

## Orally Transferred Aphorisms of Dentistry

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### Abstract

Dentistry has existed for millennia. Wisdom derived from experience has produced principles of practice that influence dentistry. Many of these oral advisories circulate among dental health care workers in spoken words but are rarely written down.

**Aim:** This article accumulates some of the important orally transferred aphorisms (OTA) and traditions, records them and deconstructs their implications, reasons and significance.

**Discussion:** These oral advising principles have evolved from experience and each act as a dictating guide for policy and activities in the practice of dentistry.

**Conclusion:** Orally transferred aphorisms have been passed down from generation to generation of dentists; those recorded here will be added to, as long as dentistry evolves as a profession to yield further accumulated wisdom of dental health care workers.

**Keywords:** aphorisms; antibiotics; cosmetic dentistry; oral; treatment; teaching; transgenerational; wisdom

### Introduction

Much wisdom has accumulated in the past, and oral treatment as traditions were in the purview of the training of most leaders, priests and chiefs. On earth, people are born, and people pass on, and all that is left behind is a whisper of their intelligence as the ability to adapt to their surroundings. This intelligence all too often is the spoken word and is passed down orally from generation to generation. When the volume of recorded narratives, from which wisdom is derived, becomes too much to commit to memory, it is written down. Oral verbal tracts, poems, yarns and ballads can easily be forgotten, modified or inadvertently changed. But the written word, it records and remains codified and unchanged for posterity. The Holy Judeo-Christian Bible was recorded in written form over millennia and many brilliant scholars interpreted the allegories, myths, insights and importance for centuries. The fear that much of this intellectual activity would be lost prompted the subsequent scripting of the Talmud, as a written document, to capture the thoughts and ideation of biblical scholars and their interpretations [1]. Tooth problems have plagued Mankind since the beginning of recorded time. Consequently, dentistry has existed through the ages, and has adapted according to contemporary knowledge, understanding and discoveries. Paleontology and archaeology reveal many

examples of how dentists of yore attempted to treat teeth. Until the 20<sup>th</sup> Century, most dentists were not well educated or adequately trained professionally. Extractions were the most frequently practiced form of dentistry, and many dentists were instructed by self-taught practitioners as apprentices and barbers! Later during the early 20<sup>th</sup> Century education and focused training improved, qualifying exams, professional registration, and specialization all took hold of the profession. The amounts of accumulated attitudes, knowledge and skills is enormous, and today in the 21<sup>st</sup> Century, nearly every country in the world has an established, well-informed, educated, exceptionally well-trained and highly skilled dental profession. [2,12] Yet among the contemporary training programs of modern dentists, there persists an anthology of orally transferred traditions, some of which are buried in erudite text-books and professional journals but many of which are simply passed on verbally as casual, but very serious, orally transmitted aphorisms to neophytes.

### Aim

This article assembles some crucial examples of orally transferred aphorisms (OTA) as important nuggets of knowledge, records these and discusses, deconstructs the implications and reasons for application in each

and explains their significance for oral health care workers.

**“Never let the sun go down on undrained pus.”** Most emergencies in dentistry derive from pain, allergy, trauma, infections or hemorrhage. These causes demand immediate attention to stabilize a patient. Inflammation is an early reaction accompanied by pain and swelling. When the body's innate defense mechanisms control the spread of inflammation, there is an accumulation of purulent exudate, namely pus, often walled off by a fibrous encapsulation. This is termed abscess formation. Accumulated pus is usually contained within some such form of abscess, the body's defense mechanism, that localizes and limits the spread of infection. The leukocytes enzymes can easily dissolve containing fibers and the controlled infection becomes a spreading cellulitis. The pus must be drained and the cause for the infection removed as soon as possible after recognition [3, 4, 5].

