Improving dental practice -Kibosho Hospital experience

Dr. Francis Roman
Dental specialist (Restorative)
Kibosho Designated District Hospital
Catholic Diocese of Moshi

Introduction

Historically, dental services in Tanzania have been dominated by tooth extraction which led to a misconception that the treatment of a diseased tooth is extraction (dawa ya jino kung'oa). To revert this misconception, all oral health plans in Tanzania emphasize on changing the treatment profiles from being tooth extraction dominated to more preventive and restorative centred. However, in most dental clinics this has not been realized.

The Kibosho scenario shows that it possible in the current Tanzanian settings to change from tooth extraction dominated treatment to more of preventive and restorative treatment (Table 1 and Figure 1) which should preferably be emulated by other dental clinics in the country.

KIBOSHO HOSPITAL

The Hospital building

The dental team

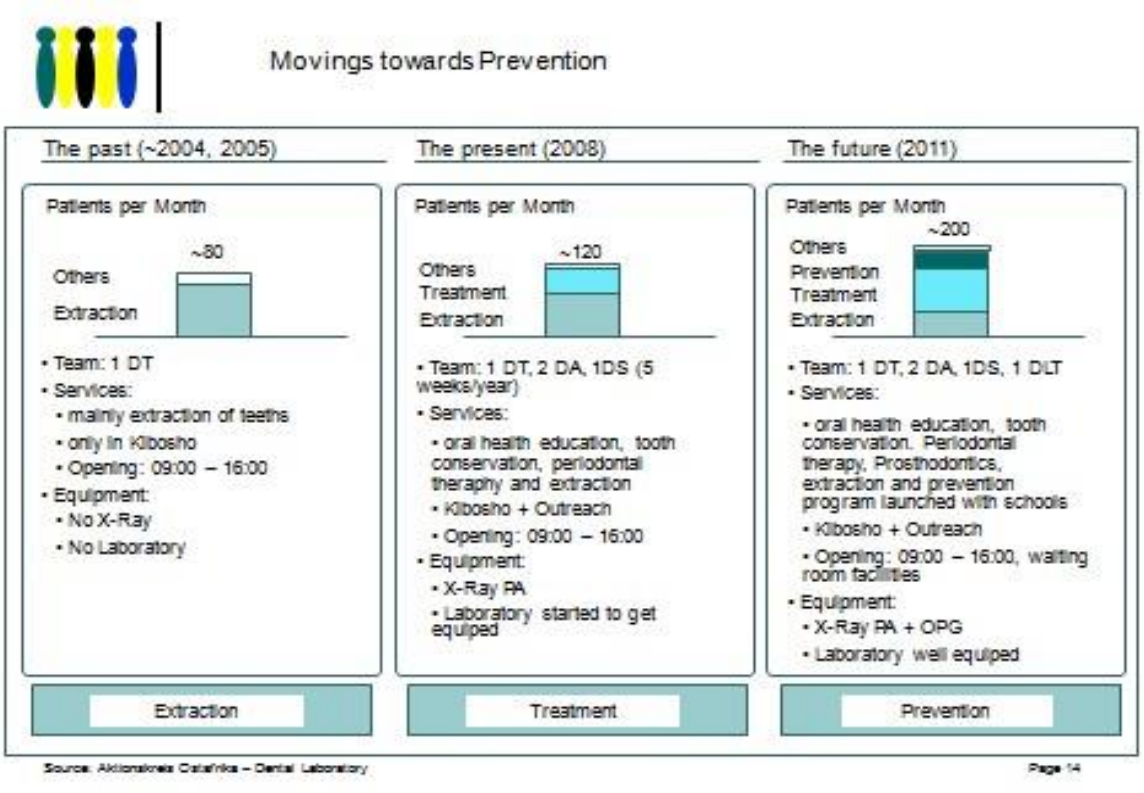
The Kibosho Hospital dental clinic treatment experiences

Below are some of the dental services provided at Kibosho hospital dental clinic;

i. Oral health education and instructions
ii. Tooth conservation
iii. Root canal treatment
iv. Composite veneer
v. Scaling and root planning
vi. Tooth extraction
vii. Surgical tooth extraction
viii. Apicectomy
ix. Prosthodontics
x. Dental Periapical X-Rays

