SCIOECONOMIC COST OF ENVENOMATIONS IN SUBSAHARAN AFRICA

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SOURCES OF DATA

1. Surveys in Health Centers
   - Evaluation of current needs (quantity/quality)
   - Geographical distribution
   - Evaluation of measures
   ➔ underestimation

2. Household Surveys
   - Evaluation of actual incidence and mortality
   - Therapeutic choice
   - Evaluation actual needs
   ➔ Bias / lack of clinical precisions
POPULATION AT RISK

1. Profile of the average patient
   - Man (60-65% of the patients)
   - ~25 y. old
   - Rural areas (field worker)
   - During the rainy season

2. Children
   - 25% of the victims (although 50% of the population)
   - More severe envenomation (weight and site of bite)
   - More amputations than in adults

3. Pregnant women
   - Hemorrhagic complications
   - High fatality case in both mother and baby
SOCIOECONOMICAL COSTS

1. Deaths
   - In adults: 15,000 deaths / 375,000 envenomations
   - In children: 5,000 deaths / 125,000 envenomations

2. Disabilities
   - In adults: 10,000 amputations / DALYS = 250,000 per y.
   - In children: 6,000 amputations / DALYS = 240,000 per y.

3. Days lost per million rural people
   - In adults: 14,000 days a year
   - In children: 9,000 days a year
1. Mean drug price
   - Antivenom (AV) = $50 – 125 per dose
   - Ancillary = $20 – 30 per patient

2. Current treatment
   - 0.5 to 1 dose per patient (= $70 per patient)
   - 30 $ per patient for ancillary treatment
   \[ \Rightarrow \] Case fatality rate $\geq 10\%$

3. Appropriate treatment
   - 3 doses per patient (= $180 per patient)
   - 20 $ per patient for ancillary treatment
   \[ \Rightarrow \] Case fatality rate = 1-2\%
PLAN OF ACTION:
AIMS AND STRATEGIES

1. Restore confidence in AV
   - Quality standard:
     = efficacy – safety – stability

2. Improve accessibility of AV
   - Better knowledge of needs (epidemiological surveys)
   - Distribution in remote health centers
   - Restrains costs of fabrication and distribution
   - Better management of cases
   - Sharing funding of AV (providers, donors, health Authorities…)

3. Communication
   - Training health workers (use and dosage of AV)
   - Inform the population (availability and efficiency of AV)
EVALUATION OF ACTION

1. Prequalification of AV by WHO
   ➔ Avoid irrelevant AV

2. Increase of sales
   ➔ Reach 200,000 doses a year in 2012

3. Appropriate distribution
   ➔ AV available in remote health centers

4. Reduction of mortality
   ➔ From 20,000 currently to 2,000 in 2012