

Atraumatic Restorative Treatment (ART) for Tooth Decay

A Global Initiative 1998-2000

ART

Atraumatic Restorative Treatment

Division of Noncommunicable Diseases

Oral Health Programme

World Health Organization

1998

ART

Atraumatic Restorative Treatment

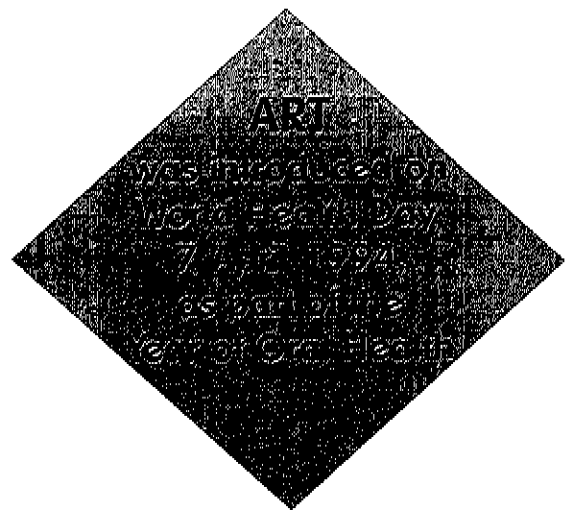
Making a difference through the Global Promotion of ART

A WHO Oral Health Programme

Background

Huge developments have occurred in oral health technology over the last few decades. However, the majority of the world's population still suffers from untreated dental decay. The main reason for this is the continued dependency on traditional approaches to oral health care.

An innovative approach that brings safe and effective care for dental decay to communities without the need for



Information sheet No. 1

is available, this approach brings care closer to all since injections are seldom required and dental drills are not used thereby making dental care more acceptable.

The Global Promotion of ART

Realising the considerable potential for this approach, ART was introduced on World Health Day, 7 April 1994, as part of the Year of Oral Health. Since then there has been much interest worldwide in the approach with ART training courses being given in more than 30 countries whilst research into aspects of ART have been or are being conducted in more than 20 countries. The WHO Oral Health Programme (ORH) believes ART is one of the most suitable caries controlling approaches for use in primary oral health care programmes and therefore the continuation of the global promotion of ART is one of its major objectives. It is, however, realised that ART should not be undertaken in isolation. It should be an integral part of a comprehensive package of health care that should also include promotion of oral health, prevention and emergency care.



expensive dental equipment is Atraumatic Restorative Treatment (ART). With this approach dental decay is removed solely with hand instruments and the cavity is filled with an adhesive, tooth coloured material which releases fluoride. This material is also used to seal caries prone tooth surfaces. Thus ART is considered a combined preventive and restorative procedure to control dental decay. This means that restorative care is no longer restricted to the dental clinic setting but can be delivered virtually anywhere. Even where traditional restorative care

ART promotion will be achieved through targeting three distinct areas namely education, community demonstration programmes and research. These promotional efforts will need to be carefully structured to be appropriate to the communities concerned and will be organised and coordinated through WHO, Oral Health and the WHO Collaborating Centre at the Dental School in Nijmegen, the Netherlands.

1 Promotion through Education (1998)

1. Education forms the foundation for future ART promotion

The educational activities need to be directed to three groups namely the profession, policy-makers and the community.

1.1 Production of a training package for ART courses

Oral health personnel require adequate training in order to achieve consistent and reliable results with ART. Thus far, a few experts have given ART training courses. The global promotion of ART will need to rely on less experienced teachers and it will therefore be necessary to produce a standardised educational package of training material for new teachers. A package consisting of a manual giving guidance on the organisation of training courses, educational material and supporting audio visual aids including slides and overhead transparencies will be produced. After piloting, the educational package will be translated into various languages and distributed.

1.2 Publication of an ART book for dentists

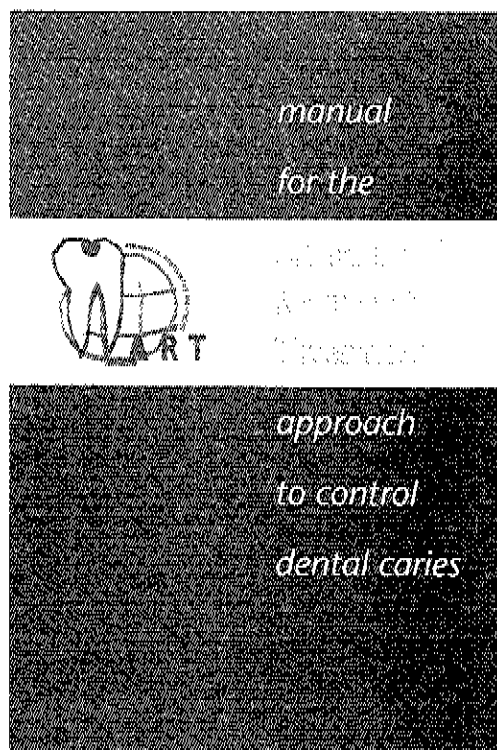
In 1997, the WHO Collaborating Centre in Groningen, the Netherlands, produced the 3rd edition of an ART manual targeted for primary health care workers. An updated and more detailed description of the ART approach will be produced specifically for use by general dental practitioners.

