Geriatric Dentistry: Before You Call 911

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CE Credits: 2 hours
Intended Audience: Dentists, Dental Hygienists, Dental Assistants, Office Managers, Dental Students, Dental Hygiene Students, Dental Assistant Students
Date Course Online: 08/15/2019
Last Revision Date: 12/29/2025
Course Expiration Date: 12/28/2028
Cost: Free
Method: Self-instructional
AGD Subject Code(s): 750

Online Course: *www.dentalcare.com/en-us/ce-courses/ce586*

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Conflict of Interest Disclosure Statement

- The author reports no conflicts of interest associated with this course.

Short Description

'Geriatric Dentistry: Before You Call 911', is a free dental continuing education course that covers a wide range of topics relevant to the oral healthcare professional community.

Course Contents

Overview

As our population continues to age, dental teams are increasingly at the frontline of caring for older adults and medically complex patients. This article offers an insightful overview of the essential steps for safely managing geriatric patients, from their first appointment to post-treatment follow-up. Providing dental care to older adults has become a daily reality in most practices. This course has been thoughtfully designed for dental professionals who recognize the rapidly changing demographics across the United States and the growing need for specialized care. Geriatric dentistry goes beyond oral treatment, it emphasizes understanding each patient's comprehensive medical and dental profile to enhance their comfort, safety, and overall quality of life.

Learning Objectives

Upon completion of this course, the dental professional should be able to:

- Discuss geriatric dentistry in general.
- Impact of COVID-19 on Geriatric patients.
- Fundamental Elements needed to prevent transmission of Infectious agents in dental settings
- Types of PPE used
- How to safely put on PPE
- Consider the physical characteristics and medical history of the older adult patient during the initial assessment.
- Describe common medical emergencies and management protocols.
- Recognize the value of communication between dental and medical teams.

Glossary

ADA – American Dental Association

ASA – Aspirin

allergic reactions – Condition in which the immune system reacts abnormally to a foreign substance.

Alzheimer's disease – Progressive mental deterioration that can occur in middle or old age, due to generalized degeneration of the neurons.

antibiotic prophylaxis – The prescription of an antibiotic prior to certain types of dental procedures for the prevention of infection for individuals who have a medical history that warrants such coverage.

apraxia – Inability to perform particular motor purposive actions, as a result of brain damage.[1]

arthritis – Painful inflammation and stiffness of the joints.

asthmatic attack – Sudden worsening of breathing caused by the tightening of muscles around airways.

baby boomers – People born during the demographic post–World War II period (between the years 1946 and 1964).

CAB – Circulation, airway, breathing

cardiac arrest – Sudden, sometimes temporary, cessation of heart function.

cirrhosis – Disease of the liver marked by degeneration of cells, inflammation, and fibrous thickening of tissue.[2]

congestive heart failure – Inability of the heart to keep up with the demands on it, with failure of the heart to pump blood with normal efficiency.

COVID-19 - The SARS-CoV-2 virus is the infectious disease known as coronavirus disease (COVID-19). The virus typically causes mild to moderate respiratory illness in most infected individuals, and it is spread through coughing, sneezing, speaking, singing, or breathing through an infected individual.

CPR – Cardio-pulmonary resuscitation.

DHCP- Dental Healthcare Personnel

diabetes mellitus – Chronic disease associated with abnormally high levels of glucose in the blood.

eczema – Patches of skin become rough and inflamed, with blisters that cause itching and bleeding.[3]

edentulous – Lacking teeth; toothless.

EMS – Emergency medical services.

etiologies – Cause, set of causes, or manner of causation of a disease or condition.

gait – Individual's manner of walking.

gingival recession – Exposure of the roots of the teeth caused by a loss of gum tissue.

Hodgkin's lymphoma – Cancer of the lymphatic system.[4]

hypercapnia – Excessive carbon dioxide in the bloodstream, typically caused by inadequate respiration.

hypertension – Abnormally high blood pressure (Persistently at or above 140/90 mmHg).[5]

hypoglycemia – Deficiency of glucose in the bloodstream.

