

# Basic Package of Oral Care: An Insight

Mayur Nath Reddy<sup>1</sup>, Antarika Gogoi<sup>2</sup>, Shwetha H.L<sup>3</sup>

1-Professor, Department of Public Health Dentistry Vydehi Institute of Dental Sciences and Research Centre. 2-Post Graduate student, Department of Public Health Dentistry Vydehi Institute of Dental Sciences and Research Centre. 3-Senior Lecturer Department of Public Health Dentistry Vydehi Institute of Dental Sciences and Research Centre.

Correspondence to:  
Dr. Antarika Gogoi, Post Graduate student, Department of Public Health Dentistry Vydehi Institute of Dental Sciences and Research Centre  
Contact Us: www.ijohmr.com

## ABSTRACT

The concept of Basic Package of Oral Care (BPOC) places great emphasis on approaches which are acceptable, feasible and affordable and can be provided within the existing Primary Health Care approach. The role of NGOs, role of local dentists and dentist as a volunteer in a foreign country, Community Health Worker (CHW) and role of public private partnership is vital for successful implementation of BPOC. The implementation of the components of the BPOC i.e. Oral Urgent Treatment (OUT), Affordable Fluoride Toothpaste (AFT) and Atraumatic Restorative Treatment (ART) depends on prevailing local factors, including available human and financial resources, existing infrastructures, felt needs and demand of the community, treatment demands of the community, their leaders and dental association.

**KEYWORDS:** BPOC, ART, AFT, OUT, Public Private Partnership

## INTRODUCTION

Health is a fundamental human right which is indispensable for the exercise of other human rights.<sup>2</sup> Human rights are legally protected and guaranteed by law and they protect individuals and groups against actions that interfere with their basic freedoms and human rights. Human rights are universal.<sup>3</sup> Every person has rights; no matter who he/she is, where they live, their class, race, sex, age and social status among others. These human rights are also inalienable.<sup>4</sup>

All human beings are entitled to the enjoyment of the highest attainable standard of health conducive to living a life in dignity. Right to health is a range of socio-economic rights for which many states have accepted an obligation under international law. The "right to health" in international law; is often defined as "the right to the highest attainable standard of health," but there are varying views on its content and states' minimal obligations.<sup>2</sup>

## ELEMENTS

According to the General Comment, the right to health contains four elements:

1. Availability: Functioning public health and health care facilities, goods and services, as well as programmes in sufficient quantity.
2. Accessibility: Health facilities, goods and services should be accessible to everyone, within the jurisdiction of the State party. The element of accessibility has four overlapping dimensions:
  - non-discrimination,
  - physical accessibility,
  - economical accessibility (affordability),
  - information accessibility.
3. Acceptability: All health facilities, goods and services should be in accordance of medical ethics

and culturally appropriate, as well as sensitive to gender and life-cycle requirements.

4. Quality: Health facilities, goods and services must be scientifically and medically appropriate and of good quality.

The right to health entails certain obligations on the government. A government obligation is basically a duty or responsibility that the government owes to its people. The following are obligations with respect to health rights that a government must fulfil:

- Respect: The government must avoid doing anything, which can interfere with the enjoyment of the right to health. For example, government cannot introduce a policy or law, which will interfere with the enjoyment of the right to health. In other words, Government must not act directly counter to the human rights standard.
- Protect: Government must take actions to stop others from violating the human rights standard.
- Fulfil: Government has an affirmative duty to take appropriate measures to ensure that the right to health of everyone is realised. The extent to which government can fulfil this obligation will depend on available resources.

