

CONTAMINATION AND INFECTION TRANSMISSION IN DENTAL PRACTICE IN TANZANIA

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First of all, I wish to inform my audience that I have not done any investigation scientific or otherwise on this subject. So what I am going to say is from my cursory observation during my routine work. Secondly, let us bear in mind that most of dental clinics in Tanzania are a part of a hospital or health centre. So when one talks on the subject of contamination and infection transmission in dental practice in Tanzania, it will be a reflection of what happens in our hospitals.

Let us start by looking at the standard of cleanliness of our dental clinics. While generally there are more than adequate supply of dental attendants the cleanliness of dental clinics leaves a lot to be desired. By cleanliness is meant clean floor, walls, equipment, furniture, vessels, instruments etc. To achieve the cleanliness means judicious use of water and soap, paint, ordinary antiseptics. But is the dental clinic the only dirty place in the hospital? Is the hospital the only dirty institution in the district, region, nation? Is it realistic to talk of keeping the dental clinic clean in isolation? We are talking of cleanliness; from national leaders to the ten cell leaders but very little is done beyond sporadic campaigns in urban areas.

Before we talk of clean dental clinics, hospitals, towns let us look at the cleanliness of where we live even of areas that should be exemplary like Oysterbay and such similar areas. Let us look at the inside of the houses of our elite who should be in the forefront in the fight against filth. Then one would not be surprised as to why we end up talking about cleanliness without taking practical steps to change the situation.

Having had a glimpse at the broad situation of cleanliness let us look at the area that concerns us here. As described above, contamination and infection transmission is

prevented first and foremost by a high standard of cleanliness generally:

- personnel
- the attire of personnel
- the floor
- the walls
- the furniture
- toilets
- running water
- the outside environment that will not pollute the atmosphere inside.

Personnel that work in the dental clinic need a high standard of personal hygiene. If a person cannot maintain personal hygiene, that person is unlikely to maintain a clean working environment. This is the case with many of the personnel working in our clinics. The professionals seem to ignore this.

While the tradition of wearing white coats to reflect cleanliness of clinicians, they are not meant to cover dirty clothes underneath. The attire that some of us appear with does not reflect the professional standard we are supposed to portray. Dressing in jeans can hardly be expected of a person going to work in a hospital but one going fishing. The rest of the clinical team need to get guidance by not only being taught but by example.

The floor and the walls of a dental clinic (surgery) can harbour many types of microbes which can cause contamination and transmit infection. That is why it is essential to have a floor and walls that are easy to clean and even apply antiseptics. Many of our clinics have potholed floors and walls which are not of the desired standard. Even then little effort is made to clean them as much as possible.

During daily work one is handling chairs, tables, trolleys, etc. These can easily contaminate hands if they are not regularly cleaned. Different hands can carry different

contaminants which are easily transmitted.

Availability of running clean water in the clinic is the cornerstone of dealing with all cleanliness in the clinic. It is impossible to avoid contamination without water. The alternative is the use of expensive antiseptic chemicals which should be used only in emergencies or field work.

Dust is a carrier of a myriad of microbes. As most of our clinics don't have air conditions, it is absolutely essential to avoid having dust in the environment which will inevitably enter the clinic and contaminate everything in it.

It is a known fact that most of our hospitals need rehabilitation. But rehabilitation alone will not keep them clean as even those fairly new are not clean enough though easier to keep clean. There are old hospitals or outpatient centres which are very old but efforts to keep them clean can be observed. It often happens those in leadership see or appreciate the importance of cleanliness. A change of leadership in this case will show in the change in the standard of cleanliness. The same happens with dental clinics. So it is upon those of us in the leadership role who should be responsible to see that cleanliness is maintained to the highest standard to avoid contamination and transmission of infection.

While cleanliness reduces the abundance of infective microbes, elimination depends on destruction of microbes and prevention of recontamination of instruments used in dental surgery: sterilization and maintenance of sterility. Problems facing dental clinics sterilization are:

- lack of knowledge by auxiliary staff
- efficient sterilization equipment
- shortage of adequate number of instruments

The auxiliary staff in the clinic usually have had no training to give them knowledge and skill to undertake proper sterilization of instruments. But these people are depended upon in sterilization unsupervised. Considering the standard of cleanliness outlined above, control of infection is not assured. Therefore there is need to give continuing education to auxiliary staff by the professionals.

Most of dental clinics sterilize instruments by boiling which is now not considered as a

means of sterilizing dental instruments though not completely useless. Due to shortage of instruments, enough time is not given for microbes to be destroyed. It is for the same reason that dental instruments are not sterilized in the central sterilizing unit of the hospital where there is one. But is it absolutely essential that those instruments which get in touch with patients blood such as needles, forceps, scalers etc. are sterilized by means that will destroy all types of micro-organisms including spores. At the moment such facility may be available in the hospital central sterilizing unit. Even then it is essential the sterilized instruments are kept sterilized which means they need to be properly packed after sterilizing. It is hoped the Workshop will address itself to this and given practical ideas keeping in mind our limited resources.

As mentioned at the beginning discussion on contamination and infection transmission have to hinge on the involvement of the whole health unit be it a hospital, health centre or dispensary. There have been occasions where I have observed that the dental clinic was the cleanest in the hospital but there have been unhappy ones too.

Dental personnel like surgeons and midwives are often in contact with blood so most exposed to the lethal diseases like HIV and Hepatitis B. That is why this theme was chosen by the Association to give a chance for members of the dental profession put forward the real situation and come up with suggestions that may help in general to alleviate the situation in dental practice both in government, voluntary agencies and private.

Plan for future equipments and materials for hygiene in regional dental clinics in Tanzania.

Rehabilitation of equipment in regional dental clinics has started. It is hoped when supply of new equipment is completed every dental clinic will have either an autoclave or the modified pressure cooker depending on the demands of the unit. But availability of equipment alone is not enough unless effort is made to institute a high standard of cleanliness described above. Schools will be urged to put emphasis on developing the behaviour of

students to maintain a high standard of hygiene. They should also instil the same to those they supervise in the dental clinics. Avoidance of shortcuts should be a habit right from the beginning of their profession.

Since most of treatment given in dental clinics consist of extraction of teeth, every effort will be made to provide adequate supply of needles and forceps. This will enable proper

sterilization while keeping continuous supply of instruments to cope with the number of patients.

The supply of gloves is a general problem covering the whole clinical service. But suggestions on this issue will be appreciated.

I wish you a successful workshop and the Ministry of Health will welcome your proposals on how to cope with the problem in this difficult times economically.