**“The best inlay is never as good as it looks, and the worst amalgam never is as bad as it looks.”** Conservative dentistry treats decayed teeth with confirmative or restorative procedures. Confirmative fillings often as amalgams tend to oxidize, lose their shine and look blackened after placement; the oxidized metal under the amalgam will inhibit decay formation, and when cut out, the amalgam is replaced without further need for decay removal. Restorative inlays, often beautifully created in metal like gold or composite resin, as an inlay, only, overlay or crown. The inlay-restorations may look good and healthy, but often have leaky margins. Cement washout is common, and tooth-decay ensues under the inlay. Consequently, this OTA is applied,” The best inlay is never as good as it looks, and the worst amalgam never is as bad as it looks.”

**“You can have longer teeth, or teeth no longer.”** In Periodontal therapy, after root planing or surgical intervention, healthy dent-gingival attachment is established at a more apical level on the tooth roots. This frequently has the inexorable outcome of making the clinical crowns of the teeth look longer. Provided these teeth are maintained with good oral hygiene (brushing, flossing, rinsing) these ‘elongated’ teeth can function for a lifetime. But patients undertaking treatment should be warned of this possible outcome [6].

**“This is an I.P.P. Immediate Payment practice.”** In the early part of the 20<sup>th</sup> Century patients never discussed fees for professional services. The work was done, and at the end of the month a payable- account was sent to the patient. This system worked well while

the patients paid their bills. Abuse of the system, led to delinquent accounts, and often the dentist could not collect any fees. With the introduction of Insurance payments, and tracking of treatment by computer, fees were charged and paid for immediately on the Internet. Accordingly, immediate payment was expected on completion of a procedure. Newly qualified dentists were advised to hang an “I.P.P” sign up clarifying the position. This explains that payment is made immediately after a dental procedure is complete. This reduced the induced stress and distress of practice significantly with a dramatic drop in unpaid bills [7, 10].

**“Apply B.T.P. Big Toe-Philosophy”.** After treatment and alighting from the dental chair, as soon as the patient puts their foot (big-toe) on the ground I.P.P. applies. This verbal BTP advice is taught in conjunction with I.P.P. and also frequently applied for patients who pay by means, other than by computerized transfer of funds [7, 10].

**“If you want spectacular dentistry, be prepared to pay spectacular prices.”** Many patients don't realize that esthetic dentistry (“I want a Hollywood Smile”) demands complex additional therapies that cost money; imaging technicians, dental mechanics and support staff with costly equipment, materials (like, gold, platinum, molded polymers or fired porcelain) all have to be accessed, timed, financed, administered, and they all provide essential contributions and support for optimal dental therapy. All these expensive supports are embraced in the comprehensive computation of professional fees payable. To avoid misunderstandings, confusion and later disagreements about fees, Informing the patient in writing of costs to be incurred with complex dental treatment before embarking on it, is essential.

**“Present a detailed Treatment Plan before doing treatment.”** A full detailed comprehensive **Treatment-Plan (TP** indicating the type of procedure, appointments and time needed, individual itemized and total costs should be presented to patients undertaking elective complex dental treatment), should be written down and presented before therapy starts. It is strongly advised that all patients acknowledge with their signature, the presentation of the TP. Presenting and discussing the Treatment Plan brings forth questions by both the dentist and patient. Some oral inquiries have become so routine in the TP presentation, few Oral Health Care workers are aware of the consequential implications. The oral questions

inherent in the Initial Assessment and Recording of Treatment Index (IARTI) are.

Do you want to save your teeth?

Do you realize the therapy will take many appointments over a long period of time?

Have you made proper arrangements to meet your financial obligations? WAHUM TOMYO [7].

**A positive answer to the three basic questions should be procured by the dentist before doing any therapy, otherwise the patient is not ready for treatment [7].**

**“Always read the labels and inserts on product packages when using or refreshing supplies.”** It is difficult to understand why neophyte trainees do not read the label of contents on products, and also why they disregard the inserts for drugs or other supplies used in dentistry. For example, it is important to know what a recommended mouthwash contains; besides contents like menthol, thymol, methyl-salicylate.... is it alcohol free; does it contain Fluoride, and if so, how much? What are the side effects from absorbed topical anesthetic and how are metabolites excreted from the body. New supplies of drugs, support apparatus and sundries may have modified formulae; manufacturers of these certified materials must comply to stringent standards of quality, purity and effectiveness. They are legally obliged to provide all relevant information to the user. Warnings of potential allergy, toxic side effects or expiry dates are all provided, and practicing health care workers should always be vigilant to comply. One unexpected anaphylactic reaction is one too many.