According to the General Comment, the right to health has a "core content" referring to the minimum essential level of the right. Even though this level cannot be determined; key elements are set out to guide the priority setting process. Essential primary health care; minimum essential and nutritious food; sanitation; safe and potable water; and essential drugs are the inclusions of the core content. Another core obligation is the adoption and implementation of a national public health strategy and plan of action. These obligations must address the health concerns of the whole population; be devised, and

How to cite this article:

Reddy MN, Gogoi A, Shwetha HL. Basic Package of Oral Care: An Insight. *Int J Oral Health Med Res* 2017;3(6):152-157.

periodically reviewed, on the basis of a participatory and transparent process; contain indicators and benchmarks by which progress can be closely monitored; and give particular attention to all vulnerable or marginalized groups.<sup>5</sup>

Oral health is an important component of general health and an important indicator for quality of life. Individuals throughout the world, particularly the poor and socially disadvantaged in developing countries, suffer greatly from oral disease, despite the recognition of oral health as a human right.<sup>6</sup> Among the conditions the disadvantaged faces are caries, gingivitis and periodontal disease, tooth loss, oral cancer, HIV-AIDS-related oral disease, facial gangrene (Noma), dental erosion, dental trauma, and dental fluorosis. In addition to these clinical manifestations of oral disease and the associated detrimental impacts on health, the socio-behavioural ramifications of compromised oral health include oral dysfunction leading to malnutrition, gross facial disfigurement, time lost from work or school, and social isolation.<sup>7</sup> Poverty, a high illiteracy rate, compromised oral hygiene habits, lack of oral health education and promotion, and lack of access to timely, affordable oral health services are the factors that contribute to this burden of oral disease.<sup>8</sup>

More than 70% of the population of the world, mainly those living in low- and middle income countries, have little or no access to oral health care. Although oral health is recognised as a basic human right, the lack of appropriate and affordable oral care to more than 4 billion people worldwide has not yet resulted in a massive increase of political activity and financial resources to address the problem.<sup>9</sup>

The persistent and ubiquitous nature of oral health inequalities presents a significant challenge to oral health policy makers. Oral health inequalities mirror those in general health. The universal social gradient in both general and oral health inequalities highlights the underlying influence of psychosocial, economic, environmental and political determinants. The chief preventive approach in dentistry, i.e. narrowly focusing on changing the behaviours of high-risk individuals, has failed to effectively reduce oral health inequalities, and has increased the oral health equity gap. There is a need of conceptual shift from this biomedical/behavioural 'downstream' approach, to one addressing the 'upstream' underlying social determinants of population oral health. Failure to change this preventive approach is a dereliction of ethical and scientific integrity. A range of public health actions may be implemented at local, national and international levels to promote sustainable oral health improvements and reduce inequalities.<sup>10</sup>

A social determinants approach is crucial for establishing a population strategy framework that highlights the need to examine the underlying "cause of the cause" or social conditions that result in unequal oral health distribution and disease.<sup>11</sup> In order to comprehensively address oral health inequalities, current research suggests a conceptual

shift from the traditional "downstream" biomedical/behavioural model (in which individual risk factors are assessed and preventive/educational interventions focus on behavioural change at the individual level with little focus on the broader factors that influence well-being) to a broader "upstream" model that focuses on the social environments in which oral health behaviours are formed. Downstream interventions have a predominantly curative focus and target the harmful health behaviours that are already established. Upstream interventions are directed at the circumstances (such as poverty and illiteracy) that may bring about harmful health behaviours and conditions. Upstream interventions thus focus on prevention and health promotion at the level of society. These interventions consists of comprehensive educational media campaigns, community engagement, healthy public policies, and legislative action.<sup>10</sup> An emphasis on community and societal interventions is more likely to have the desired impact on oral health outcomes among vulnerable populations.<sup>8</sup>

## ORAL CARE AND PRIMARY HEALTH CARE (PHC)

More than 25 years ago, the Alma-Ata conference, organised by the WHO and UNICEF, gave priority to local, simple curative and preventive care addressing the needs of the population; in contrast to expensive western-oriented health care which remains largely restricted to hospitals and private clinics, for the first time. Delegating tasks to auxiliaries in Community Health Centres and using simple but effective approaches are important components of primary health care. During the last few decades, in many low- and middle-income countries, PHC has been the basis of health care.<sup>12</sup>

