Preliminary Action Plan:

Filariasis Elimination Program in American Samoa

Lymphatic Filariasis Elimination Working Group

Pago Pago, American Samoa

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Background:

In 1963, blood surveys in American Samoa indicated a microfilaria prevalence of 26%. After mass drug administrations (MDAs) of DEC - during the 1960s, microfilarial prevalence dropped to 0.4%. The filariasis prevention program was discontinued in the early 1970s. A recent serosurvey in 1999 of 3018 persons with the ICT card test indicated that 21.4% of men and 12.2% of women were infected (average 16.6%). Although the two tests differ, it is clear that the prevalence of lymphatic filariasis infection is returning to high levels.

Aggressive programs to interrupt transmission of lymphatic filariasis in the Pacific commenced in 1998 with the organization of PacELF, a multinational partnership aimed at eliminating transmission of lymphatic filariasis in the Pacific by 2006.

The first mass drug administration in American Samoa began in November, 1999 and continued for 7 months. By the end of this period, 10,968 persons had received therapy, representing a coverage of 19% of the eligible population, far less than the 85% coverage thought to be needed to interrupt transmission. The MDA was temporarily stopped on the advice of WHO scientist Dr. Kazuyo Ichimori. To be effective, an MDA must cover a significant number of the total population in a relatively short period of time.

The inability of the program in American Samoa to achieve higher coverage has raised concern that American Samoa may serve as a focus for continued transmission and re-introduction of LF to islands where effective control has been achieved. Furthermore, international donors are reluctant to support the cost of program development and implementation in an American territory. Barriers to high coverage included:

- Shortage of manpower to undertake the MDA
- Lack of transport
- Insufficient funds to pay staff
- Ownership of program restricted to one nurse
- A focus on house-to-house administration of medicine
- Inadequate community involvement
- Requirement for licensed nurses to administer the medicine
- Necessity to complete consent forms

Program Goals

1 To eliminate lymphatic filariasis from American Samoa using annual administration of a two-drug regimen (DEC/Albendazole) over a period of 5 years.

2 Improve the capacity to implement and evaluate public health programs.

Strategy

This urgent health problem has long-term consequences for all Samoans, especially children. The solution requires that every man woman and child on the islands receive preventive medicine. A "Business as usual" approach will not succeed.

Building on lessons learned from the first MDA, efforts in future years will focus on increasing community ownership of the program and using central locations within communities (e.g. schools, businesses and government offices) for distribution of drugs, rather than a house-by-house approach. To achieve these goals, we will need to:

- Develop ownership of the program within the Department of Health
- Provide adequate transportation
- Improve participation of nursing, administrative and environmental health staff in MDAs
- Expand community awareness of the MDA
- Work with village leaders and community police to organize community participation
- Involve ministers, private sector and other relevant government organizations in planning, training and implementation of the MDA
- Expand venues to administer medicines

MDA Activities (see appendices)

MDAs will begin with a National Meeting and launching ceremony in the densely populated Pago Pago bay area in September. The purpose of this highly publicized MDA campaign will be to raise public awareness and treat a large number of citizens in a short period.

Additionally, cannery and government employees will be visited during working hours to receive their medicine during the initial MDA in the bay area.

Following the bay area MDA, district-based MDAs will take place on the following four Saturdays.

Organization of these district MDAs will be spearheaded by district nurse-supervisors, in consultation with associate director of nursing Molisamoa Pa'au. MDAs in all districts will be completed in a two-month period, beginning in September, 2001, in conjunction with filariasis elimination activities in neighboring Samoa.

Specific Objectives

Program activities

In the first year of the program, we will:

1. Encourage the governor to declare an "Emerging Disease Alert"
2. Establish the elimination program at the highest levels of government
3. Establish a Task Force appointed by the Governor, and headed by the Lieutenant governor, containing representatives from Council of churches, legislators, community groups, radio, television, and heads of other government departments.
4. Adapt existing training and education support materials and use these to increase community awareness of lymphatic filariasis and acceptance of the strategies available to interrupt transmission.
5. Enlist the support of community and church leaders for the filariasis program.
6. Train and equip teams (including nurses and health workers) to distribute DEC-albendazole to all eligible persons in their communities (pregnant women and children < 2 years old will be excluded).
7. Give the first annual round of DEC-albendazole in September.
8. Monitor the pill distribution and use cluster surveys to assess drug coverage (i.e., percentage of the eligible population that actually receives the drug).
9. Establish a data management and surveillance system to adequately meet program needs.

In the second year of the program, we will:

1. Modify community mobilization strategies to improve coverage to 85%.
2. Continue to collect data on programmatic measures as described above, including cost.
3. Give the second annual round of DEC-albendazole and assess drug coverage.
4. Determine the importance of cross-border migration in the epidemiological pattern of lymphatic filariasis in American Samoa and develop strategies to treat guest workers and visitors.

