

INTEGRATING ORAL HEALTH IN PRIMARY HEALTH CARE IN GHANA

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SUMMARY

The Primary Health Care concept promulgated at Alma Ata did not define its application in the delivery of oral health services. For reasons of equity, accessibility and coverage, Ghanaian dental professionals have felt the need to integrate some “basic oral health care services” into the existing Primary Health Care program. Mobile dental teams with portable equipment and headed by dentists are advocated whose main duties will be to provide “basic oral health care services” in the sub-district communities with referrals to district and regional centers. It is argued that the goals of primary health care can still be maintained without the employment of middle-level “provider” auxiliaries because of the peculiar situation in Ghana. This paper examines the dental health services in Ghana and suggests that Ghanaians, especially the rural population, will enjoy more equitable, accessible and affordable dental services if these were integrated into the PHC system.

Keywords : Oral health services, Primary Health Care, integration,
Basic Oral Health Care Services

INTRODUCTION

Following the Alma Alta declaration¹ the adoption of “Health For All by year 2000” set the agenda for a new public health strategy in the direction of Primary Health Care (PHC). In the same year (1978) Ghana adopted the five cardinal principles governing the implementation of the PHC, which are ¹:

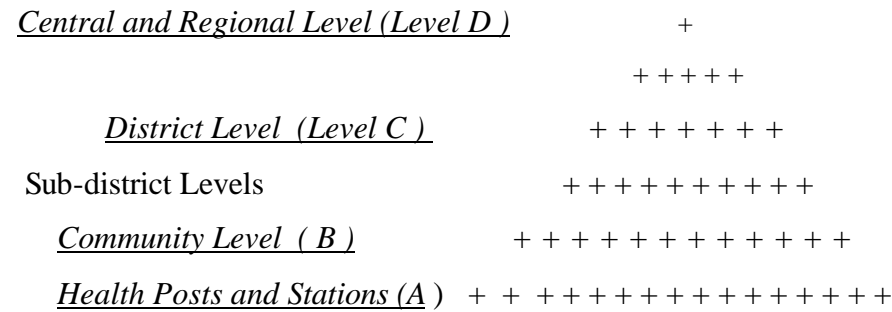
1. Equitable distribution of resources;
2. Community participation
3. Focus on prevention
4. Appropriate technology
5. Multi-sectoral approach.

Although the strategy focused mostly on medical programs, many countries have extended these PHC principles to include dental services ². The observation is that a more equitable, effective and affordable dental care would be enjoyed, especially by the relatively poor, developing countries, if this was integrated into their existing PHC systems. This paper discusses the state of oral health services in the country and suggests the integration of these services into the present PHC strategy for a more efficient system.

Structure of the Health Care Services in Ghana

The structure of the health care delivery system in Ghana is a 4-tier pyramidal system ³ under a central national control.

Figure 1 4-Tier Pyramidal Structure of the Health Care System (Ghana)



Regional Hospitals (Level A)

The major Regional hospitals depend upon district hospitals for their patient load. The majority (68 %) of the dentists in Ghana work in public Regional hospitals. There is usually a dentist, two or three Dental Surgery Assistants (DSAs) and one or more dental laboratory technicians depending on the size of the catchment area. The dentist is responsible to the Chief Medical Officer of the hospital. Unlike the medical profession, dentistry has no representation at the regional, district or community levels.

District Level (Level C):

This is the key level of management of the PHC system and provides leadership in district health care. The attempt to provide middle, para-dental personnel to provide oral health services in the district and rural areas, especially to school children, was defeated when the 15 Dental Therapists trained overseas in the late 1970s ended up in schools within Accra, the capital. There are presently only 14 dental clinics in the 110 districts in the country (Table 1)

Table 1

**REGIONAL DISTRIBUTION OF HOSPITALS
AND DENTAL FACILITIES IN GHANA**

Region	Population	Hospitals			No. of Dentists**		
		Regional / District*	# of Districts in Region		Public	Private	District
Greater Accra	2,909,643	1	4	5	26	36	0
Central	1,580,047	1	4	12	4	1	2
Eastern	2,108,852	1	9	15	7	0	6
Volta	1,612,299	1	5	12	2	0	2
Western	1,842,878	1	7	11	4	1	2
Brong Ahafo	1,824,822	1	3	13	2	0	1
Ashanti	3,187,601	1	3	18	8	4	1
Northern	1,854,994	1	2	13	1	0	0
Upper East	917,251	1	1	6	1	0	0
Upper West	573,860	1	1	5	1	0	0
TOTAL	18,412,247	10	39	110	56	42	14

* The districts also have health centres and posts.