In dentistry however, this change has not been actively pursued, but for a few exceptions. Oral health care remains largely the domain of dentists in private clinics and hospitals in urban areas. Simple oral health care, combined with information and preventive activities for the majority of poor and disadvantaged populations, delivered by assistants or health care workers in the community, rarely became a reality. If oral health played a role in policy frameworks at all, the approaches chosen follow the traditional western curative treatment model using expensive technology and highly trained dentists. Therefore, many health care systems, not only in low-income countries, fail to address the importance of oral health for the individual (in terms of pain and suffering) and public health (in terms of impact on general health and local economies).<sup>13</sup>

Some of the reasons for the huge gap in oral health status and availability of oral health care are:

- Low priority for oral health compared to other diseases
- Lack of professional and political advocacy regarding oral health and for redistributing resources

- Absence of living conditions and health determinants conducive to good oral health
- Inadequate workforce planning and dominance of the restorative approach and western treatment and education models
- Lack of integration of oral care into PHC
- Resistance of the dental profession to distribute tasks to non-dental personnel together with failure to address the problems of quackery
- Services not entirely based on community needs and demands
- The 'inverse care law' – inequitable distribution of services between affluent urban and non-affluent rural areas.<sup>12</sup>

## THE BASIC PACKAGE OF ORAL CARE: A DOWNSTREAM INTERVENTION

The WHO Collaborating Centre situated at University of Nijmegen in The Netherlands has worked within primary oral health care principles to create an affordable and sustainable community service called the basic package of oral care (BPOC).<sup>14</sup> The BPOC is framed to work with minimum resources for maximum effect and does not require a dental drill or electricity. The BPOC can be customised specifically to meet the needs of a community.<sup>8</sup>

### Principle of BPOC (Workshop Report, 1951)

- The philosophy of Primary Health Care (PHC), with its leading principle of basic oral care for all and emphasis on prevention and affordable and sustainable services, was initially a guideline.
- The services offered should primarily meet people's perceived needs and treatment demands was the basic assumption. However, two main barriers prohibit proper inclusion of oral health care into the PHC system: dentistry's traditional orientation toward individual care rather than a community approach, and its inherent technical character. Thus, the philosophy of conventional dentistry must be changed to one of low-technology treatment control and prevention to meet the perceived oral health needs and treatment demands of the community.

**Rationale of BPOC:** The situation in most non-EME (non-established market economy) countries and in disadvantaged communities in EME (established market economy) countries calls for a change in approach of care. Traditional western oral health care approach should be replaced by a service that follows the principles of PHC. This implies that more emphasis should be given to community-oriented oral health promotion.<sup>15</sup>

Most significant is the fact that a dentist trained in BPOC can train local ancillary medical and dental personnel to become BPOC-proficient. These local non-dentist BPOC-trained individuals can then step up to the role of the primary resource for oral health promotion and simple

curative care in their communities. A large non-dental labour force, including community health workers (CHWs) and teachers, is integral to primary oral health care (POHC) and BPOC. Most developing countries have a large number of community health workers compared to the professional dental work force. These workers are given training to deliver a range of services, including childhood immunization promotion, growth monitoring, family planning, and health promotion and education. They are also trained to treat minor ailments and injuries, and to identify and refer more serious cases to physicians. Thus they have the educational and clinical capacity required to learn BPOC and promote POHC.<sup>14</sup>

Oral health education is simply insufficient to change oral conditions; as an adjunct to receiving oral health education and improving oral hygiene practices, individuals need basic oral treatment. Hence, health promotion must go hand-in-hand with health service provision, thus reflecting a more coordinated approach with the combination and balance of upstream (health education) and downstream (clinical prevention) oral health determinants and interventions.<sup>10</sup>

Furthermore, it is essential that a system of preventive care needs to be put in place. The

BPOC includes the following three main components:<sup>16</sup>

1. Oral Urgent Treatment (OUT)
2. Affordable Fluoride Toothpastes (AFT)
3. Atraumatic Restorative Treatment (ART)

**Oral Urgent Treatment (OUT)** for the Emergency refers to management of oral pain, infections and trauma. This includes services targeted at the emergency relief of oral pain, management of oral infection and dental trauma through (OUT). An OUT service must be tailored to the perceived needs and treatment demands of the local population.

