LINKING DEMOGRAPHIC SURVEILLANCE AND HEALTH SERVICE NEEDS

THE AMMP / TEHIP EXPERIENCE IN MOROGORO, TANZANIA

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Malaria at Facility Based HMIS
National Statistics for Tanzania
(1996)

• MALARIA is:
  • Leading Case for < 5 admissions  49%
  • Leading Case for ≥ 5 admissions  33%
  • Leading Cause of death for < 5 admissions  34%
  • Leading Cause of death for ≥ 5 admissions  23%
  • Leading Case for < 5 outpatients  36%
  • Leading Case for ≥ 5 outpatients  31%
  • Leading Case for outpatients in all 20 Regions  24%- 49%

• But this is nothing new for health planners.
  
Malaria at Facility Based HMIS
District Statistics for Morogoro, Tanzania
1996

• MALARIA IS:
  – Leading cause of health service attendance 30% (285,037)

• But this too, is nothing new to DHMTs.

Are these HMIS statistics sufficient to influence Health Programming?

- **Priorities chosen in the 1996 Morogoro District Health Plan:**
  1. <5 Mortality (*via* EPI, EDP, MCH. *Malaria not specifically addressed*)
  2. Maternal mortality (*Malaria not specifically addressed*)
  3. STDs (including HIV)
  4. Skin diseases
  5. Accidents
  6. Tuberculosis
  7. Dental caries
  8. Hepatitis B

  – *Source: Morogoro District Health Plan, 1996-97.*
What is it?

- Demographic Surveillance System (DSS)

  **Definition:**
  - A geographically-defined population under continuous demographic monitoring with timely production of data on all births, deaths, and migrations (INDEPTH, 1998)

**Characteristics of AMMP DSS:**
- enumeration of denominator population by repeated household visits at regular intervals
- continuous reporting of critical events, especially deaths, by Key Informants
- cause of death determined by Verbal Autopsy (VA)
Burden of Disease Distribution (YLLs)
Morogoro (R), 1992-1995 (all ages)


**Ac. feb. illness**
- < 5 yrs: 18.3%
- 5-14 yrs: 5.1%
- 15+ yrs: 6.9%

**Ac. diarrheal. dis.**
- < 5 yrs: 10.4%

**Perinatal**
- < 5 yrs: 7.6%

**AIDS**
- < 5 yrs: 7.5%

**Injuries**
- < 5 yrs: 6.1%

**Pneumonia**
- < 5 yrs: 5.4%

**Malnutrition**
- < 5 yrs: 4.7%

**Anaemia**
- < 5 yrs: 3.6%

**Pulmonary TB**
- < 5 yrs: 3.6%

**Maternal**
- < 5 yrs: 2.3%

**Other**
- < 5 yrs: 18.5%

Total 30.3%
Place of Death
Morogoro (R), 1992-1995 (all ages)

All causes

- Home: 83%
- Health facility: 13%
- Other: 4%

Acute febrile illness

- Home: 86%
- Health facility: 12%
- Other: 2%

Place of Death in Children Under 5 years from Acute Febrile Illness with Seizures Morogoro (R), 1992-1995

Contact with Formal Health Facilities in the Illness Leading to Death
Morogoro (R), 1992-1995 (all ages)

All causes (n=5,959)

- None: 22%
- Trad. Healer only: 24%
- Formal: 54%

Acute febrile illness (n=1,582)

- None: 15%
- Trad. Healer only: 29%
- Formal: 56%

Acute febrile illness with seizures (n=525)

- None: 7%
- Trad. Healer only: 41%
- Formal: 52%

Something New for HMIS
- Community Based Burden of Disease Data -

Selected Insights from a Sentinel Demographic Surveillance System
The Case of Morogoro Rural District, Tanzania
AMMP DSS Mortality Data

- Although 85% of households are within 5 km of a health facility...
  - 83% of all deaths occur at home
  - 84% of <5 deaths occur at home
  - 30% of total mortality burden is due to malaria
  - 45% of <5 mortality burden is due to malaria
  - 46% of deaths occur without prior health facility contact
  - 90% of deaths due to acute febrile illness with seizure occur at home

Morogoro Disease Burden vs 96 Budget Priority

![Bar chart showing the comparison of disease burden and budget priority in Morogoro.](image-url)
Morogoro Disease Burden vs 98 Budget Priority

![Graph showing disease burden and budget priorities in Morogoro. Bars represent different interventions, with red bars indicating 92-95 YLL share and white bars indicating 98 budget share. Interventions include Malaria All, (I)MCI, Malaria < 5, RH Strategy, Malaria > 5, Immunization, TB, and Other.](image-url)

AMMP  Tanzania Ministry of Health  TEHIP
District Responses to the New Insights
- Comparing the Morogoro DHPs for 1996 and 1998 -

- Re-allocation of resources through District Health Plans
- 5 fold increase in share of resources directed to malaria control
- 20 fold increase in resource share for malaria control in <5s
- Introduction of IMCI
- Promotion of ITNs

- Malaria now given prominence consistent with disease burden

  – Source: Morogoro District Health Plan, 1998-99 and TEHIP.
Take Home Message

Why the dramatic increase in priority of malaria?

• A combination of:
  • Decentralized control of priority setting and resource allocation (Health Sector Reforms)
  • plus information providing
    • New appreciation of community burden of malaria mortality (DSS)
    • New appreciation of under utilization of health facilities (DSS)
  • plus new interventions
    • Curative case management intervention package (IMCI)
    • Preventive, home based intervention (ITNs)