Disease Specific Contingency Plans
- One Health Strategic Plan 2015 – 2020
- National climate change and health communication strategy 2016 - 21
- Tanzania National eHealth Strategy 2013 – 2018 (under – review)

One Health _ Anthrax outbreaks in the humans-livestock-wildlife interfaces areas of northern Tanzania



Routes of disease transmission

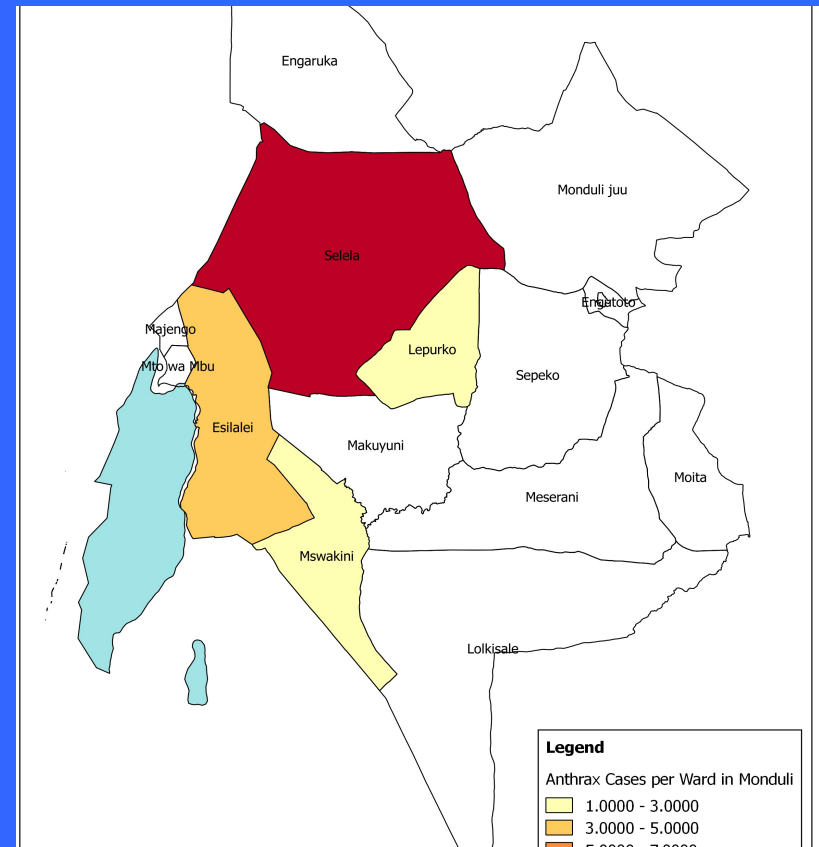
- Anthrax is an acute infectious zoonotic disease caused by *Bacillus anthracis*. It mostly affects wild and domestic herbivorous – **NEGLECTED DISEASE**
- Humans acquire anthrax through contact with infected animals or anthrax-contaminated materials
 - Other routes of infection
 - Drug users (sharing of syringes)
 - Bioterrorism
- Three disease forms (cutaneous, inhalational & gastrointestinal)



The disease Impact in the hot-spot areas



Monduli district – Northern Tanzania



Structural Equation Model for predictor variables associated with anthrax transmission in northern Tanzania

- SEM – was able to identify that education was linked to the model as a predictor of exposure
- Higher level of illiteracy is linked to poverty
 - Poor people opt to dress carcasses – meat
 - Uneducated people can't read the EIC
- Studies show that, illiteracy and poverty are linked to high incidences of zoonotic diseases in Sub – Saharan Africa.
 - Increased contacts to animals, yet they have poor health services (**Grace et al 2017**)

Variable description	Age 1- 20 years, OR (95% CI); p-value	Age >20 years, OR (95% CI); p-value
Not exposed (LCA class)	OR=1.00 (-)	1.00 (-)
Exposed (LCA class)	25.0 (1.5-410); p=0.024	3.2 (1.28-8.0); p=0.013
No formal education	.	1.00 (-)
Have formal education	.	0.23 (0.09-0.58); p=0.002*

*Having formal education was a predictor for being Exposed, not directly linked to skin anthrax

Disease control strategies in the hot-spot areas



Toa chanjo kwa mifugo yako.



- Public awareness campaigns– key messages
- Safe carcass disposal – burning
- Intensified surveillance systems for humans and animals (One Health)
- Livestock vaccination
- Stockpiling of antibiotics
- Identification of competent laboratories for human + animal diagnosis

Further Readings _ Anthrax situation in northern Tanzania

1. Prevention, detection, and response to anthrax outbreak in Northern Tanzania using one health approach: A case study of Selela ward in Monduli district” (***DOI: 10.14202/IJOH.2017.66-76***)
2. Anthrax outbreaks in the humans - livestock and wildlife interface areas of Northern Tanzania: a retrospective record review 2006–2016” (***DOI: 10.1186/r12889-017-5007-z***)
3. Risk factors for human cutaneous anthrax outbreaks in the hot-spot districts of Northern Tanzania: an unmatched case control study” (***DOI: 10.1098/rsos.180479***)
4. Ecological niche modeling as a tool for prediction of the potential geographic distribution of *Bacillus anthracis* spores in Tanzania” (*IJID – S – 18 – 00817*) – Submitted to the ‘***Intern. Journal of Infectious Diseases***’

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Challenges

- No analysis of effectiveness of health education (HE) delivery – reaching target audience
- Poor involvement of research and training institutions in HE strategies
- Poor involvement of private sector
- Limited capacity and capabilities of risk communication at sub-national levels

Recommendations

- Strategies for more proactive risk communication should be developed (PPP with the media - radio, TV, cell phone providers, newspapers, etc)
- Increase the number of trained health communicators (health personnel, community chiefs, religious leaders, traditional healers, etc)
- Research activities on the health education uptake and retention

Introduction of a Digi Project in Arusha region



- Met the Regional Health Management TEAM (RHMT)
 - Engagement of local CHWs in the Digi project
 - Good mobile phone penetration in the region
 - Anthrax is a BIG public health problem
 - Two staff were assigned to join the assessment to Monduli district

Site survey in Monduli district (Selela, Mto wa Mbu, Esilalei Migombani & Mungere)



- Met the Council Health Management TEAM (CHMT)
 - Anthrax is a main PH problem in the district
 - Humans, livestock and wildlife are being affected
 - Esilalei & Mungere village met the inclusion criteria
 - 3G connectivity – TiGO
 - Sufficient smart phone penetration
 - Allocated a building (Kindergarten) for a Digi project
 - Focal person allocated

Site survey in Monduli district – Esilalei village



Thank You

Merci



Karibu Tanzania