The three fundamental elements of OUT comprises of<sup>12</sup>

- Relieving of oral pain
- First aid for oral infections and dento-alveolar trauma
- Referral of complicated cases. Need for OUT
- Although most oral diseases are not life threatening, however, they constitute an important public health problem.
- Their high prevalence, public demand for treatment, and their impact on the individual and society in terms of pain, discomfort, functional limitation and handicap affect the quality of life.
- The social and financial impact of oral diseases on the individual and community can be very high.

### Treatment Modalities (OUT)

- Extraction of grossly decayed and periodontally involved teeth with bad prognosis under local anaesthesia.
- Treatment of post-extraction complications such as dry sockets and bleeding.
- Drainage of localized oral abscesses.
- Palliative drug therapy for acute oral infections.

- First aid for dento-alveolar trauma.
- Referring complicated cases to the nearest hospital.

Oral Urgent Treatment (OUT) is an on-demand service providing basic oral emergency care. Relieving pain is the predominant treatment demand of underserved populations. Emergency oral care that is easily accessible for all must be the first priority in any oral health programme.

**Affordable Fluoride Toothpaste (AFT):** Affordable Fluoride Toothpaste (AFT) is an efficient tool to create a healthy and clean oral environment. The WHO states that fluoridated toothpaste is one of the most important delivery systems for fluoride. The availability and affordability of effective fluoride toothpaste is essential for every preventive programme.

**Rationale for using Affordable Fluoride Toothpaste (AFT):** The anti-caries activity of fluoride toothpaste has been proven in an extensive series of well-documented clinical trials. The widespread and regular use of fluoride toothpaste in non-EME countries would have an enormous beneficial effect on the incidence of dental caries and periodontal disease. Governments should recognize the enormous benefits of fluoridated toothpaste to oral health and should take the responsibility to reduce or eliminate the tax burden on this product.

#### Recommendations

- Affordable fluoride toothpaste with anti-caries efficacy should be made available to all to ensure that all populations are exposed to adequate levels of fluoride by the most appropriate, cost-effective and equitable means.
- The packaging of the fluoride toothpastes should be clearly labelled with the fluoride concentration and the descriptive name of the fluoride compound.
- Advice for adult supervision of tooth brushing by young children.
- Production and expiration date should be labelled.
- Instructions for using a pea-sized amount of paste by children.
- Directions for proper rinsing after brushing.
- The method of dispersal of toothpaste should facilitate the use of small amounts of the paste

**Atraumatic Restorative Treatment (ART):** While preventive methods, such as affordable fluoride toothpaste, continue to make a large impact on the level of caries, some carious lesions inevitably progress to cavitation. ART is a novel approach to the management of dental caries that involves no dental drill, plumed water or electricity. Atraumatic Restorative Treatment (ART) is a caries management approach, consisting of a preventive and a restorative component. The ART approach is entirely consistent with modern concepts of preventive and restorative oral care, which stress maximum effort in prevention and minimal invasiveness of oral tissues.<sup>12</sup>

ART can be performed inside and outside a dental clinic, as it uses only hand instruments and a powder-liquid high-viscosity glass-ionomer, and requires neither electricity nor running water. It is relatively painless, minimizing the need for local anaesthesia and making cross-infection control easier. Appropriately trained dental auxiliaries, such as dental therapists, can perform ART at the lower level of the health care pyramid such as in health centers and in schools. This makes restorative treatment more affordable, while simultaneously making it more available and accessible. ART therefore meets the principles of PHC.

