

Dept. of Public Health Dentistry

Dental Manpower

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Dental Manpower



INTRODUCTION

- Division of labour → less time consumption, more no. of treated pts., cost efficacy, better quality of treatment
- Also, it is not feasible to train more dentists in India (total training cost=\$44,300 as compared to dental hygienist-\$4,450 and dental assistant-\$1,600)
- India has about 298 institutes producing 25,000 to 30,000 BDS graduates every year
- Dentist: population ratio:it was 1:30,000 acc to 2004 statistics. It is 1:10,000 in urban & 1:2.5 lacs in rural India acc to 2004 statistics. Now it is 1:4000 and decreasing every year.....

DENTAL MANPOWER

- Dental manpower includes the dentist and dental auxiliaries/ ancillaries
- **Dentist** is a person licensed to practice dentistry under the law of the appropriate state, province, territory or nation.
- Dentist must be both licensed & registered.
- Every dentist must satisfy certain qualities:
 - completion of an approved period of professional education in an approved institution
 - demonstration of competence
 - possess satisfactory personal qualities

HISTORY

- Baltimore college of Dental surgery was the **first dental school in the world**, established in 1840. (it was later called Uni. of Maryland)
- In India, Dr. Rafiuddin Ahmed started the **first dental college in Calcutta** in 1920.
- Presently, there are about more than 298 dental colleges in India, both recognized and unrecognized by the DCI, having total admissions of more than 30,000 students roughly.

DENTAL AUXILIARY/ ANCILLARY

- ▶ Dental Auxiliary/ Ancillary is a person who is given responsibility by a dentist so that he/ she can help the dentist render dental care, but who is not himself/ herself qualified with a dental degree.
- ▶ The duties undertaken by dental ancillaries range from simple tasks such as sorting instruments to relatively complex procedures which form part of the treatment of patients.
- ▶ Auxiliary is called ancillary in the U.K.

WHO CLASSIFICATION (1967)

- Non-operating ancillaries can also be classified as
 - a) **Clinical**: assist the dentist in his clinical work but does not carry out any independent procedures in oral cavity
 - b) **laboratory**: assists the dentist by carrying out certain lab. proced.
- operating ancillaries: not a professional, is permitted to carry out certain treatment procedure. in mouth under the direction and supervision of the dentist.

REVISED CLASSIFICATION

1. NON OPERATING ancillaries:

- a) Dental surgery assistant
- b) Dental secretary / receptionist
- c) Dental laboratory technician
- d) Dental health educator

2. OPERATING ancillaries:

- a) School dental nurse (New Zealand type)
- b) Dental therapist
- c) Dental hygienist
- d) Expanded function dental ancillaries (EFDA)

a) DENTAL SURGERY ASSISTANT

- ▶ He/ she is a non operating auxiliary who assists the dentist/ dental hygienist in treating patients, but who is not LEGALLY permitted to treat patient independently.
- ▶ Also called dental assistant, chair side dental asst., dental nurse, etc.
- ▶ He/ She may only work under the supervision of a licensed dentist, carrying out duties prescribed by the dentist or by a dental hygienist employed by the dentist.
- ▶ **FOUR HANDED DENTISTRY:** Art of seating both the dentist and the dental asst. in such a way that both are within easy reach of the patient's mouth. Patient is fully supine, while the assistant can do retraction/ aspiration. (less fatigue, greater efficiency)

- ▶ DUTIES (WHO expert committee):
1. reception of the patient,
 2. preparation of the patient for the treatment,
 3. preparation & provision of all necessary facilities such as mouthwashes & napkins,
 4. Sterilization & care of instruments,
 5. preparing & mixing of restorative materials including both filling & impression materials,
 6. assistance of X ray work,
 7. documentation help,
 8. instruction to the patients where necessary about correct use of toothbrush,
 9. care of the patient till he/ she leaves the clinic,
 10. preparation of surgery for the next patient,
 11. aftercare of G.A. patients.