**“Antibiotics: Check before, during and after!”** Antibiotics constrains spread of infection but doesn't cure it. Check for allergies before prescribing, check for effects after administering. Checking before injecting penicillin will ensure avoiding a fatal anaphylactic reaction. Administering an antibiotic like penicillin into an individual who is allergic to it can prove fatal. Antibiotics will not cure toothache, nor eliminate infection, unless the cause for the infection is removed. Progressive swelling may stop or reduce with a course of antibiotics, but the reason for the swelling must be determined and eliminated. Bacterial infection as a spreading cellulitis takes hold when innate immunity cannot contain it. Abuse of antibiotics has produced allergies to them, like allergy to penicillin. Antibiotic-Resistant bacteria exist in society. After follow-up by communicating with the patient, if an antibiotic does not have the desired effect within 24 hours, the patient should be referred for emergency assessment and therapy in a hospital. Selection of the right antibiotic is essential to avoid allergy, and after prescribing,

monitoring and follow-up is essential to avoid morbidity and even mortality [8 10].

**“Nearly all dentistry is elective.”** With confirmative, restorative and dent-alveolar surgery in dentistry most, if not all, procedures necessitate desire, agreement and co-operation from the patient. That means” Nearly all dentistry is elective.” Preventive dentistry demands implementing knowledge about fluoride (in water at 1ppm or topical application), non-cariogenic diet, detergent chews, oral hygiene, and professional monitoring for prophylaxis. The oral health professionals have the serious and heavy burden of making judgment calls in the best interests of the patient and assisting them to take and implement the best treatments. Communication with colleagues and patients is essential, and dentists must develop verbal communication skills for these purposes. Well informed patients will voluntarily elect and agree to dental treatment [9, 10,11].

**“Tooth-ache drops will never cure toothache and will bring the patient to the dentist.”** This anachronistic primitive concept believed that if you place some astringent oil, like oil of cloves or cajeput into a tooth cavity it will relieve or eliminate the patients' pain. The taste of the oils is characteristically shocking and all too often the pain is so severely aggravated that it forces the patient to seek help from a dentist. Occasionally the pulp is exposed and the oil acts as an astringent and may moderate the pain. The patient still requires the services of a dentist.

**“The bill will hurt more than the treatment.”** This notion is expressed when elective, yet unnecessary, therapy is requested from limited payment of insurers. In general, most insurance cover is for sanative, prophylactic therapy, and many will not pay for what they regard as “Cosmetic”. There is a difference between Cosmetic and Esthetic Dentistry. [9] Permanent appearance modification enhances natural appearance, but rarely perfects beauty. This statement is often used to dissuade patients from implementing unnecessary treatments.

**“When washing your hands sing ‘Happy Birthday’ three times while you soap-suds before rinsing off and drying.”** Hand Hygiene is important in dentistry. Before the HIV scare in 1980, most dentists worked with naked hands. Repeated scrubbing and hand washing, before, during and after treatment was routine. Ungual infections, herpes whitlows, increased antibodies to hepatitis and candida spores were routinely found among these practitioners. Now Personal Protective Equipment (PPE) not only dictates

washing of hands, but also demands the donning of impervious polymer gloves for protection. Singing ‘Happy Birthday’ thrice still applies and is still practiced for hand-hygiene preparation, but with the mandatory use of gloves and PPE those mentioned infections have subsided significantly [12,13].

**“If it is not durable and fails in form and/or function, it is cosmetic and will need replacement.”** Most patients regard a front-tooth loss a social calamity. Temporary cosmetic replacements are common, but if the prosthesis fails to look natural and does not function, it will have to be replaced. Any mobile Osseo integrated implant is deemed cosmetic and must be replaced [14].

