Preliminary Field Investigation Report

Investigation Number: 01 **Date:** 24th December 2008

Name of Resident: Senga Sembuche

Location: Temeke, Dar es Salaam

Accompanied by: Daudi Kadigi

Vehicle Used: STK 4426

Duration of Field Trip: 10 days

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1. Introduction

Measles is a highly infectious disease causes by morbilivirus for which human are the only reservoirs. Transmission is primarily from person to person via aerolized droplets or by direct contact with the nasal and throat secretions of the infected persons. It is among the epidemic infectious notifiable diseases in Tanzania.

Tanzania has been conducting measles control initiatives since 1999. Emphasis has been on strengthening routine as well as supplementary immunization activities. While the routine immunization (single dose vaccine at 9 months) gives a protection of 85%, the supplementary dose given during campaigns has shown to increase the protection to 99%.

The current measles immunization routine coverage in Tanzania is more than 90% while the campaign results have also shown figures to be above 90%. The routine coverage of measles in Dare es salaam region in 2005 according to the districts has been above 70% (Ilala: 79%, Kinondoni 90%: Temeke 91%) and with the 2005 measles campaign the coverage in all districts have reached above 90%.

2. Nature of the Problem

On the 15th of November 2008, the MOHSW received report of cases of suspected measles. Following telephone interview it was learnt that there were a total of 32 cases, 15 being children under 5 years of age.

The index case was elaborated as a female ten month infant from Buza Capetown Street with date of rash onset on 30th September 2008, who later developed difficulty in breathing and died. Vaccination history of this case revealed that the case had not received any valid dose of measles vaccine. On subsequent day, another child aged 10 months presented with difficulty in breathing and later died too. Since the outbreak has began, it was learnt that 7 specimens were collected from 7 suspected measles cases out of which 6 were laboratory confirmed as measles cases.

It was also learnt that the CHMT had the suspected cases investigated up to their places of residence. Active search to identify other cases was conducted in all the 4 affected wards whereby a total of 40 houses were visited. 100 health care providers from private and public health facilities were also sensitized on how to identify and manage a measles case. All dispensaries in the providing services to the affected neighbourhoods had also been visited.

3. Hypothesis of the outbreak

This outbreak was thought to have been imported from an index case who was a residence of Tabora region where there was an measles outbreak. This index case had just come from Tabora to visit his relatives in Temeke, Dar es Salaam. It was hypothesized that the individual spread the disease as he visited relatives in different places.

4. Preliminary findings

We defined a suspected case as a person residing in Temeke with rash and fever with or without cough or running nose or conjunctivitis from September 30th of 2008. We reviewed

the line list and found the there were a total number of 23 suspected measles cases who fitted the standard case definition.

Table 1: Outcome of measles illness in Temeke Outbreak 2008

Outcome of illness	Frequency	Percent
Alive	17	73.9%
Died	2	8.7%
Unknown	4	17.4%
Total	**23**	**100.0%**

Table 1 above shows the outcome of the cases. There were two measles deaths during this outbreak giving a case fatality rate of 8.7%. The outcome of illness could not be established for 4 cases.

Table 2 describes the cases distribution by place. The most affeted street/ neighborhood was Buza Capetown, 17.4% of the cases were from this neighborhood.
There was no gender differences among the cases.

Table 2: Distribution of Cases by Street/ Neighborhood

Street or Neighborhood	Frequency	Percent
Azimio Kusini	1	4.3%
Buza	2	8.7%
Buza Capetown	4	17.4%
Buza Mbepela	1	4.3%
Changombe	1	4.3%
Ilala	1	4.3%
Makangarawe	3	13.0%
Mbagala Kizuiani	1	4.3%
Tandika	2	8.7%
Temeke Sokota	3	13.0%

Turdaleo Salom	1	4.3%
Yombo	1	4.3%
Yombo Buza	1	4.3%
Yombo Vituka	1	4.3%
Total	**23**	**100.0%**

Fig 1 below describes age group distribution More than half of the cases i.e 56.5% of the cases were children aged between 1 to 5 years, 30.4% of the cases fell between the ages of 16 to 33 years.