Effectiveness of the ART approach, survival of ART restorations, ART restorations vs. conventional restorations and the acceptability of ART restorations are some of the issues to be considered prior to placement of ART restorations. The ART approach is consistent with modern concepts of preventive and minimally invasive restorative oral care. ART is particularly suitable for school children and can be provided within a school dental care system. By treating small cavities premature extractions are avoided.<sup>15</sup>

25% of India's specialist physicians reside in semi-urban areas, and a mere 3% live in rural areas.<sup>17</sup> The rural areas, with a population approaching 700 million, continue to be deprived of proper healthcare facilities. The people residing in rural India are deprived of health care facilities, are unaware and illiterate.<sup>18</sup> Thus, there is a need to implement BPOC to improve oral health of the people residing in rural and urban slums of India. Unsurprisingly, standards of oral health are very poor in India, with a large proportion of the population affected by conditions such as periodontal diseases and tooth decay; and two thirds of people who have never seen a dentist. Thus basic package of oral care with its three important components (OUT/ART/AFT) is an important tool to improve oral health status of the people in India.

## IMPLEMENTING THE BPOC

**Role of NGOs in implementing the Basic Package of Oral Care:** The concept of the BPOC provides many opportunities for NGOs to engage themselves in a structured effort towards better oral health. Despite a growing importance of non-governmental organisations (NGO) in the medical and general health sector, which has brought about a new generation of highly professional, socially responsible and financially transparent organisations, the situation in the sector of oral health development assistance is very different.

Some of the drawbacks of this sector include:

- Financial resources for the majority of NGOs are very limited,
- The degree of professionalism is generally very low (in terms of organisation management, accountability, volunteer training, evidence-based interventions, quality control, evaluation and

- sustainability),
- Integration into existing local community structures is often very low,
- Lack of coordination, information and technology sharing between the different dental NGOs.

Although organisations and individuals involved are often highly motivated and sacrifice significant amounts of time, money and resources with the best of intentions, the impact and sustainability of such volunteer engagement remains at best very limited. Therefore, a profound strategic reorientation for the majority of dental NGO's and the volunteers serving for them is long overdue. Their programmes and projects need to be reoriented towards projects that are efficient, sustainable and integrated and accepted by host communities.

#### **Role of Local Dentists and Dentist as a Volunteer in a Foreign Country:**

There are a fairly large number of dentists from the high-income world who are prepared to volunteer to work in a low socio-economic community for a limited period. Their motivations to volunteer may vary but in most cases are rooted in the recognition of need and the desire to help. They seek guidance from NGOs sending volunteers or start projects on their own with the best of intentions and undoubtedly praiseworthy motives. Patients receiving medical assistance certainly benefit, but these patients constitute only a small and almost insignificant section of the whole population. The dentist can also train the local health workers who can continue with the care after the departure of the volunteer. Training packages in form of videos can be created to train local health workers. However, training of health workers in OUT is only justified if there is a functioning Primary Health Care system where the health worker can work with the acquired OUT skills. There also needs to be referring network for cases beyond the health worker's capabilities. Once the training is completed it is imperative for a local dentist, a volunteer or an NGO to carry out regular evaluation visits. These visits are needed to monitor the health worker's activities, the service performance and to make changes where necessary. It is self-evident that only with a close co-operation with local communities, government administrations and other relevant organisations this type of NGO and volunteer involvement is possible.

#### **Role of Oral care and Primary Health Care (PHC):**

During the last few decades, PHC has been the basis of health care in many low and middle-income countries. If sufficient funds and manpower are available than primary health care can be efficient ways to achieve the goal. Hence there is a need to strengthen the health care centres at all levels. The oral health care should be blended with the on-going primary medical care.

**Role of Public Private Partnership (PPP):** Given strong economic growth of country in past decade, increasing demand for public investment across all sectors has created investment gaps in these key sectors. In addition, challenges are also increasing in terms of service delivery standards, performance benchmarks, and

incorporation of technology into provision of health and education services to all, especially poorest and those located far from urban growth centres of country. Public-private partnerships or PPPs have shown their ability to meet some of these challenges in India. Public private partnership has been identified as a key focus area for increasing access to health services by integrating common people and local government institutions. Public and Private sectors have separate but complimentary roles recognized by health sector which tried to make best use of their comparative advantages. There is a need to identify areas of collaboration of varied nature in PPP some of them are awareness generation, health education, outsourcing of non-health services. With respective strengths and weaknesses, neither public sector nor private sector alone can operate in best interest of health system.<sup>1</sup>

