



# Framework for action on rheumatic fever and rheumatic heart disease in the WHO Eastern Mediterranean Region



## 1. Summary

Globally, rheumatic heart disease (RHD) is the leading cause of preventable cardiac death in people under the age of 25. RHD is caused by infection with *Streptococcus A* (Strep A), a widespread bacterium associated with infections that commonly occur in childhood. Untreated throat (and possibly skin) infection with Strep A (“strep throat”) triggers an autoimmune response in some children, which then causes acute rheumatic fever (RF). RF affects the joints, skin, nervous system and heart. While patients with RF will typically recover, the damage caused to the heart valves is permanent and can cause heart failure, stroke, heart rhythm problems and maternal death during pregnancy.

Once a child is identified as having experienced RF, regular antibiotic prophylaxis is required to prevent subsequent Strep A infections and consequent RF episodes, which would further damage the heart. The vast majority of RF/RHD occurs in developing countries. It is a disease of poverty that is strongly associated with overcrowded living conditions.

Available data indicate that RF/RHD presents a significant ongoing public health burden in the WHO Eastern Mediterranean Region. In May 2018 the World Health Assembly passed resolution WHA71.14 to prioritize action to address the global burden of RF/RHD. This regional framework for action on RF/RHD aims to guide implementation of this resolution in the Region.

The framework was endorsed by Member States in resolution EM/RC66/R.1 of the WHO Regional Committee for the Eastern Mediterranean at the Committee’s 66th session in October 2019.



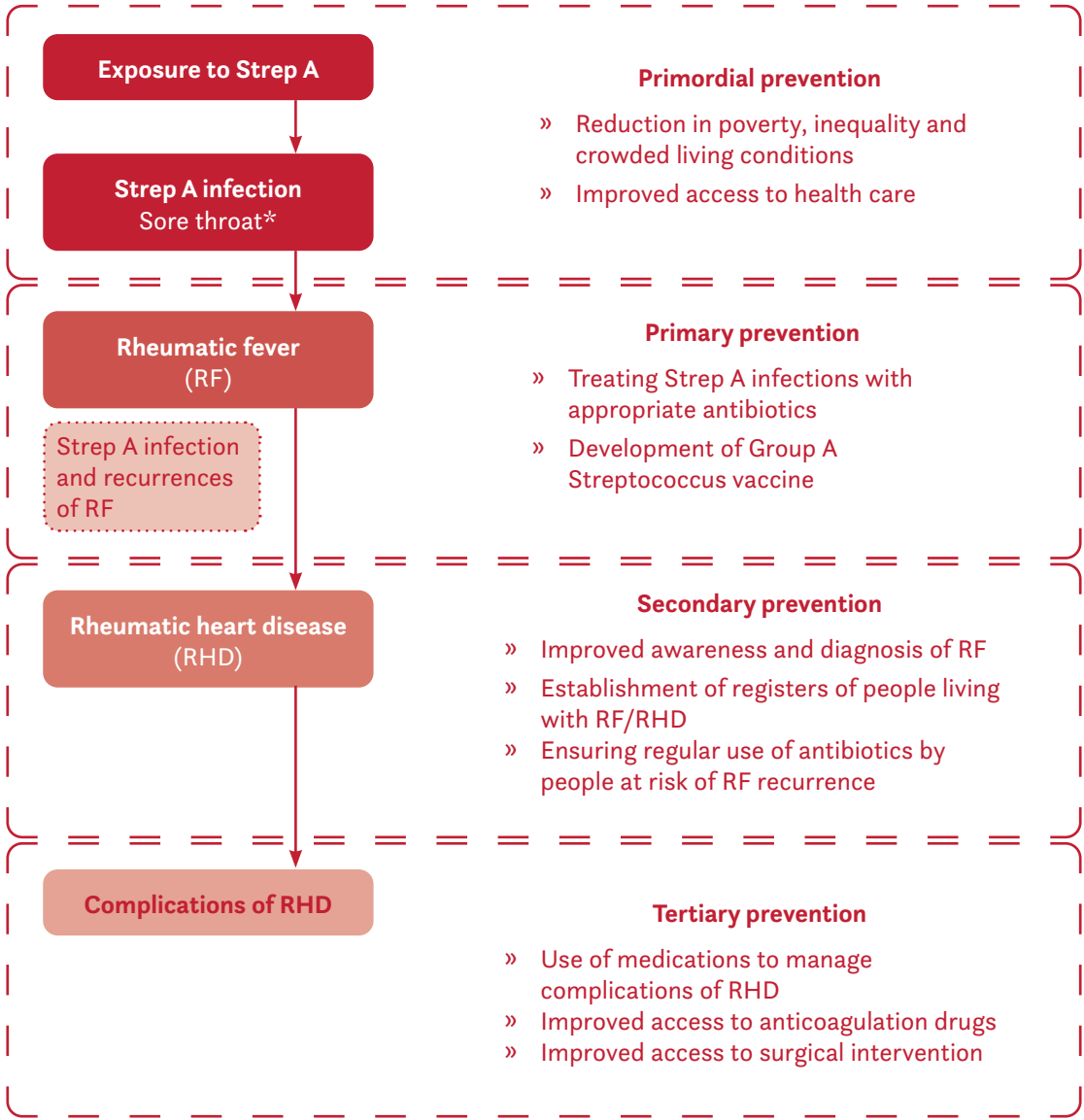
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## 2. Opportunities for action