** There are 15 dentists located in Mission and Military health institutions in the country and 12 graduate dental residents at the University of Ghana Dental School. Discounting the graduate residents, there are 117 active dentists in the system.

Sub-District Levels---(Level B)

(a) Community Level---Health Centres :

These provide outpatient services to relieve the district and regional hospitals of all but their most specialized functions. Health centres usually serve a catchment area of about 8 km and provide the first point of contact with health personnel from the Ministry of Health (MOH). There is no dental equivalent to the delivery system at this level, except for the odd outreach program by the already under-staffed dental team from the Regional hospitals³.

(b) Health Posts and Stations (Level A)

This is the smallest unit at the broad base of the 4-tier system where minor cases like cuts and wounds are treated with serious cases referred to the health centres or the district hospitals. These stations are run by Community Clinic Attendants (CCA) and function as first aid stations and health observational posts. There is no equivalent oral health delivery system at this level.

SITUATIONAL ANALYSIS OF DENTAL SERVICES IN GHANA

When the PHC strategy was implemented in 1978, dental services were not specifically mentioned. This lack of integration of dentistry in the PHC system in Ghana has left oral health care far behind other health care services. Some of the effects have been the loss of prestige of the dental profession; the absence of trained or certified para-dental personnel in the system; the general lack of oral health awareness not only among the general populace but also among many medical colleagues. Moreover, an institutionalized, community-based oral health program does not exist.

As in many developing countries, oral health services are offered by dentists mostly located in the urban centers³ (Table 1). With negligible numbers of district and sub-

district dental clinics, the nearest location where oral health services is accessible for most of the rural dwellers is the Regional hospital.

Most of the rural Ghanaian population has to travel long distances on often very difficult roads to the few available facilities. Aside of the inadequate number of dentists, many of the dental equipment in public dental services are non-functional ³. In the few areas where the equipment is functional, especially in the more isolated areas of the country, it has been difficult to attract dentists who claim “lack of attractive incentives” from the government.

Emergency services, dental or medical, are not easily available to the majority of Ghanaians. Even in the urban areas cost keeps many prospective users away from accessing the available services because of the “cash and carry” payment system (fee for service) and the total lack of third party payment (insurance) plans. From young adults to the 50 year olds lack of perception of their dental needs appears to be the most frequent reason for not going to the dentist ⁴. This lack of perception of needs, or ‘absence of toothache’, causes delays in seeking treatment and the majority of patients present teeth at an advanced stage of decay usually beyond repair.

One undesirable consequence of these delays is the observation that 73-93 % of all treatment given in the public dental clinics are tooth extractions ^{3,5,6}. Moreover, preventive services (examination, scaling and prophylaxis) form only 0.33 to 2.7 % of services at the public dental clinics and is testimony to the abysmal lack of oral health education, preventive practices and the lack of dental health promotional programs in the country ^{5,6}.

RATIONALE FOR A CHANGE IN THE ORAL HEALTH CARE SYSTEM

There is an urgent need for a change in the dental delivery system in Ghana for these reasons:

1. The Ghanaian population, albeit slowly, is increasingly becoming aware of its dental health. Ten years ago only 1:10 Ghanaians used toothpaste; now 8:10 are using the toothpaste ⁷. Although the numbers are still small, more Ghanaians are seeking dental services as a result of the influence of television, the radio, newspapers and through the effects of urbanization.
2. The University of Ghana Dental School soon hopes to graduate ten dentists a year. The infusion of new and younger graduates who have an extensive community orientation will demand a shift in the prevailing ideology of fixed, curative, hospital-based system to one of an “outreach”, community-oriented system.
3. Seventy percent of Ghanaians, mostly rural, are still without dental services 24 years after the adoption of the PHC strategy ³.
4. The “cash and carry” (fee-for-service) payment system is keeping most Ghanaians away from satisfying their felt needs.
5. The epidemiology of dental disease has changed in Ghana. Recent studies continue to indicate a low to very low caries prevalence in rural communities although periodontal disease remains at the same high levels as it was thirty years ago ⁸⁻¹¹. Earlier preoccupation with dental caries should therefore give way to a new direction and attention towards periodontal diseases.