INR (International Normalized Ratio) – The prothrombin time (PT) and its derived measures of prothrombin ratio (PR) and INR are measures of the extrinsic pathway of coagulation. (Normal range is between 2-3 for those on anticoagulant therapy).[6]

keratinization – Process in which the cytoplasm of the outermost cells of the mammalian epidermis is replaced by keratin.

O_2 – Oxygen.

orthostatic hypotension – Decrease in systolic blood pressure of 20 mm Hg or a decrease in diastolic blood pressure of 10 mm Hg within three minutes of standing when compared with blood pressure from the sitting or supine position.[7]

osteoporosis – Condition in which the bones become brittle and fragile from loss of tissue.

Parkinson's disease – Chronic nervous disease characterized by a fine, slowly spreading tremor, muscular weakness and rigidity, and a peculiar gait.

periodontium – Specialized tissues that both surround and support the teeth, comprised of cementum, periodontal ligament and alveolar bone.

PPE – Personal Protective Equipment

prosthesis – An artificial device that replaces a missing body part. (i.e., partial or full dentures, dental implants etc.)[8]

psoriasis – Skin disease marked by red, itchy, scaly patches.[9]

renal failure – Condition in which the kidneys lose the ability to remove waste and balance fluids.

stroke – Damage to the brain from interruption of its blood supply.

syncope – Temporary loss of consciousness caused by a fall in blood pressure.

vitals – Clinical measurements, specifically pulse rate, temperature, respiration rate, and blood pressure that indicate the state of a patient's essential body functions.

WW I & II – World War 1 and 2.

xerostomia – Condition in which the mouth is unusually dry.[10]

911 – In North America including Canada, the 911 system was designed to provide a universal, easy-to-remember number for people to reach police, fire or emergency medical assistance from any phone in any location, without having to look up specific phone numbers.

Introduction

Aging is a universal and inevitable physiological process experienced by all living organisms as part of the natural cycle of life. In the United States, a substantial portion of the populationthose born between 1946 and 1964, commonly referred to as the *Baby Boomers* is projected to become the largest and most rapidly expanding demographic group. This generation has lived through pivotal moments in American history, including the Korean and Vietnam Wars, the Moon Landing, and numerous other defining social and technological milestones.

Baby Boomers, born in the post–World War II era, are generally well-educated, resourceful, and deeply invested in maintaining their overall health. Their strong emphasis on wellness extends to oral health, as many seek to preserve their natural dentition well into later life. This growing commitment underscores an increasing demand for dental professionals particularly those with advanced training and expertise in geriatric dentistry who can provide comprehensive, patient-centered care tailored to the unique needs of older adults.[11]

Also referred to as the 'Aging Tsunami,' about 62 million people are over the age of 65 years comprising 18% of the U.S. population today.[12] This percentage is expected to swell to 23% by 2054 which is around 84 million older adults .[13] Furthermore, persons aged 80 years and older also represent the fastest-growing age group in this country.[14] Amid this mountainous rise of retirees, there is also a humongous task for governments to provide optimal healthcare for medical and dental co-morbidities. Considering it, the federal government has come up with strategic framework outlined for healthy aging and age inclusive communities. The report includes contributions from eight HHS divisions, as well as the U.S. Departments of: Agriculture, Housing and Urban Development, Labor, Transportation, and Veterans Affairs; the Social Security Administration; and AmeriCorps