- ▶ Addition of one dental assistant increased the no. of patients treated by the dentist by 33% if he were using one chair and by 62% if he were using two chairs. (Klein, 1944)
- ▶ Advantages: less physical & mental strain, improved quality of service, shorter appointments.

b. DENTAL SECRETARY/ RECEPTIONIST

He/ she assist the dentist with his secretarial work & patient reception duties.



C. DENTAL LABORATORY TECHNICIAN/ MECHANIC

- Extra oral construction & repair of oral appliances & bridge work including casting of models from impressions, fabrication of dentures, splints, orthodontic appliances, inlays, crowns, & special trays.
- Also called as dental mechanics.
- Formal training of 2 yrs. In about 6 institutes in India.
- Last batch was in **1989 in GDC, A' bad.**
- Employed by dentists in private/ public practice, self employed or by commercial laboratories.

Denturist: dental laboratory technician permitted in some states of U.S & elsewhere to fabricate dentures directly for patients without a prescription of the dentist.

- A denturist may perform some or all of the following duties
- Measure patient's jaw to determine size & shape of dentures required.
- Make impressions of patient's teeth, gums and jaws.
- Construct dentures or direct other workers to construct dentures
- Fit & modify new dentures
- Repair dentures
- Reline and rebase dentures
- Fabricate mouth protectors, antisnoring prosthesis and removable prosthesis on implants
- May prepare partial dentures.
 - The WHO expert committee on Auxillary Dental Personnel (1959) recommends that only qualified dentist can work on patients.

D.DENTAL HEALTH EDUCATOR:

- Instructs in prevention of dental diseases & may also be permitted to apply preventive agents intra orally.
- In Sweden, 2 weeks of additional training is given after which ancillaries are allowed to conduct fluoride rinsing programmes in school children

II. A.SCHOOL DENTAL NURSE (NEW ZEALAND TYPE):

- Permitted to diagnose dental disease & to plan & carry out certain specified preventive & treatment measures , including some operative procedures in the treatment of dental caries & periodontal disease in defined group of people, usually school children.
- The dental nurse scheme was established in Wellington, NZ in 1921 by Dr. T.A. Hunter. It was done to improve dental conditions in children in NZ due to separated communities and World War I
- Training is for a period of 2 yrs. → employed by government as a staff member in school to provide regular dental care to 450-700 students.
- Every school which takes more than 100 children has its own dental clinic.

NEWZEALAND SCHOOL DENTAL NURSE

- T A Hunter, founder of New Zealand school Dental association founded a school for training nurses called **Dominion training school for dental nurses**
- Duties include both reversible & irreversible procedures.
 1. Oral examination,
 2. prophylaxis,
 3. topical Fluoride application,
 4. advice on dietary Fluoride,
 5. cavity preparation & placement of amalgam filling,
 6. administration of Local anesthetic,
 7. pulp capping, extraction of primary teeth,
 8. patient instruction,
 9. class room & parent teacher Dental Health Education,
 10. referral to private practitioners for more complex procedures.

- Overall effects of this service were dramatic.
 - In 1923, 78.6 teeth were extracted for every 100 fillings placed while on 1969, only 2.9 teeth were extracted.
- Other countries include Malaysia, Singapore, Thailand, Vietnam, Myanmar, Indonesia, Hong Kong, etc.
- Advantage:
 1. provide care cheaper than dentists,
 2. less expensive to train,
 3. salaries similar to school teachers (Employment)

B. DENTAL THERAPIST

- Permitted to carry out, to the prescription of a supervising dentist, certain specified preventive & treatment measures like preparation of cavities & restoration of teeth.
- Their 2 years training includes
 1. clinical caries diagnosis,
 2. cavity preparation in deciduous and permanent teeth,
 3. material handling,
 4. vital pulpotomies & extraction of deciduous teeth under Local Anesthesia,
 5. take radiographs,
 6. emergency first aid to trauma cases & nerve blocks, endodontic care is not given by them.
- They are permitted to work based on the written treatment plans devised by supervising dentist. The operative work is similar to NZ school nurse, but they are not permitted to diagnose and plan dental care
- UK, Australia, Hong Kong, Singapore, Vietnam & Tanzania use dental therapists.

