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Mini Review

Dental Assisting Role in Special Care Dentistry: Proposal of a Structured On-Job Training to Address Skills Lag

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Abstract

Dental assistants have a key role in Special Care Dentistry, despite this, there is a lack of necessary education and training in this area. Patients with special needs face significant barriers to access oral health services due to lack of knowledge of dental professionals in caring for vulnerable groups, inexperienced or unhelpful staff, or lack of help with communication. Some recommended curricular revisions to better prepare dental assistants to play a vital role in inter professional care models and hopefully to increase job satisfaction and practice longevity. However, until needed curricular changes are made to bridge the current skill lag; policy makers at work place can adopt the proposed on-job training in this article.

Keywords: Dental assistant; On-job training; Special care dentistry; Policy making

Introduction

Hospital based dentistry and other dental services that treat patients with special needs look for dental assistants with the appropriate training to meet the needs of their patients. The majority of dental assisting programs globally span from 9 months to 2 years depending on the type of certification or degree awarded. Those programs focus on the technical part of the profession with variable coverage of the theoretical knowledge of oral diseases such as diagnosis and management.

Graduates of these programs face challenges because they find themselves lacking the skills and inter professional competencies needed to manage patients with special needs [1]. Significant barriers to access oral health services has been attributed to lack of knowledge of dental professionals in caring for vulnerable groups, inexperienced or unhelpful staff, or lack of help with communication which have led to lack of confidence in the service and an increase in the likelihood of developing additional preventable health conditions [2].

To address deficiencies in the curriculums of dental assisting programs, some advocated for post diploma training to improve poor standard in specialized procedures [3]. Specialty certifications and permits of dental assistants in oral surgery, sedation, orthodontics, and radiographic training are emerging new trends.

Dental assistants can be fairly trained efficiently if a structured mini-curriculum is provided as on-job training. In one program for child oral health improvement, when dental assistants were given the appropriate training and accreditation; they provided some extended duties of the general dentist efficiently [4].

Due to established barriers of access of oral health services faced by patients with special needs and the lack of training and experience of dental assistants, the purpose of this article is to propose structured on-job training for dental assisting workforce joining special care practice.

Components of On-Job Training Curriculum

Didactic Teaching

Introducing the concept of Special Care Dentistry (SCD) to the dental assisting workforce should be the main foundation of the proposed curriculum. It is essential for dental assistants to appreciate the essence of SCD in its wider concept as compared to the term "special needs". The concept of SCD is concerned with the improvement of oral health of individuals and groups in society who have a physical, sensory, intellectual, mental, medical, emotional or social impairment or disability or, more often, a combination of a number of these factors [5]. Historically, the concept of SCD started to formalize as a specialty in the 1990s, and is continuing to grow to date [5,6,7] with no parallel formal training for the dental assisting workforce.

As an extension of the SCD definition, the didactic curriculum should also incorporate the ethics and local legislatives pertaining to rights of patients with wide range of conditions to equal access of care [8]. Another equally important topic is the motivation of the dental assisting workforce to be provide care with compassion and high engagement [9,10].

Simulation-Based Training

Multiple simulations that are free of charge and readily available such as live patients experience [11], or role-playing improve the confidence of dental assistants. Teams can be assigned to participate in 10-15 minute scenario followed by debriefing session [12]. E-learning is a vast resource for simulations to learn about a condition, a devise or a scenario.

In SCD services, dental assistants deal with special patients, special situations, special equipment, and other professions outside the dental team. To improve outcomes of learning toward gaining the required skills, a single method of simulation or a combination of simulations can be utilized.

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Table 1: Safety risks and proposed management interventions.

Risk	Management
HAIs* and other infection transmission risks.	Training and application of contact precautions, droplet precautions, and airborne precautions in addition to standard precautions.
Falls	Identification of high risk patients. Canes and walkers: clearing obstacles from the way. Wheelchairs: for panoramic X-ray, removing IV pole if possible. Using bellows to raise patient head to appropriate height. Moving from-to dental chair: Using breaks, adjusting dental chair to same level as wheelchair, using transfer board if available. Stretchers: treating patient in the stretcher is safer than transfer to the dental chair. Asking paramedics to adjust the stretcher height and recline. Fastening belts to secure patient. Portable lift and wheelchair tilt are safest options if available.
Aspiration	Suctioning all the time of the procedures, avoiding supine position or reclining patient more than 45°, observing patient's breathing at all time.
Seizures	Protecting eyes from direct light using dark eye glasses. Asking patient to report any aura.

*HAIs: Hospital Acquired Infections.

Special Patients

A variety of conditions included in the previous definition the SCD could hinder normal delivery to dental care; and thus customizing every task to the patient's particular need is imperative. Simulation training must focus on developing communication skills, vigilance, and swiftness to patient's situation and surrounding risks.

Simulation should be comprehensive to cover a wide range of scenarios including needs of patients and their care givers. For end of life care, other professional, non-specialist workers can be invited to provide necessary knowledge and communication skills to improve competence and confidence of dental assistants in effective and compassionate care [13].