BASIC ORAL HEALTH CARE SERVICES

Dental professionals in Ghana believe that some “basic oral health care services” should be incorporated into the health reform presently being discussed in the country and this change should be in line with the Wellness model or the Primary Health Care strategy. The “Wellness” approach ¹², as is the PHC strategy, includes a broader view of health, more local control, greater emphasis on health promotion and disease prevention, employing appropriate technology and making better use of the available health resources. The debate, however, is about what constitutes a “basic dental care”. In the past year the Oral Health Unit of the Ministry of Health in consultation with the Ghana

Dental Association has proposed ingredients of a “basic oral health care package” (BOHCP) (Table 2).

Table 2 COMPONENTS OF PROPOSED BASIC ORAL HEALTH CARE SERVICES

Preventive Programs:

1. Examination, consultations and Oral Hygiene Instruction
2. X-rays (maximum of 4, 2 peri-apical, 2 bite-wings).
3. Scaling and prophylaxis
4. Topical fluoride applications
5. Pit and Fissure Sealant applications
6. Referrals

Community Outreach Programs:

1. Dental health education
2. Health promotional activities

Restorative Services:

1. Fillings—amalgams, composites (anteriors only), ZnOE dressings, ART.
2. Simple root canal treatments---on the anterior teeth.

Surgical Services:

1. Emergency extractions (excluding impactions)
2. Minor oral surgery (suturing, incision and drainage (I&D), biopsy etc.)

Prosthetic Services:

Acrylic removable partial dentures replacing 2-4 anterior teeth.

Orthodontic services:

Minor orthodontic procedures (eg. crowding, anterior crossbite) using removable appliances

In its initial implementation emphasis would be placed on emergency provision of dental services. Dental restorations, such as filling of decayed teeth, have attracted various unfavourable myths and beliefs from the generally unaware population. These beliefs have developed from the long delays in reporting for treatment which makes filling these

teeth provisional and with guarded prognosis. Consequently, the demand for fillings is low^{5,6}.

Interestingly, poor as they are, but for aesthetic reasons, Ghanaians prefer fixed prosthodontics (bridges) to removable partial dentures. Unfortunately, the high cost of a bridge forces many to settle for removable partial dentures. Due to its high cost and “unsightly appearance”, many, however, avoid the properly designed partial dentures with cast metal clasps. Most therefore settle for the inferior clasplless partial dentures. In general, therefore, a few obvious ingredients of the basic service package are identifiable^{13,14,15} (Table 2):

(a). Emergency services---pain relief in the form of analgesics, antibiotics, and fillings including zinc-oxide-eugenol ‘dressings’ and atraumatic restorative treatment (ART)¹⁶; extractions and provision of simple root canal treatments on front (anterior) teeth.

(b). Oral health education, especially to mothers and children, and Teaching the Teachers (TOT) like nurses, midwives, school teachers and public health workers;

(c). An effective, supervised referral system from the communities to district / Regional hospitals;

(d). Intensive preventive and promotional programs through use of various fluoride applications, fluoridated toothpastes and tooth powders, topical fluorides and fluoride rinses for high-risk groups;

(e) Replacement of missing teeth with removable partial dentures.

SOME CONSIDERATIONS

Auxiliary Utilization

Although middle-level “operating” auxiliary personnel have been used in many developing countries to deliver primary dental care services, Ghanaian dental surgeons are against the utilization of middle-level “operating” auxiliary. At a time when international bodies like the Federation Dentaire Internationale (FDI) and the WHO are calling for increased utilization of auxiliary provider manpower to complement the inadequate supply of dental surgeons in developing countries^{13, 14,15} this decision by the Ghanaian dental surgeons seems to contradict the prevailing trend.

The reason for the objection in Ghana is that in previous attempts the operating auxiliary providers have consistently taken advantage of the inadequate supply and maldistribution of dental surgeons to perform procedures not within their job description. Due to the unchecked illegal practices by “quacks”, the Ghana Dental Association (GDA) has attempted to block any move by the Ministry of Health to include clinical procedures within the curriculum of the auxiliary providers. The GDA has resolved that until proper supervision and control systems can be instituted with adequate legislation, delegation of expanded duties or substitution by provider auxiliaries will not be supported.

Moreover, the GDA argues that conditions which prompted the need to employ middle-level auxiliary “providers” in dentistry in the 1960s and 70s is no longer tenable in Ghana. Indeed, a small country with a low disease prevalence and producing ten dentists a year should be able to supply enough dentists for the country in just a few years and it would be a waste activating another provider auxiliary personnel. Instead, the very scarce resources could be more efficiently utilized to support the new dental graduates in the districts. It has therefore been suggested that in the Ghanaian experience the only indicated “provider” auxiliary would be a hygienist, bearing in mind the high prevalence of periodontal disease^{8,9,11}. At the same time the hygienist can be activated to do other public health duties as the Australian experience has shown¹⁷. In the spirit of PHC, another suggestion is to update medical practitioners located in rural areas to undertake emergency dental services.

