

Rhd prevention

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## **Planning and implementation of national programmes for the prevention and control of rheumatic fever and rheumatic heart disease**

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- The establishment of a national prevention programme is essential in countries where rheumatic fever (RF) and rheumatic heart disease (RHD) remain significant health problems. Both primary and secondary prevention of RF and RHD have been proven to be safe, feasible and effective in both developed and developing countries. The overall goal of a national programme should be to reduce morbidity, disabilities and mortality from RF and RHD.
- At country level, the planning phase of the programme should include an assessment of the prevalence of RF and RHD and a plan of operation with objectives and approaches adapted to local needs and circumstances. It is important to implement such programmes through the existing national infrastructure of the ministry of health and the ministry of education without building a new Administrative mechanism. This would minimize additional costs and prevent unsustainable monolithic programmes. Based upon previous experience planning and implementation of national programmes should be based on the following principles:
  - There should be a strong commitment at policy level, particularly in the ministries of health and education.
  - A national advisory committee should be formed, under the auspices of the ministry of health, with broad representation from all stakeholders, including representatives from a wide spectrum of professional organizations (e.g. cardiologists, paediatricians, family physicians, internal medicine specialists, epidemiologists and nurses).
  - Programme implementation should be stepwise. For example, start in one or more defined areas to test whether the methods and procedures are appropriate for the local situation (Phase I), and then gradually extend the programme to provincial (Phase II) and national coverage (Phase III).
  - The programme should be service-oriented and emphasize active secondary prevention, and be integrated into the existing healthcare systems, particularly primary health care.

- Support from the microbiology laboratory should be optimized at peripheral, intermediate and national levels.
- Suspected outbreaks of group A beta-haemolytic streptococcal infection should be controlled and studied.

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**The main components of a national programme are:**

- secondary prevention activities aimed at preventing the recurrence of acute RF and severe RHD;
- primary prevention activities aimed at preventing the first attack of acute RF;
- health education activities;
- training of health-care providers;
- epidemiological surveillance;
- community involvement.

### **Secondary prevention activities**

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- Secondary prevention is based on case finding, referral, Registration, surveillance, follow-up and regular secondary prophylaxis for RF and RHD patients. A central or a local referral or registration centre should be established in participating areas. Once detected, patients with a history of RF or with RHD are referred to the central or local centre for medical care, follow-up and long-term secondary prophylaxis. Attention should be given to patients who have difficulties in adhering to long-term secondary prophylaxis regimes, or who drop out of the prevention regime (i.e. they miss more than two consecutive injections). For more details see .

### **Primary prevention activities**

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- Primary prevention is based on the early detection, correct diagnosis and appropriate treatment of individual patients with Group A streptococcal pharyngitis. Vertical programmes for the primary prevention of RF and RHD are not cost effective in developing countries. Such programmes need to part of the routine medical care available and should be integrated in to the existing health infrastructure. Health education to the public, teachers and health personnel would enhance the impact of a primary prevention programme.

## **Health education activities**

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- Health education activities should address both primary and secondary prevention. The activities may be organized by trained doctors, nurses or teachers and should be directed at the public, teachers and parents of school-age children. Health education activities should focus on the importance of recognizing and reporting sore throats early; on methods that minimize and avoid the spread of infection; on the benefits of treating sore throats properly; and on the importance of complying with prescribed treatment regimes.
- Health education campaigns in schools and in the community are effective methods for communicating health messages and for increasing awareness in schoolchildren and parents. Health messages could be transmitted to parents indirectly by targeting schoolchildren. The involvement of the print and electronic media (radio, TV, newsletters, posters) is vital to the success of such programmes. Patient group meetings are also a potent means of transmitting and networking health information. The commitment of the school and school health service (when available) to the health education of children is of tremendous importance when implementing RF/RHD control programmes.

## **Training health-care providers**

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- Members of the health team at all levels have clearly identified roles and responsibilities in running RF/RHD prevention programmes, and they should receive appropriate training at regular intervals. Training should be given to physicians, as well as to non-physician health-care providers who are involved in primary or secondary prevention activities. Training programmes should stress the importance of early detection, diagnosis and appropriate treatment of streptococcal pharyngitis, as well as the importance of detecting, treating RF/RHD and monitoring compliance to secondary prophylaxis. Training courses should also include procedures for penicillin skin testing and for treating anaphylactic reactions.
- Public health nurses are essential for running RF/RHD prevention programmes in developing countries, particularly in planning, coordinating and implementing such programmes where there is a shortage of available doctors.

## **Epidemiological surveillance**

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- Surveillance of acute RF and RHD, if incorporated in to the national statistical report, would provide useful information on the epidemiological trends of the disease. Regular analysis and evaluation of the RF and RHD registers would also provide useful information on trends and characteristics of the disease in defined locations. Where resources permit, surveys in school-age children may be conducted to determine prevalence of RF/RHD, the seasonal frequency and distribution of streptococcal pharyngitis, and the levels of antistreptolysin- O titres in the school-age population.

## **Community and school involvement**

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- The success of a prevention programme depends on the cooperation, effectiveness and dedication of health personnel at all levels, as well as of other members of the community (e.g. health administrators, educational administrators, teachers and community leaders). Most importantly, potential patients themselves and their families must be involved in the control strategies adopted by communities.
- As schools play a large part in spreading streptococcal infection, they can also play a large role in its control. Where school health services exists, they should be used to identify children with signs suggestive of RF. Screening schoolchildren for RF is worthwhile in areas with a high prevalence of RHD, and such screening may be carried out by community health workers who have been specially trained for the purpose. Teachers and pupils should also be involved in efforts to improve patient adherence to secondary prophylaxis, as well as in follow-up procedures.
- A manual with detailed recommendations for preparing a plan of operation for RF and RHD prevention has been published by the WHO/CVD programme (2).