In the third and fourth years of the program:

1. Give the third and fourth annual round of DEC-albendazole and assess drug coverage and demonstrate the feasibility of sustaining treatment coverage of no less than 85% of the at-risk population over a period of 5 years.
2. Microfilaremia will be assessed in selected communities to assess program progress.
3. Modify treatment strategy based on evaluation of a) drug coverage and b) infection rates in humans during the first 2 years of the study.
4. Beginning in the fourth year of the intervention -, we will assess whether transmission of lymphatic filariasis has been interrupted, using entomologic measures of transmission.
5. Develop a plan to integrate filariasis surveillance into the territorial epidemiological surveillance system.

In the fifth year of the program, we will continue the interventions and evaluations as described for previous years, and, in addition, will assess whether transmission of lymphatic filariasis has been interrupted, by collecting blood from children $\leq$ 5 years of age and testing it for filarial antigen.

Evaluation

Interruption of transmission will be assessed as per WHO's criteria, e.g. 1) annual measurement of microfilaremia in selected communities (beginning year 3); 2) in year 5, assessment of antigenemia in children $\leq$ 5 years old (as a proxy for incidence of infection).

Auxiliary measurements will include intestinal worm burdens. We may also use entomologic measures of transmission if this proves to be a useful and cost-effective technique in other settings.

Programmatic measures of success will include drug coverage, community attitudes and knowledge about filariasis and its prevention, cost-effectiveness, and number of community health workers/teachers trained.

Benefits

Results of the program in American Samoa will in large part influence the outcome of programs throughout the region. In addition, we expect to observe:

- The community capacity for active participation in disease prevention programs will be strengthened.
- Epidemiological surveillance capabilities will be improved (e.g. record keeping, data collection, etc.).
- Clinical & laboratory skills of health personnel will be increased

Appendix 1: Preliminary MDA Plan

Based on a three-pronged approach:

1. **High-publicity launching day MDA in the Pago Pago bay area**

   -- Multiple distribution points
   -- 8 am -4 pm
   -- All health staff participate
   -- September 5
   -- Post-distribution assessment meeting of LFE working group

2. **Followed by 5 community-based district MDAs**

   -- District MDA each subsequent Saturday
   -- Nurses from each district all participate all 5 Saturdays
   -- Community volunteers (trained) on site to help
   -- Local district health staff each participate one Saturday

September 8	Western district
September 15	Central 1 district
September 22	Eastern district
September 29	Central 2

   Manu'a -- during work week in early October

   -- Use school buses to deliver staff
   -- Use community/church networks to bring in distant people
   -- District health clinics open September, October for walk-ins

3. **Special treatment visits to canneries and governmental offices**

Staffing: Based on a team-approach.

- Multiple stations at a distribution site.
- Medically-trained health department employee dispenses medicine.
- Other staff and community volunteers gather community members, greet, educate, take down written information, note contraindicated persons (pregnant, <2 years, very ill, very old), provide water, directly observe therapy.
- Recompense: Recommend compensatory time and flex-time (1-8pm)

Certain high-volume sites to receive special attention:

- Fagotogo market Friday pm, Saturday am

- Airport, esp. Friday and Monday pm
- Laufou Shopping Center
- LBJ hospital

Appendix 2: Preliminary Calendar of Activities 2001

March:
- Finalize action plan
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- Develop governmental/community leader awareness
- Memo to health department staff
- Monthly meeting with district nurse-supervisors: develop district MDA plans

April:
- Develop promotional/educational materials (fliers, banners, posters)
- Develop radio spots, newspaper campaign
- Develop TV spots
- Consider creative ideas and develop ie:
  - Governor makes a phone message you hear when pick up phone
  - Awareness message in the movie previews
  - Advocates among patients with lymphedema on TV
  - Printed message in phone bill
  - Hotline with recorded information
  - Celebrity TV or radio spot

May:
- Begin training health staff
- Begin public awareness campaign

June:
- Begin community-based planning and training (involve matais, pulenuu, church leaders, police, community groups)

July:
- Maintain community-based planning and training (involve matais, pulenuu, church leaders, police, community groups)
- Purchase supplies

August:
- Increase public awareness campaign in radio, TV, movie theatre
- Medicines, supplies distributed to districts
- Refresher course for staff, assign specific locations, roles
- Special training for LBJ clinical staff and district clinic nurses re: adverse reactions

September:

- Launch Day (Governor, legislators, Dr. Tufa on TV, taking the medicine)
- MDA in bay area
- Cannery, government employees treated at work
- District MDAs begin

October:

- Mid MDA meeting w/ District nurses- special concerns, needs
- District MDAs continue, finish

November:

- Post-MDA evaluation meeting to discuss/recap/ note lessons learned
- Coverage survey: EPI cluster study to determine coverage
- Thank-you picnic for staff !! certificates given?

December

- Analyze survey data
- Get publicity out on coverage, set stage for next year

Appendix 3: Budget

Education/Awareness campaign	
Poster/pamphlets/banners	$ 4000
Radio/TV	$ 5000
Community meetings	$ 4000
Newspaper	$ 1500
Transportation	
MDA transport	$ 2000
Supplies/equipment:	
Cups,water	$ 500
Copying,Office supplies	$ 1500
Computer/printer	$ 2500
Personnel costs:	
Health	$ 14,000
Data input contract	$ 1000
	$ 36,000

Note* Seek donated, tax-deductable community support for services: Newspaper ads, radio announcements, pamphlets, tickets to Manu'a