PROVISIONAL ORAL HEALTH CARE PLAN FOR GHANA

The identified ingredients of the BOHCP should be incorporated into a system that would not only plan for demand but also for systematic care in rural Ghana ¹⁸.

It would be community-based with a mobile dental team headed by a dentist. Each oral health team will consist of a Dental Surgeon, a Dental Assistant (DSA), two or more Dental Health Educators (DHE) and a Community Health Representative (CHR) who will be the contact person to liaise and facilitate communication between the team and the community.

The team will be equipped with simple portable dental equipment and a vehicle to transport them from one community to another within the prescribed district. For systematic care the target population would be school children from Kindergarten to JSS3 (5-16 years). Whilst the clinical team is set up in a school and is engaged in providing the needed basic care, the DHEs would provide 30-minute, age-specific oral health educational sessions to each classroom in the same school. Dental health education will also be given to other groups in the community: pre-natal classes, nursing mothers, teachers, nurses and other health workers.

Cost of providing the package of basic oral health services has to be determined. Current levels of spending by the Oral Health Unit in areas where coverage is currently deemed “good” can be used as a starting point. The government must then formulate a strategy for its financing. A subsidized system may be implemented especially if access is to be facilitated for the deprived rural population. A token fee may be assessed, however, for each family for using the services.

Although the target group for systematic care will be school children, adults who need work will be seen on demand basis in all communities visited. The team will permanently reside in and commute from the district capital where accommodation is readily available.

It would be appropriate to appoint Regional and District Dental Officers who will supervise as well as coordinate all activities of the district and sub-district dental teams in the Region. For this reason, the GDA has asked for the creation of the Regional and District Dental Officer position. It is proposed that some experienced dentists are needed in the current MOH hierarchy to support the Chief Dental Officer (CDO).

The long term objective of the mobile program will be to equip each district in the country with a mobile team. A dentist would then have all the communities in the district(s) under his care. Arrangements can be made by the community “assembly-men” in the surrounding villages to send any dental emergencies on to the dental team. The PHC aspect of the program will be strengthened if the communities themselves are allowed to plan ways of getting their emergency cases to the mobile teams. They could also plan the traveling itinerary of the team when it is in their community, where the team will set up in the community and where the team would reside in the district. The CHR will help direct the oral health sessions in the classrooms and to community groups.

A Pilot Program with Mobile Dental Teams

It is suggested that a pilot project be started in one selected district using the “mobile dental team” concept. An evaluation would be made at the end of two years with respect to utilization levels, patient satisfaction and acceptance, the most appropriate treatment services at this level and the mix of dental manpower that would be most efficient and effective. If the evaluation indicates that the utilization of an "operating" auxiliary is a more efficient option then the training program for these auxiliaries would be implemented. The health educational and promotional services of the Dental Health Educators will also be assessed to see if the number of the DHEs should be increased in each district. New oral health teams would be sent to other districts in succeeding years according to a schedule drawn up by the Regional Dental Officer. If it is, however,

determined that the workload in a district is light then groups of districts can be joined to form a unit served by one team.

An Extension of the Proposed Primary Oral Health Care Service

Use of Dental Students and New Dental Graduates in an "Externship" Program

As an extension of this proposed program it is suggested that new dental graduates be employed as additional manpower in this integrated primary oral health care program. Presently all new dental graduates from the University of Ghana Dental School have to do a year's internship program ("Housemanship") at an approved Teaching Hospital. Under this proposed program the new graduates will be sent to the districts for three months in the year under supervision of the University Lecturers and the Regional Dental Officer. Similarly, final year dental students can be engaged in an outreach externship program two weeks in the year with portable equipment to provide treatment in under-serviced communities.

CONCLUSION

Although the PHC strategy adopted in Ghana in 1978 did not include dentistry, it has been found necessary to integrate dental services into the existing Primary Health Care system for increased accessibility and coverage, especially for rural populations. It is argued that the goals of Primary Health Care can be maintained without the utilization of provider auxiliaries because of the peculiar situation in Ghana. Mobile dental teams headed by dentists are advocated to provide basic oral health care services in the sub-district communities with referrals to district and regional centers. Although some curative services will be provided, greater emphasis will be placed on emergencies as well as oral health educational programs in schools, anti-natal clinics and to communities.

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