As shown in Fig. 1, a number of opportunities exist to intervene on the path from Strep A infection to the complications caused by RHD.

There is a strong foundation of evidence and experience to guide RF/RHD control activities. While not all components need to be implemented at once, any comprehensive approach will require elements at all levels of prevention and control.



\*The role of Strep A skin infections in the development of RF remains unclear

**Fig. 1** Opportunities for intervention in RF and RHD

## 3. Framework for action

The regional framework for action outlines the key steps to be taken by countries in the Eastern Mediterranean Region in implementing the activities called for in resolution WHA71.14.



# Framework for action on rheumatic fever and rheumatic heart disease in the WHO Eastern Mediterranean Region

Strategic approach	Key outcomes What is needed in each country	Progress indicators Steps to be taken by each country
<p>In the area of <b>governance</b></p>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>• have an RF/RHD Advisory Group;</li> <li>• have a national RF/RHD plan that integrates, and is delivered in coordination with, other relevant plans and strategies;</li> <li>• have a national investment case on the cost/out-of-pocket spending/burden to patients.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a national advisory group, ideally with the participation and endorsement of the ministry of health, whose role is to develop a national RF/RHD strategy and monitor programme implementation.</li> <li>• Appoint a national focal point.</li> <li>• Undertake a baseline review of the RF/RHD situation in the country, with particular consideration given to assessing burden and access barriers among populations at high risk, including migrants, refugees and conflict-affected groups.</li> <li>• As guided by the findings of the baseline review, develop a national RF/RHD plan that articulates implementation in coordination with other relevant strategies and plans.</li> <li>• Define national targets for programme implementation and for reducing the disease burden.</li> </ul>
<p>In the area of <b>primary prevention</b></p>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>• have local guidelines in place for the diagnosis and treatment of pharyngitis.</li> </ul>	<ul style="list-style-type: none"> <li>• Adapt or develop and implement local guidelines for the diagnosis and treatment of pharyngitis, based on global best practice and integrated with existing strategies (for example, incorporation of a sore throat module into the Integrated Management of Childhood Illness).</li> </ul>
<p>In the area of <b>secondary prevention</b></p>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>• have local guidelines in place for the diagnosis and management of RF/RHD;</li> <li>• have a functioning RF/RHD register that is regularly monitored, with data used to inform programme activities;</li> <li>• integrate the delivery of RF/RHD care within existing primary health care structures and systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Implement RF/RHD prevention and management services that are integrated with, and delivered through, existing health system structures and services, in line with local guidelines.</li> <li>• Identify existing service-delivery platforms that offer opportunities to reach underserved patients or patients at high risk through the integration of RHD services (for example, antenatal care to identify and manage pregnant women with RHD).</li> <li>• Implement an RF/RHD register with a dedicated coordinator.</li> </ul>
<p>In the area of <b>access to medicines</b></p>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>• have reliable access to high-quality benzathine penicillin G (BPG);</li> <li>• make BPG treatment available without charge to patients.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that BPG is on the national Essential Medicines List and national formulary of medications.</li> <li>• Undertake an assessment of access to BPG to demonstrate robust procurement processes or to identify supply gaps that require broader (for example, regional) action.</li> <li>• Ensure that BPG procurement is incorporated into routine procurement and budgeting processes.</li> <li>• Identify and implement the measures needed to ensure the routine testing of BPG quality.</li> </ul>