1.3 Brochures on ART

Brochures on ART will be prepared and distributed to decision-makers and the general community as a means for promoting ART.

1.4 Handbook on oral care including ART for use in refugee camps

The refugee problem still exists in many countries and there is a need for a handbook to be produced which will enable health care workers confronted with a refugee problem to implement some form of oral health care. As a component of other health care the ART approach is very suitable for the conditions that exist in some camps. It is therefore proposed that a handbook be produced which includes ART within its general context.



2 Promotion through community demonstration projects (1998 - 2000)

Different cultures and communities require different approaches to promotion. Because of this, community demonstration projects involving ART as part of an overall oral health care programme need to be undertaken in different parts of the world. It is expected that each of the six WHO Regions will undertake at least one such community demonstration project that will involve the following:

2.1 Country profile

Reliable data are needed for project planning, not only on oral health but also on the possibilities to implement a training course and to carry

out research in one of the countries of the Region. If suitable data are not available, this should be collected.

2.2 Regional ART Masterclasses

ART masterclasses serve to introduce ART to each WHO Region. Representatives of countries of the Region will attend these masterclasses. The intention is that participants would then serve as teachers within their respective countries. Participants will be provided with the ART training packages but will also receive instruction on project monitoring and evaluation.

2.3 Establishment of community demonstration projects, monitoring and evaluation

The host country where the ART masterclasses are held will establish a community demonstration project involving ART to serve as a reference for the Region. The study population will be selected on the basis of the oral health and dental caries data available. Once projects have been established, they should be subject to monitoring and project evaluation. This enables any problem to be identified at an early stage and modifications made where appropriate. Participants of the Regional ART masterclass will be invited to a meeting a year into the project to learn about aspects of project monitoring. Here the correct use of evaluation criteria and calibration will be taught.

Those countries who have already established their own ART projects will be invited to present their own experiences.

ART masterclasses serve to introduce ART to each WHO Region

ART promotion will be achieved through targeting three distinct areas namely education, community demonstration programmes and research.

2.4 Dissemination of the outcomes of community demonstration projects

The outcomes of the community field projects in each of the Regions will be assembled into a publication for widespread distribution.

Implementation of community demonstration projects in each of the WHO Regions

In two of the WHO Regions, EMRO and EURO, ART related activities have already started. The American Region has its own structural organisation, the Regional Office for the Americas (AMRO), and will liaise with WHO, HQ/ORH regarding implementation of ART activities in that Region. In view of this, immediate attention will be given to introducing community demonstration projects involving ART in the three remaining Regions (AFRO, SEARO and WPRO). Concurrently, technical assistance will continue to be given to the Regions where ART activities have already started.

The countries selected for ART demonstration projects and/or technical assistance are listed below.

(1) AFRO

It is planned to start a Regional Community Demonstration Project involving ART in Ghana, representing West Africa. ART has already been introduced in Ghana last year as part of a primary oral health programme for Liberian refugees. The Chief Dental Officer at the Ministry of Health has

expressed the need to consider inclusion of ART into the national plan for oral health services and has requested that ART workshops be conducted in the country.

(2) AMRO

The Regional Adviser will liaise with WHO/HQ/ORH regarding the implementation of ART projects in Central and South America.

ART projects have been launched in Ecuador, Panama and Uruguay using governmental dental care facilities to provide dental treatment to a large



WHO Regional Offices

- Regional Office for Africa (AFRO)
- Regional Office for the Americas (AMRO)
- Regional Office for the Eastern-Mediterranean (EMRO)
- Regional Office for Europe (EURO)
- Regional Office for South-East Asia (SEARO)
- Regional Office for the Western Pacific (WPRO)

proportion of the population. The objective of the project is to reduce the prevalence of untreated dental caries and promote inclusion of the technique, materials and their scientific support into dental schools curricula.

(3) EMRO

Two projects are currently being implemented in this Region. One of the projects is based in Syria at the WHO Regional Demonstration, Training and Research Centre on Oral Health in Damascus while the other project is being implemented in Pakistan at the Aga Khan University in Karachi.

Syria

In 1997, a study assessing the effectiveness of ART in children started in collaboration with the Dental School of the University of Nijmegen, the Netherlands. The study aims to compare traditional restorative treatment (removing decay with a dental drill and filling the cavity with amalgam) with restorations placed using the ART approach. The outcome will form the basis for developing a model for oral health care in the Eastern Mediterranean Region. The first year evaluation was conducted in April 1998. Technical support is requested for the subsequent evaluations in the following years.