Table 1 Extracted and conserved teeth from 2009 to 2015 at Kibosho Hospital

Year	Teeth extracted n (%)	Teeth conserved n (%)	Total teeth treated n (%)
2009	725 (59.9)	485 (40.1)	1,210 (100)
2010	843 (61.6)	525 (38.4)	1368 (100)
2011	752 (54.6)	626 (45.4)	1378 (100)
2012	796 (53.5)	691 (46.5)	1487 (100)
2013	980 (53.2)	862 (46.8)	1842 (100)
2014	1220 (54.2)	1031 (45.4)	2251 (100)
2015	1251 (54.6)	1041 (45.4)	2292 (100)

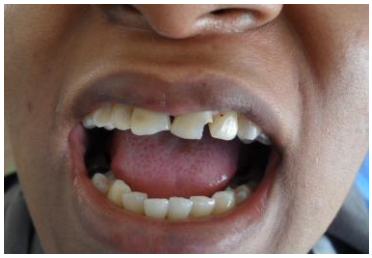


Figue1 Temporal changes in treatment pattern at Kibosho Hospital

The services offered at Kibosho hospital dental clinic have benefited various patients in terms of improving esthetics and masticatory functions that would otherwise not been possible in clinics where tooth extraction dominates.

Six selected situations are presented below. They demonstrate how restorative treatment improves esthetics and function that have been compromised by oral diseases and conditions.

1. Improving esthetics compromised by dental caries on anterior teeth

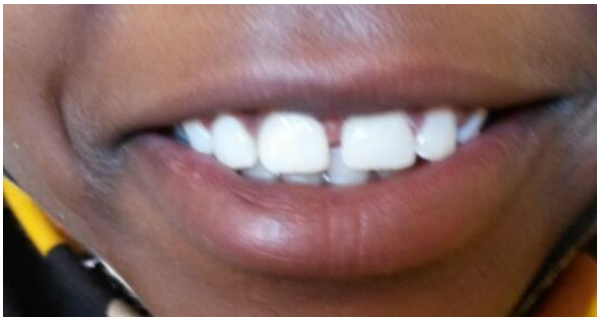


Esthetics before treatment

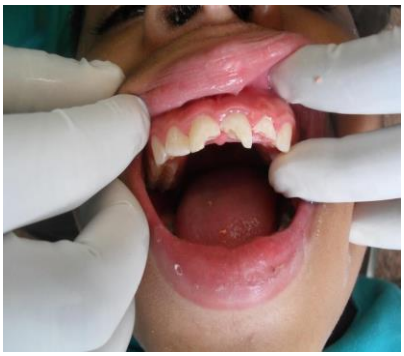
Esthetics after treatment

2. Improving esthetics compromised by dental trauma on anterior teeth

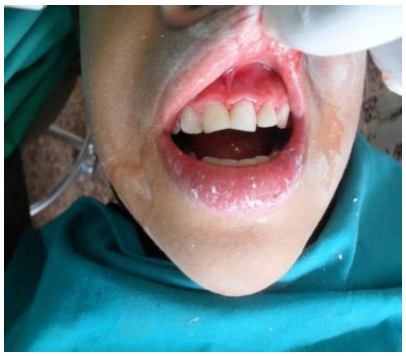
Esthetics following a crown fracture of tooth number 21



Esthetics After composite restoration

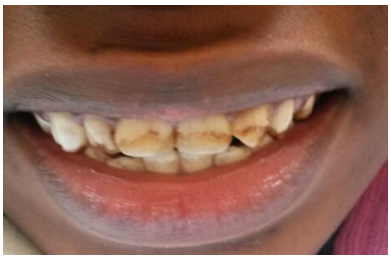


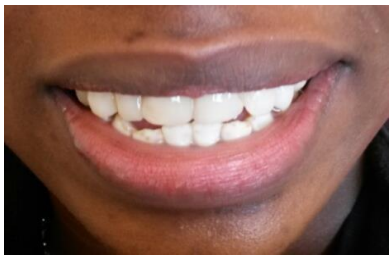
Esthetics following a crown fracture of tooth number 11 & 21