(continued) ↘

## Framework for action on rheumatic fever and rheumatic heart disease in the WHO Eastern Mediterranean Region (continued)

Strategic approach	Key outcomes What is needed in each country	Progress indicators Steps to be taken by each country
In the area of <b>surveillance and monitoring</b>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>have reliable data on the RF/RHD disease burden at the national and, where possible, subnational level;</li> <li>have a surveillance system in place to monitor the RF/RHD disease burden and identify groups at high risk.</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement a surveillance system which is integrated within existing health monitoring/surveillance structures and systems, and which generates data on core metrics for RF/RHD, including adverse treatment events.</li> <li>Consider the need to include RF as a notifiable disease.</li> <li>Consider the need for special studies in high-risk areas (for example, clinical audit, echocardiography screening).</li> </ul>
In the area of <b>health workforce at the community and primary health-care level</b>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>have a community and primary health-care workforce that is able to recognize and appropriately treat or refer pharyngitis and RF, and deliver prevention strategies;</li> <li>ensure that health providers who deliver treatment have the necessary confidence to safely administer BPG;</li> <li>integrate frontline health-worker training into the health workforce training curriculum.</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate training on RF primary prevention into existing training structures and systems.</li> <li>Incorporate the safe administration of BPG into training for all personnel administering treatment.</li> <li>Implement dedicated training for frontline health-care workers as needed.</li> </ul>
In the area of <b>community awareness</b>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>ensure that communities are aware of and understand RF/RHD and their link with Strep A infection (throat or skin), particularly communities and schools in high-risk areas.</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement a community education and awareness-raising strategy for Strep A infection, RF and RHD.</li> </ul>
In the area of <b>tertiary care, including surgical intervention</b>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>ensure access to echocardiography to guide diagnosis, monitoring and treatment planning for people living with RHD;</li> <li>develop an overview of pathways to access to interventional cardiac surgical procedures (including percutaneous procedures);</li> <li>ensure a sufficient sub-specialist medical workforce to provide care for the population of people with RHD.</li> </ul>	<ul style="list-style-type: none"> <li>Report on access to echocardiography.</li> <li>Report on the number of surgeries for RHD performed per year.</li> </ul>
In the area of <b>social determinants of health</b>	<p><b>Each country should:</b></p> <ul style="list-style-type: none"> <li>have data on levels of household crowding, malnutrition, lack of education and other key risk factors in high-burden populations;</li> <li>introduce policies and programmes to alleviate over-crowded living conditions and improve housing among high-burden populations.</li> </ul>	<ul style="list-style-type: none"> <li>Report on relevant Sustainable Development Goal (SDG) indicators, including: <ul style="list-style-type: none"> <li>» proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural);</li> <li>» proportion of population living in households with access to basic services;</li> <li>» coverage of essential health services;</li> <li>» prevalence of malnutrition (weight for height &gt; +2 or &lt; -2 standard deviation from the median of the WHO Child Growth Standards); among children under 5 years of age, by type (wasting and overweight);</li> <li>» proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.</li> </ul> </li> </ul>