Pakistan

A study comparing various treatment modules including ART started in 1995. A third year evaluation is planned for 1998. Technical assistance in the form of an independent evaluator is requested for this third and final evaluation.

(4) EURO

The first ART Community Demonstration Project commenced in Voronezh, Russian Federation, in 1998 as part of a more comprehensive integrated oral health care package. A training course was conducted in February 1998. Funds to start implementing this project were provided by local health authorities.

Technical assistance is requested for project monitoring and evaluation.

(5) WPRO

Two school-based demonstration programmes involving ART in both primary and permanent teeth have been implemented in the People's Republic of China. Technical assistance will be required for further programme evaluation.

3 Technical assistance (1998 - 2000)

Technical assistance for ART activities include the following:

3.1 Monitoring of research activities

This refers in particular to providing assistance to the evaluating process by making an expert available on request for the organisation of the evaluation of ART research, calibration of examiners and reporting the findings in a scientific manner. The expert will ensure the independence of the evaluation process. In addition, monitoring the process of acceptance and integration of ART into the health system and its impact on the oral health status in the community should be organised. This process evaluation is facilitated through organising a debriefing workshop a number of years after conducting the masterclasses on ART.

3.2 Contribution to scientific papers and publications

As a matter of keeping interested parties updated with recent publications relating to ART, it has been previous practice to print additional copies of papers for distribution at the time of publication. This has been an important method in promoting ART amongst the scientific and academic community. Funding will be required to continue this practice in terms of the publication and distribution of ART related papers.

Organisational activities at the WHO Collaborating Centre in Nijmegen, the Netherlands

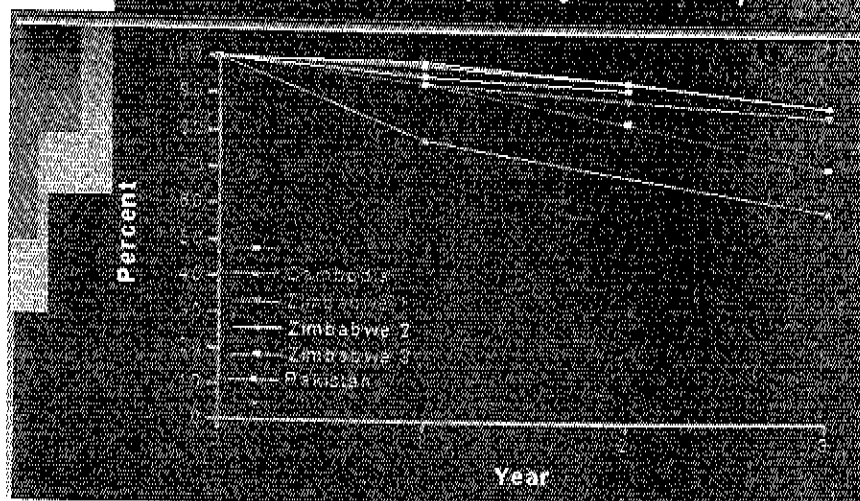
The project manager Dr J.E. Frencken is based at the Centre. The staff of the Centre will coordinate the various ART activities, provide scientific input and technical assistance, and liaise with WHO, Oral Health in Geneva and other oral health institutions.

Consultation group on ART

This group will assist in the project management to review progress and propose future activities with respect to the development and promotion of ART. The group will comprise of experts from the existing ART team and representatives from the international dental profession and dental research federation. The group is scheduled to meet annually, preferably during an international conference starting June 1998.



Survival rates for one-surface ART restorations in permanent teeth (three-year results)



Responsible Staff of the WHO Global Programme on ART

Responsible Officer

Dr G.N. Pakhomov
Division of Noncommunicable Diseases
Oral Health Programme
World Health Organization, Geneva

Project Manager

Dr J.E. Frencken
Associate Professor,
Dental Faculty, University of Nijmegen,
the Netherlands and
WHO Collaborating Centre, Nijmegen

WHO Temporary Adviser

Dr C.J. Holmgren
Honorary Associate Professor,
University of Hong Kong.

© World Health Organization, 1998

This document is not a formal publication of the World Health Organization (WHO), and all rights are reserved by the Organization. The document may, however be freely reviewed, abstracted, reproduced or translated, in part or in whole, but not for sale or for use in conjunction with commercial purposes.

For further information please contact:

Dr G.N. Pakhomov
NCD/ORH,
World Health Organization
1211 Geneva 27
Switzerland

Tel.: 41 (22) 7913475
Fax: 41 (22) 7914866
E-mail: pakhomovg@who.ch