## CONCLUSION

Presently, oral health is being given immense importance at the national level. Most initiatives are aimed at the prevention of oral disease, there is a need to look into affordable and effective curative modalities too. Basic Package of Oral Care can be a golden step in this direction. The rural section of the community will be immensely benefited and in turn the overall burden of oral diseases will come down drastically. There is an urgent need for public health dentists along with dentists in government service, preferably with some training in public health to implement BPOC at their respective areas and analyze the feasibility and effectiveness in the community. The implementation of the three components of the BPOC depends on prevailing local factors, including available human and financial resources, existing infrastructures, local perceived needs, treatment demands of the community, their leaders and dental associations. The main components of the BPOC (Oral Urgent Treatment, Affordable Fluoride Toothpaste, Atraumatic Restorative Treatment) offer many opportunities for effective, affordable and sustainable activities that aim to improve oral health in the community and population level. A reorientation of dental NGOs and the volunteers working for them, revival of existing primary health care services and public private partnership is mandatory for the successful implementation of BPOC.

## REFERENCES

1. World Health Organisation. Constitution of the World Health Organisation. Available at [www.who.int](http://www.who.int) (Accessed on 04/04/2017)
2. (ICESCR General Comment 14, The Right to Highest Attainable Standard of Health (Article 12) General Comment No. 14 (11/08/00) (E/C.12/200/4) (paragraph 1).
3. Right to Health. A Publication of the AIDS Law Unit, Legal Assistance Centre
4. Hobdell MH. Health as a fundamental human right. *British Dental Journal*. 1996; 180(7):267-270.
5. The Right To Health. Joint Fact Sheet WHO/OHCHR/323 August2007

6. Petersen PE, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C. The global burden of oral diseases and risks to oral health. *Bulletin of World Oral Health Organisation* 2005; 83(9): 661-669
7. Petersen PE. The World Oral Health Report 2003. Continuous improvement of oral health in the 21st century – the approach of the WHO Global Oral Health Programme. 2003
8. Karim A, Mascarenhas AK, Dharamsi S A Global Oral Health Course: Isn't It Time?, *Journal of Dental Education* 2008; 72(11):1238-46
9. Batra M, Rajwar YC, Agarwal N, Singh A, Dutt M, Sinha A. Basic Package for Oral Care: A Step towards primary oral health care. *TMU J. Dent* 2014; 1(2):57-60
10. Watt RG. From victim blaming to upstream action: tackling the social determinants of oral health inequalities. *Community Dent Oral Epidemiol* 2007; 35: 1–11
11. Watt RG. Emerging theories into the social determinants of health: implications for oral health promotion. *Community Dent Oral Epidemiol* 2002; 30: 241–7.
12. Helderma WV, Benzian H. Implementation of a Basic Package of Oral Care: towards a reorientation of dental Ngos and their volunteers. *Int Dent J.* 2006; 56(1):44-8.
13. van Palenstein Helderma WH, Mikx F, Truin GJ, Hung HT, Luc PH. Workforce requirements for a primary oral health care system. *Int Dent J* 2000; 50: 371-377
14. Frencken JE, Holmgren C and Helderma VP. WHO Basic Package of Oral Care (BPOC). Nijmegen, Netherlands: WHO Collaborating Centre for Oral Health Care Planning and Future Scenarios, University of Nijmegen. 2002
15. Kumar S, Ravishankar, Kumar S, Saran A. Basic package for oral care: relevance and implementation strategies in Indian scenario: a review. *Int J Basic App Med Sci* 2013; 3(2):166-170.
16. Pine CM and Harris R. *Community Oral Health* 2007; 1<sup>st</sup> edition, 532.
17. Hobdell M, Petersen PE, Clarkson J, Johnson N. Global goals for oral health 2020. *Int Dent J* 2003;53:285–8.
18. Harvard University School of Public Health World Bank and WHO. *The global burden of disease: A comparative assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020.* Boston MA: 1996.

Source of Support: Nil  
Conflict of Interest: Nil