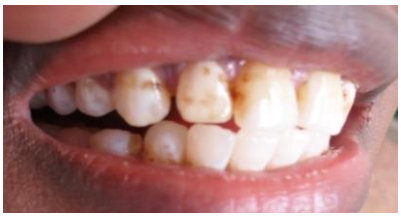


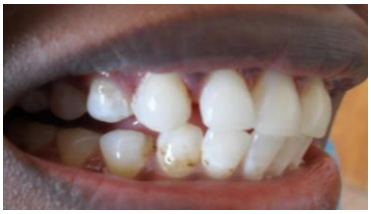
Esthetics after composite restoration

3. Improving esthetics compromised by dental fluorosis



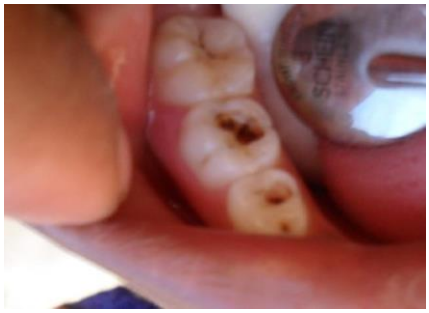


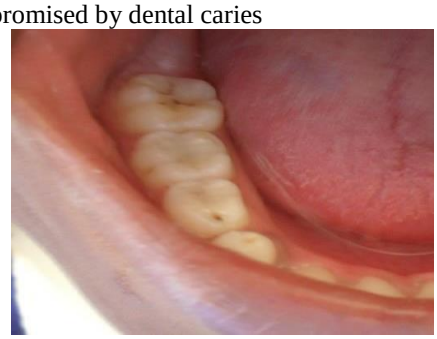




Before treatment (Left) **After treatment (Right)**

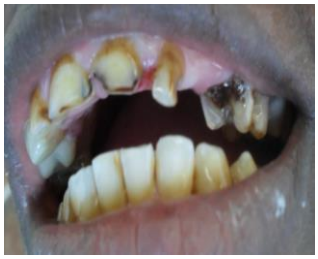
4. Restoring masticatory function of molars compromised by dental caries

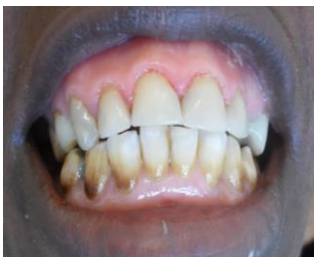




Molars with open carious cavities **Molars after composite restoration**

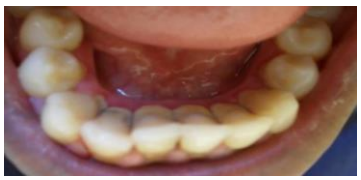
5. Rehabilitation of grossly carious teeth by composite restoration

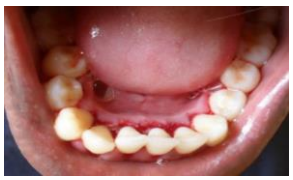




Before treatment **After treatment**

6. Improving gingival health and esthetics by scaling and root planning





Gross calculus sextant 5 **After scaling and root planning**

Experiences from Kobosho Hospital show that changing treatment profile from tooth extraction dominated to more restorative and preventive care encounters a number of challenges, including;

i. Shortage of skilled staffs
ii. Lack of commitment among some staffs
iii. Community's low awareness and misinformation about dentistry
iv. Shortage of dental supplies
v. Lack of equipment

Despite the above challenges the Kibosho Hospital dental clinic leadership circumvented the situation through among others; proper record keeping, planning and stepwise purchase of the required equipment and supplies.

Recommendations to heads of dental clinics who wish to change treatment profiles from tooth extraction dominated to more preventive and restorative care

i. Recruit skilled personnel
ii. Maintain high job and professional satisfaction
iii. Educate community on the available treatment options, and
iv. Ensure systematic purchase of equipment and supplies

REFFERENCES

1. Rufenacht CR. Fundamental of esthetics. Chicago: Quintessence, 1992.
2. Baldwin DC. Appearance and esthetics in oral health. Community Dent Oral Epidemiol 1980; 8:224-256
3. Quaittrough AJ, Burke FJT. A look at dental esthetics. Quintessence Int 1994;25:7-14
4. Andreasen J. Adhesive dentistry applied to the treatment of traumatic dental injuries. Oper Dent 2001;26:328-335
5. Smales RJ. Effect of enamel bonding, type of restoration, patient age and operator on the longevity of an anterior composite resun. Am J Dent 1991;4:130-133
6. Albert HF. Direct composite veneer. In bonded tooth-colored Restorative, ed 7. santa Rosa, CA: Alto Books, 1985:7-1-7-32
7. Black JB. Esthetic restoration of tetracecline stained teeth. J Am Dent Ass 1982;104:846851
8. Peumans M. The clinical performance of veneer restorations and their influence on the periodontium (thesis). Lauven, Beligium: Lauven University Press, 1997
9. Smales RJ. Long term detorioration of composite resin and amalgam restorations. Oper Dent 1991;16:202-209.
10. Cahen PM, Etal. Comperative study of oral conditions in school children of Strasbourg. Community Dent Oral Epidemiol 1987;15:211215