

# The Requirements for Control

BY

D. A. W. RITTEY, M.B., CH.B.

*Department of Social and Preventive Medicine,  
University College of Rhodesia.*

The purpose of my paper today is to set the stage for the actors who follow and to serve at the same time as a bridge between this session and the one before. Inevitably, therefore, the paper, I regret, will be illuminated with "occasional flashes" of the obvious.

There is a delicate balance between health and disease, the balance, whatever the disease, being maintained by the interaction between host, agent and environment



a three-way traffic.

It is in the light of this interaction that I wish to discuss the requirements of control of bilharziasis.

## A. CHANGES IN ENVIRONMENT

This in turn is a complex force, affecting both host and agent.

### (1) *Changes which Could Affect the Host*

- (a) As we will doubtless see from Dr. Pitchford's paper, a programme of rural management could materially alter the risk to the host by reducing exposure.
- (b) Programmes of basic hygiene.
- (c) Programmes of public health engineering as a vital part of any water conservation or irrigation schemes, which by themselves unplanned can alter the environmental balance in favour of the agent.

### (2) *From the Point of View of the Agent*

Since we are dealing with the bilharziasis, the effect on the vector must be taken into consideration.

Here all the environmental factors already mentioned come into play, but to these can be added active attack upon the vector, e.g., mollusciciding programmes.

## B. CHANGES IN THE HOST

In this context I will confine my remarks to infection in man, although they may well apply to infection in animals.

### (1) *Changes in the Habits of the Host*

Often considered a counsel of perfection and unattainable, it is no easy matter to change man's habits, particularly, as so often happens, man can see no reason for change

if the persuader has no suitable alternative to offer. I believe that the sociologist is an essential part of any control programme.

- (2) *Health Education* has an important part to play, if based on the principles outlined above. Dr. Castle's paper is an important indication of the problems. So often we educate those already converted; the unconverted as we see either do not understand or do not want to know. In my own experience I believe we should leave science to the scientist and concentrate on pseudo-scientific beliefs. These popular beliefs are usually fallacious and must be exposed for what they are for the protection of the public. Our health education must aim at the positive "Do this," not the negative "Don't do this"!
- (3) Our next approach could be mass treatment to reduce worm load and egg passage.
- (4) Chemoprophylaxis is tempting. The probable drawback if we achieve this is ensuring that the drug is actually taken.
- (5) Another fruitful method may come from the immunologist. Immunity to parasitic infection may not be so far away.

## C. CHANGES IN THE AGENT

Many of the above approaches can affect the agent.

These, as I see it, are the basic requirements for control, but what of their application?

Control of bilharziasis must be based on research, but there must be a line drawn between the two.

In the realms of research it is imperative to try out each innovation by itself to enable us to assess the efficacy of the innovation in isolation.

In the field of bilharziasis control we all have our pet schemes, e.g., mass treatment in some countries; here in Rhodesia it is snail control. We should not, I suggest, pin our faith on any one method; we should use the lot. Even a course of action which is known to give minimal advantages in isolation should not be abandoned as part of the overall attack, provided no better course of action is available.

Finally—and this is a word of warning for me—experiment needs planning with a view to future measurement. In control, measurement is vital and I confess to forgetting this. The statistician, and I quote, "is not there to put spanners in the works, but to ensure that the works really work and will continue to work before we start."

I promised to talk with occasional flashes of the obvious. This I have done in the belief that sometimes a reminder of the obvious is necessary for us all.