

No. 789, Memorandum on

A DEMONSTRATION IN THE CONTROL OF MALARIA (*Bolivar County*)

By C. C. Bass, M. D.
W. S. Leathers, M. D.
Wickliffe Rose.

International Health Commission

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1. Area in which Demonstration is to be Made (Bolivar County, Mississippi).

1) Favorable conditions:

- a. Malaria very prevalent for a long time.
- b. No hookworm disease to complicate.
- c. Physicians all favorable.
- d. County officials all favorable.
- e. Sentiment of public thought to be favorable.
- f. Best county health officer in State.
- g. Offers white, colored, or mixed communities.

2) Unfavorable conditions:

The occurrence of hemoglobinuria may have created some prejudice in the minds of the medical profession or the laity against the use of quinine.

3) Plan of Attack:

Select three communities for the initial experiment and extend work to other communities as results justify.

2. Detailed Working Plan.

- 1) Have a few meetings in the community to inform the people what it is proposed to do, and to secure their confidence and co-operation.

2) Make map of the community showing boundaries, roads, streams, and houses.

3) Take a census of the community, recording by families, name, age, sex, color, occupation, and address. The census should indicate who are the family-heads and give the name of each physician attending each person during the year.

4) Make malaria survey:

a. Get blood specimen from each person.

b. Get from each person history of malaria attack during the year.

c. Get from physician history of malaria attack for each person.

5) Show results of survey on map:



represents each person in community.



represents those whose history indicates an attack of malaria during the year.



represents those whose blood shows malaria plasmodia.



represents those who have moved from community or could not be found.

6) Send map showing results of survey to family-heads.

7) Record census and survey alphabetically by families.

Print this list with suitable blank spaces for recording subsequent work and findings.

8) Distribute quinine for full treatment with return cards for each week. On the envelope containing quinine print instructions for taking it; and on the envelope containing return cards, directions for returning them. All persons whose history indicates attacks of malaria during the year, and all in whose blood plasmodia are found, are to be treated. All others living in the same house with cases of malaria to be advised but not necessarily urged to take treatment.

9) After a lapse of at least one week following the completion of quinine treatment in the community make second survey. Take blood specimens of all persons and history as to attacks since previous survey.

10) Show result of second survey on map and distribute map to family-heads.

11) Frame map and post in public places, such as schools, stores, mills, etc.

12) Visit, investigate, and treat persons still infected. Follow up very closely.

13) One week or more after second period, if treatment is finished, make third survey.

14) Show result on third map; distribute and post.

15) Continue as results indicate.

3. General Working Plan.

1) Have a conference with the physicians of the county to

acquaint them with the undertaking and secure their co-operation and support. Consult them for suggestions, especially as to selection of first three communities in which to begin work.

2) Have a conference with influential leaders in the county, including county officials. Get their assurance of co-operation and their suggestions as to communities in which to begin work.

3) Select one or more of the first three communities.

4) Begin work in one community. As soon as a part of the field force can be spared begin in the second. Begin in the third community and have the survey made there before it is time to return to the first community to make the second survey.

4) Type of First Three Communities to be Selected.

1) Size. From 16 to 25 square miles, containing about 175 families, and from 700 to 1000 persons.

2) Location. Should be convenient to central headquarters.

3) Kind of people. In one community largely colored; in one, largely white; and in one, mixed. In the mixed community there should be a small town.

5. Educational Measures to be Carried on in Communities as part of the work.

1) Give talks illustrated with lantern slides and charts, on:

5.

- a. The malaria plasmodia: what they are, and how they grow and produce disease in man.
- b. The mode of transmission of malaria plasmodia by mosquitoes.
- c. The existence and importance of latent malaria and malaria carriers.
- d. The method of destroying malaria plasmodia in the blood:

Dose of quinine for adults;
Dose of quinine for children;
Mode of administration;
Duration of treatment.

- e. The non-existence of malaria in a community after all plasmodia are killed until more are introduced from outside.
- f. The danger of sleeping or visiting houses where malaria is present or of receiving visits from persons who are infected.
- g. The method of preventing infection when exposed.

2) Use exhibits including:

- a. Chart showing transmission of malaria.
- b. Demonstrations under the microscope.
- c. Chart showing damage to blood by malaria.
- d. Chart showing decreased efficiency caused by malaria.
- e. Chart showing estimated cost of malaria to Bolivar county.
- f. Chart showing a carrier discharged from hospital and his blood.

3) Distribute leaflets.

4) Go from house to house and talk to the people about malaria.

6.

5) Enlist the press; in the beginning furnish general news items only; use judgement in publishing any item.

6. Training of Field Force.

Have the field force spend two or three weeks in New Orleans so that it may:

1) Become familiar with the malaria parasite and with what is known of its life in mosquitoes and in man, and its mode of transmission to man.

2) Study symptoms and other features of the disease by lectures and through hospital cases.

3) Observe hospital cases under treatment by different methods.

4) See the relative merits of different methods of administration worked out.

5) Assemble outfits for field work.

7. Training of Laboratory Force.

Have the laboratory force spend two or three weeks in New Orleans so that it may:

1) Become familiar with the use and care of the microscope.

2) Practice with stained malaria plasmodia in ordinary blood spreads.

3) Practice with the particular kind of specimens to be employed in field work.

4) Practice with the concentration method.

8. Personnel.

- 1) One State director.
- 2) One scientific director.
- 3) One assistant scientific director.
- 4) Four field directors.
- 5) One laboratory director.
- 6) Five laboratory assistants.

9. Budget.

1) One scientific director	\$2,400	per annum	
2) One assistant scientific director	900	"	"
3) One State director			
4) One field director	2,000	"	"
5) Three field directors @ \$1,800 ...	5,400	"	"
6) One laboratory director	2,000	"	"
7) Five laboratory assistants @ \$720	3,600	"	"
8) Traveling expenses four field directors, who are required to own autos @ \$1,000	4,000	"	"
9) Traveling expenses of scientific director	800	"	"
10) Contingent fund	600	"	"
11) Equipment	2,500		
12) Traveling expenses laboratory force to New Orleans	100		
13) Board of laboratory force while in New Orleans	100		
14) Return traveling expenses of laboratory force from New Orleans	100		
Total	\$24,500		