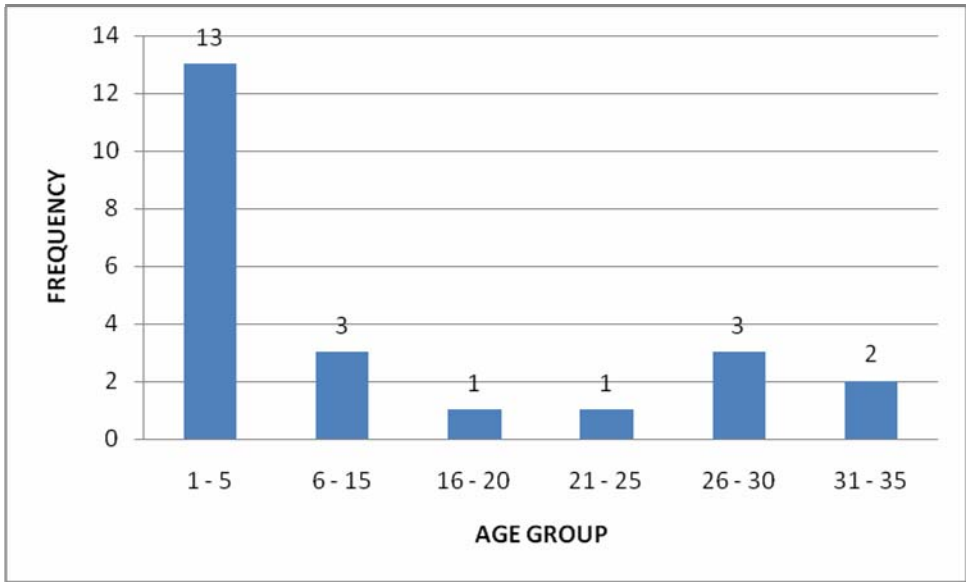


Figure 1: Age Distribution of Cases

Figure 2 shows the measles vaccination status of the affected people. Few had received 2 doses; 9 (39.1%) cases had not received any valid dose of measles vaccine while 13 cases (56.5%) had unknown measles vaccination status.

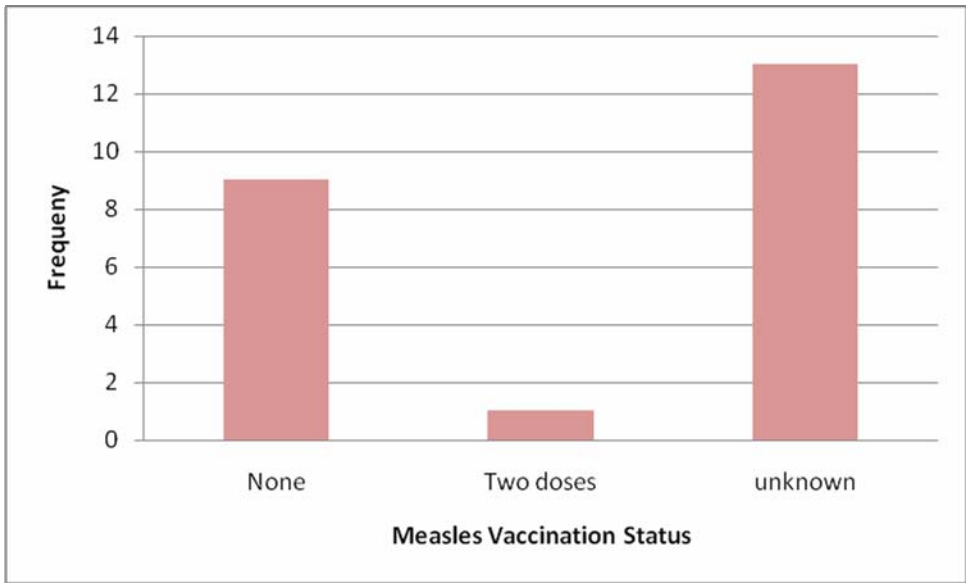
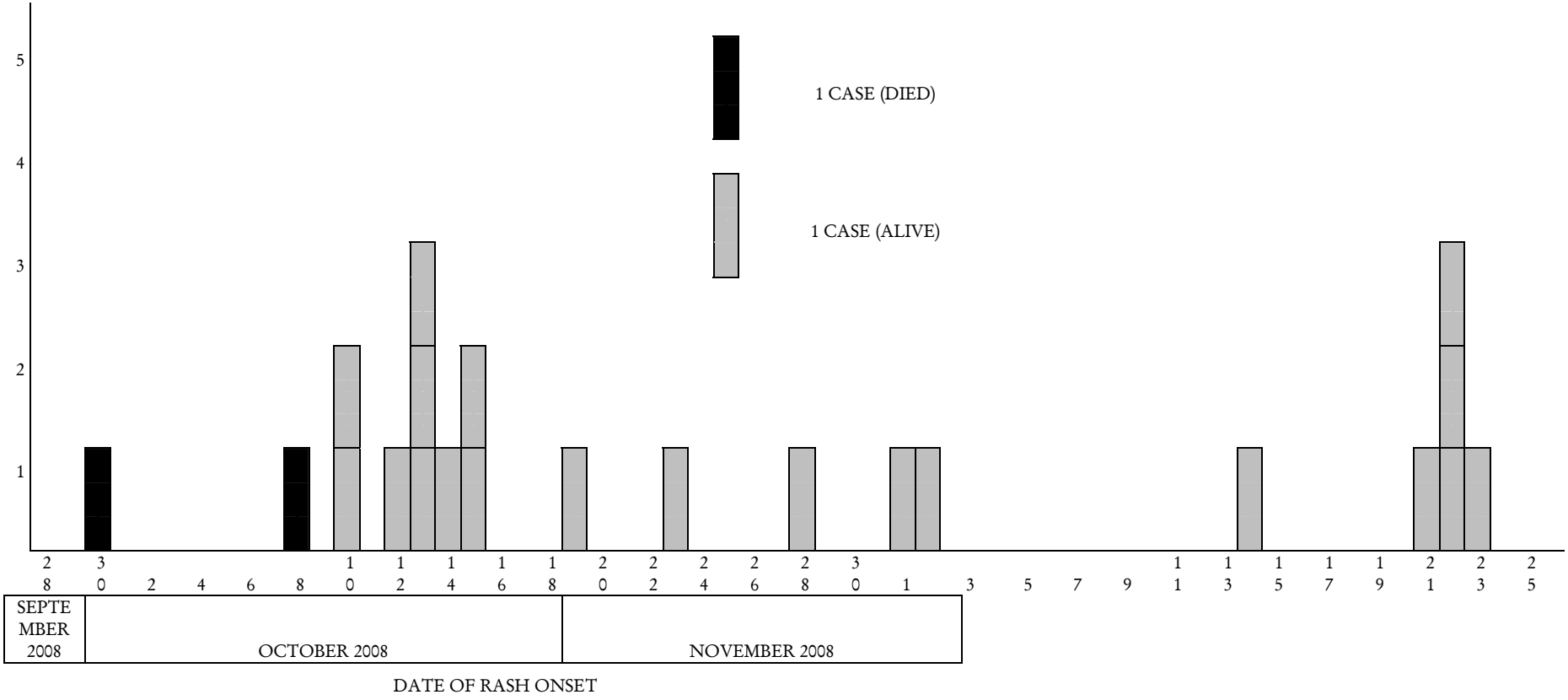