Special Situations

Higher infection risk: Dental assistants working at SCD service might potentially be exposed to a higher risk of infection than in a normal service. This higher risk is attributed to special situations such as hemodialysis, frequent blood transfusions, and immune suppression. Frequent hospitalizations and surgical or invasive medical procedures could introduce the risk of Hospital-Acquired Infections (HAIs) that spread by contact such as Methicillin-resistant Staphylococcus Aureus (MRSA). It is not uncommon to serve patients who have drainage bags containing body fluid, stoma bags, and feeding tubes which poses significant risk if the patient has undiagnosed MRSA. Higher risk of infection mandatesa more comprehensive infection control training beyond standard precautions; and a specialized approach to achieve safety of oneself and others [14].

Higher physical stress: Patients with mobility disability need assisting in moving to and from the dental chair, and the X-ray facility. Also, it is common for hospital-based dental services to perform examination and procedures in the wards and emergency room in positions different from what dental assistants are trained for. These situations are physically demanding because they require heavy lifting, bending and twisting, and other manual handling of the patients. The main aim of simulation training is to prevent Musculoskeletal Injuries and Disorders (MSD). However, single-approach methods such as safe-lifting, back-belt, and body mechanics classes should be avoided because they are in-effective [15]. Instead, simulation can incorporate participatory ergonomics where dental assistants themselves go through a series of steps starting from identifying ergonomic risks, brainstorming solutions and controls, implementing them, to finally assessing controls effectiveness via symptoms identified [15].

To ensure sustaining service-based ergonomic program over time, the concept of peer leader education [15] can be applied by selecting one dental assistant who is effective in coaching to receive a special training. The pear leader tasks consist of ongoing hazard evaluation of the work environment, and assuring competency in use of patient handling equipment and devices.

Special Equipment

Live patient experience and E-learning are the best source for teaching dental assistants about large range of equipment such as portable oxygen machines, walkers, specialized wheelchair, and stretchers. Simulation training, including basic concept of operation, can increase dental assistant confidence and comfort in helping patients using these devices.

Training should also be expanded to take account medical devices such as catheters, regular Intravenous (IV) lines and Central Venous Catheters (CVC), hemodialysis catheters, and tracheotomy tubes to familiarize dental assistants on how to customize tasks safely.

Multidisciplinary Team

Skill mix has been recommended as a solution to eliminate barriers to oral health care [2]. An example of other professionals that dental assistants would work with are nurses, paramedics, and coordinators. Training should include hand-off communication policy with nurses, ability to direct paramedics on appropriate patient's transportingand positioning, and communicating with coordinators. Attention should paid to avoid inter professional jargon which can impair effective multidisciplinary approach [16].

Patients Safety

The most important role of the dental assistant in SCD is to provide care in a safe manner. Training topics could be drown from the International Patient Safety Goals (IPSG) developed by the Joint Commission International (JCI) [17] with particular emphasis on reducing risks of HAIs and harm resulting from falls.

Dental team provides examination and procedures in operating rooms, wards and emergency room for patients with higher risk of infection due to their compromised immune response, presence of drains, IV access or catheters that could be portal of infection entry. Table 1 provides summary of interventions needed to manage this risk that must be part of training.

Patients attending SCD are more prone to falls due to physical

disability, medications side effects, and procedures under sedation such as biopsies, or fasting for extended period of time. Also, transporting patients with mobility difficulties could be very dangerous task leading to injury. Large number of patients attending SCD use walking aids such as canes, and walkers; while some come to clinic in wheelchairs or stretchers. Safety interventions to reduce fall risk are summarized in Table 1. Moreover, E-learning simulation can be borrowed from open nursing resources that are extensively available to develop a customized risk fall policy with following components: identification of patients at high risk, interventions, and incidents recording for audits and reassessment of interventions.

Another common risk in SCD service is aspiration caused by dysphagia which could lead to life-threatening chocking. Wide range of conditions seen in SCD could cause dysphagia including neurological, muscular, respiratory, gastrointestinal, cognitive, congenital and developmental, and tumors or treatments that change or obstruct the swallowing tract [18,19]. Simple but yet critical management tips are displayed in Table 1.

Finally, patients with epilepsy need special consideration to protect eyes from direct light to avoid triggering seizures [20, 21].

Conclusion

The dental assistant is a key member of the SCD, despite this, there is a considerable variation in relation to the level of training, permitted duties, and legislative registration of dental assistant workforce [22,23]. Further, underutilization of assistants' skills was reported as a reason of job dissatisfaction in dental assisting profession [24]; furthermore changing jobs was due to lack of recognition for their work [25]. Some authors stressed the need for curricular revisions to prepare dental assistants to play a vital role in inter professional care models and hopefully to increase job satisfaction and practice longevity [26].

Because traditional dental care delivery system is not able to deliver adequate services to patients with special needs, an inter-professional teams was proposed as a solution [27]. However, until needed curricular changes are made to bridge the current skill lag; policy makers at work place can adopt on-job training approach. Policy makers in education and licensure requirements can benefit from this proposed curriculum that covers the wide definition of SCD and meet skill mix needed.

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