Geriatric Dentistry

Gerontology, often known as geriatrics or clinical gerontology, is the study of the physical and psychological changes that occur as people age. As part of an interdisciplinary team alongside other healthcare professionals[16], Geriatric dentistry, also known as Gerodontology or Gerodontics, is the delivery of dental care to older adults involving the diagnosis, prevention, and treatment of problems associated with normal aging and age-related diseases. It was originally defined as "that portion of the pre-doctoral dental curriculum that deals with special knowledge, attitudes and technical skills required in the provision of oral health care to older adults."[17] It's commonly considered to be a part of 'Special Care Dentistry' by the Commission on Dental Accreditation. The Special Care Dentistry Association (SCDA) formed the American Society of Geriatric Dentistry (ASGD) in 1965 and later the SCDA Council of Geriatric Dentistry in 2013.[17]

Facts and Figures

Geriatric dentistry is a crucial part of the health maintenance mechanism for the elderly and medically compromised individuals. In the USA, the population of older adults has increased steadily from 12.4% in 2004 to 18% in 2024 while the share of children declined from 25% to 21.5% during same decade.[18] In 2020, there were just three states where older adults outnumbered children and this number grew to 11 states in 2024.[15] The U.S. Surgeon General's Report stated that older adults suffer from a "silent epidemic of profound and consequential dental problems".[18] Scientific research also indicates that by 2030, over 22 million senior citizens in the United States will require expert geriatrician care.[78] On average, people above the age of 65 years are expected to report one or more chronic medical conditions that require consideration before initiating any dental treatment.[17] The U.S. Surgeon General's Report stated that older adults suffer from a "silent epidemic of profound and consequential dental

problems".[19] As per one estimate, a typical dental practice could expect to see about four to five elderly patients on any given day of operation.[20]

Correspondingly, in a statement released by the US Department of Health and Human Services (DHHS) in 2015, it was projected that an additional 6,000 dental practitioners with specialized training in geriatric dentistry would be needed by the year 2020.[21,22] However, this data needs to be revised for the updated need requirements.

According to a 2018 American Dental Association survey, 86% of Americans believe that dental health is highly essential to their overall health. Both the **American Dental Association (ADA)** and **American Dental Education Association (ADEA)** have created clinical guides for oral health professionals after realizing the complex needs for dental services among geriatric populations. These clinical guides will help professionals to better evaluate and diagnose dental problems, link oral health to chronic conditions, and provide treatment to improve older adults' quality of life.[77,78] All health professions must work together to develop inter professional education on geriatric oral health.

Impact of COVID-19 on Geriatric Patients
Severe acute respiratory syndrome Coronavirus infection (COVID-19) is brought on by the RNA virus coronavirus 2 (SARS-CoV-2). The COVID-19 pandemic and its effects on society's most vulnerable groups were seen by the entire world. Since its emergence in December 2019, COVID-19 has profoundly impacted the world, claiming over 7 million lives out of more than 778 million confirmed cases (according to WHO data as of July 13, 2025)[23], and deeply affecting communities and societies across the globe. Of the 7.1 million reported deaths, approximately 1.2 million occurred in the United States.[24] According to CDC data, about 81%75% of these deaths were among individuals aged 65 and older.[25] Given that COVID-19 spreads primarily through airborne droplets and direct contact, its impact has been far-reaching and profound.

Older adults are more prone to hospital acquired infections, also called nosocomial infections, due to frequently comorbid health conditions. The need for frequent visit to dental care hospitals or special care facilities along with prolonged appointments ,use of rotary equipment, and weakened immune systems, exposes them to an elevated risk of infection. As a result, it's critical to take extra precautions to reduce the possibility of infecting them with the virus.

The coronavirus (2019nCoV) forced oral healthcare professionals to focus on the unique dental health requirements of ageing patients, by implementing specific guidelines and effective infection control methods in a timely manner. It also highlighted the need for healthcare professionals to be extra cautious to prevent themselves from getting infected too.

Strategies in the dental office to help older adults prevent infection during COVID 19 pandemic era included:

- Choosing tele- dentistry to get their initial dental visit.
- Pre-check triaging of the patients may be a useful screening technique.
- By advising doctors or prescribing RT-PCR tests and chest CT scans for questionable patients.
- Strict and effective infection control methods. The dentist can treat elderly persons while adhering to all infection control protocols and measures, depending on the urgency of the case.