**“Beware that sleeping apical granuloma...it can awaken a monster-dragon.”** This aphorism derives from seeing a periapical radiolucency at any apex of a tooth-root on Dental Radiographs (commonly, but incorrectly called X-Rays). Frequently they form after dental-carries spreads progressively through a tooth-pulp, into the root canal and is then localized at the root-apex. It may also form from a failing root-treated tooth and is a reaction to periapical infection. Often when local resistance is overcome the infection spreads from the periapical area into the face. Immediate therapy is essential and draining the abscess, a root treatment or more commonly, exodontics is needed. A periapical lesion on a pristine untreated tooth may prove to be a form of cyst, or neoplasia; both may grow, expand and destroy surrounding tissue. A root treatment is indicated with an apicoectomy, and the affected periapical area should be totally extirpated, and the removed tissue sent for histology to determine the exact pathology. Appropriate follow-up is essential in these cases.

**“Humps and bumps feel them... like it or lump it.”** Dentistry is a subspecialty of general Medicine. Thorough oral examinations demand an assessment of patients both intra-and extra-orally. It is not unusual for dentists to examine the head and neck thoroughly to detect lymphadenopathy, or other pathological lumps or swellings on the face, head and neck. This aphorism encourages clinicians, including all dentists and dental specialists, to assess any lump by digital feeling and manipulation, to make a differential diagnosis, and to decide if it demands further attention and therapy. The earlier detection of an expanding cyst or neoplasia is made, the higher the chances are of implementing successful curative therapy [15].

**“You can remove the Plaque any way you like, even with a knife and fork if needed, but get rid of the**

**Biofilm.”** This is the fundamental core of successful prophylaxis of developing gum diseases and dental decay. Use of disclosing dye makes the biofilm visible. Plaque indices may record biofilm’s existence or absence. But if there is no biofilm, there will be no gum-and tooth- disease. Gnotobiotic animals do not develop gum disease or caries. Mastering oral hygiene apparatus through practice, demonstration or motivation is needed, and the essential aim is to eliminate all biofilm to optimize oral health and prevent gum and dental disease. This aphorism ensures the message sticks in the brain of neophytes, and it is remembered for decades after in private practice [16]. When it comes to Osseo integrated implants: “Know how to grow bone; that’s the most important.” Osseo integrated implants have revolutionized dentistry. Should adequate bone exist the placement of an Osseo integrated implant is feasible. But if there is not enough bone, or the bone density is inadequate, no implant can be placed. Consequently, bone grafts from an endogenous source (like the hip) or exogenous material (like decalcified freeze-died bone, and/or other material), or osteoid from healing donor site may be used to grown new bone. The “grown bone” or augmented bone, will contribute markedly to the successful integration of the implant. If there is no bone, or inadequate bone, Osseo integrated implant placement is contra-indicated, and success will be compromised. Accordingly, the memorable aphorism is repeated. For Osseo integrated implants: “Learn how to grow bone.” (17)

## General discussion

During training, medical health workers are trained to make decisions based on reliable verified published data; this is referred to as practicing “evidence-based Medicine”. After graduating from a Medical or Dental School, doctors and dentists, who are considered as doctors of the mouth, are expected to sustain their bank of knowledge through updating continuing professional development and education programs. [2] Most health care workers conform to this, yet when asked what they remember most, the vast majority of them recall these Orally Transferred Aphorisms (OTA) that were repeated by their teachers and professors. The fear that much of this intellectual activity would be lost prompted the scripting of this appraisal, to capture and recapitulate the thoughts, ideation and interpretations inherent in orally transmitted aphorisms. Sustaining and keeping up-to-date in any profession is essential. These OTA’s remind practitioners to sustain adding to their knowledge and remains as an essential part of

their core frames of reference for successful practice. Many professionals may deem these OTA's as 'Common sense'; yet it is most surprising that these OTA's are rarely read in formal articles, and even more surprising is that these OTA's are frequently mentioned by teachers and professors, with scant acknowledgement of the inherent wisdom implied by them.

## Conclusion

Oral traditions persist in most professions. This is true of Medicine and Dentistry. Many more OTA's will evolve as new therapies and novel technologies are introduced. These Orally Transmitted Aphorisms are prime pragmatic principles that dictate much in the policies practiced in dentistry.

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