Figure 2: Number of Valid Measles Doses

Epidemic Curve according to date of rash onset, Temeke Municipality, September to November 2008



The epidemic curve (according to date of rash onset) for this outbreak shows that the outbreak persisted from 30th September until 23rd November 2008. The index case on 30th September 2008 and peaks were observed on 13th October 2008 and 22nd November 2008. 10 cases were clustered from 8th October to 15th October 2008 while 5 cases were clustered from 21st to 23rd November 2008. Due to the nature of the epidemic curve, this outbreak seems to have initially due to a point source and later becoming propagated.

1 List of Officials Included

1. Dr. S. Mamkwe - Municipal Medical Officer, Temeke
2. Ester Fungo - Municipal Cold Chain Coordinator, Temeke
3. Mrs. Mwakalinga - Municipal Reproductive and Child Health Coordinator, Temeke
4. Dr Asha Mahita- Medical Officer In charge Temeke Municipal Hospital
5. Mr. R. Mrosso Measles Focal Person, Temeke Municipal Hospital

2 Recommendations

1. Continue active case finding and surveillance activities
2. Conduct study to determine why community did not participate in vaccination campaign
3. Conduct community sensitization on benefits of measles vaccine

5. Problems identified

- Although the overall vaccination coverage in Dar es salaam has been reported high, there are still some pockets of low vaccination coverage.
- Lack of community participation on the NIDs

6. Suggested solutions

- Mass vaccination was justifiable because most cases had not been vaccinated

7. Actions Taken

- FELTP residents and Temeke CHMT did an active case finding and conducted a case control study to assess risk factors for the current outbreak as well as test the hypothesis
- A team of FELTP, Temeke Municipal and the Ward leaders participated in the community awareness campaign which followed by immunization campaign which was held in the third week of January 2009.

Name of Supervisor Notified: Dr. Janneth Mghamba

Signature of Supervisor:

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Cc: Dr. M Kitambi EPI Program Manager

Dr. S. Mamkwe Municipal Medical Officer, Temeke