The COVID era has passed, but it has left the learning lessons for the medical and dental fraternity.

The American Dental Association (ADA) provides guidelines for geriatric dental care, emphasizing communication strategies, need for daily oral hygiene, and the importance of routine and emergency dental care. They also address the impact of systemic conditions like diabetes and the use of medications.26

Key Aspects of Geriatric Dental Care According to the ADA:

- **Communication:** When interacting with older adults, especially those with cognitive limitations or dementia, dentists should use clear and simple language. Use of nonverbal

cues like smiling while establishing eye contact can help build rapport.

- **Daily Oral Hygiene:** Older adults can maintain their oral health either by themselves or by seeking assistance from caregivers. The use of electric brushes, proper labeling of dentures and partials with the patient's name is highly recommended.
- **Routine Dental Care:** ADA recommends regular dental examinations, and prompt access to emergency care for issues like acute pain or broken teeth.
- **Impact of Systemic Conditions and medications:** Dentists need to be aware of the effect of systemic conditions like diabetes, hypertension on oral health. Dentists should also be aware of the effect of prolonged medications on the overall health and dental health of older adults. For instance, Anticoagulant therapy can increase the risk of bleeding during dental procedures. Dentists should consult with the patient's physician and monitor INR levels before invasive treatments. The American Geriatric Society (AGS) developed Beers Criteria, which aims to improve medication safety in older adults. By considering the Beers Criteria, dental professionals can help minimize the risk of medication reactions and promote safe, effective care for older adults.
- **Functional Assessment:** A functional assessment, rather than just a chronological age, is important for determining how best to provide care for older adults. This assessment considers their ability to travel to appointments, their self-care capabilities, and other factors that might affect their access to and ability to receive dental treatment.
- **Access to Care:** Barriers to accessing dental care, such as mobility limitations or lack of transportation, should be addressed. Strategies like tele dentistry or home visits may be necessary to ensure that older adults receive the care they need.

Fundamental Elements Needed to Prevent Transmission of Infectious Agents in Dental Settings: (CDC Infection Control Guidelines)

CDC also provides an Infection prevention checklist for dental settings to ensure safe care.[28] The checklist can be used to:

1. Ensure the dental health care setting has appropriate infection prevention policies and practices in place, including appropriate training and education of dental health care personnel (DHCP) on infection prevention practices.

2. Ensures adequate supplies to allow DHCP to provide safe care and a safe working environment.

Systematically assess personnel compliance with the expected infection prevention practices and provide feedback to DHCP regarding performance. Assessment of compliance should be conducted by direct observation of DHCP during the performance of their duties.

Documentation

The task of creating documented infection prevention policies and procedures based on evidence-based rules, regulations, or standards should fall under the purview of at least one individual who has received training in infection prevention coordinator.[27] Policies and procedures should be adapted to the dental context and regularly (e.g., annually) reevaluated in accordance with any applicable state or federal regulations.

CDC also recommends that all dental facilities establish policies and procedures for the early identification and management of potentially infected individuals at the first points of patient contact.

1. Create and manage programs for occupational health and infection prevention.

2. Educate and teach all dental healthcare staff on infection prevention practices appropriate to their jobs or tasks (DHCP)

3. The most recent CDC advice on vaccines, testing, and follow-up is available.

4. Establish a regular review process for the infection prevention program, which includes assessing DHCP's compliance with infection prevention guidelines. [82]

Standard Precautions consists of:

- Hand washing.
- Putting on personal safety gear (e.g., gloves, masks, eyewear).
- Respiratory hygiene/ cough etiquette.
- Sharps safety (engineering and work practice controls).
- Aseptic safe injection practices
- Sterile instruments and devices.
- Clean and disinfected environmental surfaces
- Practice hand hygiene when:
  - o Hands are obviously dirty.
  - o Following barehanded contact with tools, materials, equipment, and other items that could be contaminated by blood, saliva, or respiratory secretions.
  - o Hands are obviously dirty.
  - o Before putting on gloves and once more right after taking them off.