C.DENTAL HYGIENIST

- He/ she is a operating auxiliary licensed & registered to practice dental hygiene under the laws of appropriate state, province, territory or nation.
- **Dr. Fones** is considered to be the ‘**Father of dental hygiene**’ and in **India** it is **Dr G B Shangwalkar**
- Functions include:
 1. preliminary examination of patients,
 2. Scaling, Sealants and Topical Fluoride application,
 3. instruction in oral hygiene, education.
- In some countries, they do treatment planning for dental hygiene part, taking medical & dental histories, root planning, removing overhangs, dietary evaluation and counseling, salivary and microbiological tests.
- In India , 5-6 institutes provide training

D. EXPANDED FUNCTION DENTAL AUXILIARY (EDFA, EFODA):

- US, Canada
- An EDFA is a dental assistant or a dental hygienist in some cases who has received further training in duties related to direct treatment of patients though still working under the direct supervision of the dentist.
- Also called ‘technotherapists’
- They undertake **reversible procedures** i.e. which could be corrected or redone without undue harm to the patient’s health. They take over routine resto. proc. as soon as cavity prep. and base have been completed. They do not prepare cavities or decide to go for pulp protection or not.
- 2 yr training
- Duties: placing & removing rubber dams, placing and removing temporary restorations, placing & removing matrix bands, condensing and carving amalgam resto., placing of acrylic restorations in prepared teeth, final finish and polish of **RESTORATION**.

EFDA: CANADA

- FOUR LEVELS
- 1. CERTIFIED DENTAL ASSISTANT (8 MONTHS):IOPA
- 2. PREVENTIVE DENTAL ASSISTANT(3-6 WEEKS)
- 3. DENTAL HYGIENIST (8 MONTHS) (Scaling, root planing,history with perio readings,polish fillings, perio pack, apply fissure sealants)
- DENTAL HYGIENIST WITH EXPANDED DUTIES (4 months additional training to remove sutures, finish restorations, matrix bands, retracting gingiva, fitting and removal of orthodontic bands, tooth seperation, cementing temporary crowns, placing temporary fillings)

NEW AUXILIARY TYPES (Suggested By WHO expert committee on Aux. personnel) 1959

- **1.DENTAL LICENTIATE:** 2 years training; dental prophylaxis, cavity preparation & fillings of primary & permanent teeth , extractions, drainage of abscesses, early diagnosis of serious conditions.
- Their service would probably occur in **RURAL** and frontier areas and so supervision would be remote.
- **2.DENTAL AIDE:** First aid procedures for relief of pain
- Extractions, control of hemorrhage, recognition of dental disease important enough to justify referral to a center where proper care is available.
- 4-6 months formal education followed by field training under supervision
- They would operate only under salaried health organization and under supervision

Degrees of supervision of auxiliaries

- General supervision : Dentist authorize
- Indirect supervision : Dentist within office
- Direct supervision : Direct supervision before dismissal
- Personal supervision : May assist & supervise

FOUR-HANDED DENTISTRY

- Four handed dentistry is team concept where highly skilled individuals work together in an ergonomically designed environment to improve productivity of the dental team, improving the quality of care for dental patients while protecting the physical well-being of the operating team.
- Art of seating both the dentist and the dental asst. in such a way that both are within easy reach of the patient's mouth. Patient is fully supine, while the assistant can do retraction/ aspiration. (less fatigue, greater efficiency)
- This system is based on the following principles.
 - 1.Positions
 - 2.Equipment arrangement.
 - 3.Assistant utilization
 - 4.Treatment organizations

Questions asked

- Classification
- Short notes on:

Dental hygienist

EFDA

New Zealand school dental nurse

Dentist: population ratio

Denturist

Four-handed dentistry.