Respiratory Hygiene and Cough Etiquette
Effective respiratory hygiene and cough etiquette are essential measures to prevent the transmission of respiratory infections in healthcare settings. The following practices are recommended:

1. **Containment of Respiratory Secretions:** Respiratory secretions from symptomatic individuals should be contained immediately upon entry to the facility and throughout their visit.
2. **Patient Education:** Clear and visible signage should be displayed at facility entrances, instructing individuals with respiratory symptoms to:
   - Cover their mouth and nose when coughing or sneezing.
   - Use disposable tissues and discard them appropriately.
   - Perform hand hygiene after contact with respiratory secretions.
3. **Accessibility of Hygiene Resources:** Tissues and no-touch disposal receptacles should be provided in accessible locations. Hand hygiene resources, such as hand sanitizer stations or sinks, should be available in or near waiting areas.
4. **Use of Masks:** Symptomatic patients and their accompanying caregivers should be offered masks to reduce the spread of infectious droplets.
5. **Physical Distancing:** Patients exhibiting symptoms of respiratory infections should be seated as far as possible from others. Where feasible, a designated waiting area should be provided for these individuals.
6. **Staff Education:** Dental Health Care Personnel (DHCP) should receive ongoing education regarding infection prevention strategies, emphasizing the importance of containing respiratory secretions to minimize the spread of respiratory pathogens during patient care.

Personal safety should be ensured using PPE
PPE, including medical masks, gowns, goggles, gloves, and face shields, is essential for protecting healthcare workers from infections like COVID-19. Quality-assured PPE remains critical for worker safety, continuity of care, and pandemic preparedness.[85] PPE with a guarantee of quality is still in high demand. In fact, as part of the COVID-19 response, UNICEF has sent more than 653.4 million PPE pieces to 140 countries since the pandemic started.[29]

According to CDC guidelines, Healthcare personnel should use the following PPE:

- **Face mask** - An N95 respirator or a respirator approved under standards used in other countries that are like NIOSH-approved N95 filtering facepiece respirators Or A well-fitting facemask (e.g., selection of a facemask with a nose wire to help the facemask conform to the face).

- **Eye prtotection** - Put on eye protection (i.e., goggles or a face shield that covers the front and sides of the face). Protective eyewear is required by OSHA regulations under General Industry 1910.133.a and recommended by CDC. [30]

- **Gloves** - Put on clean, non-sterile gloves upon entry into the patient room or care area. It should be **removed** after patient care and **hands should be immediately washed**. the gloves should be changed if they become torn or heavily contaminated.

Patient examination or surgical gloves should not be washed before use. Disposable gloves **should not be reused**.

- **Gowns** - Put on a clean isolation gown upon entry into the patient room or area which is to be changed if it becomes soiled. DHCP should wear long-sleeved disposable or reusable gowns or lab coats that cover skin and personal clothing likely to become soiled with blood, saliva, or infectious material—for example, when spatter and spray of blood, saliva, or other potentially infectious material to the forearms might occur. DHCP should change protective clothing when it becomes **visibly soiled** or as soon as feasible if penetrated by blood or other potentially infectious fluids.[86]

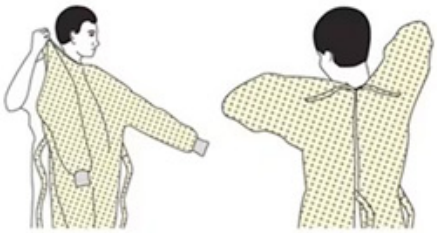
Sequence For Putting On Personal Protective Equipment (PPE)[31]
CDC has recommended step by step procedure for wearing and removing PPE which is called donning and doffing procedures as mentioned in the figures below.

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

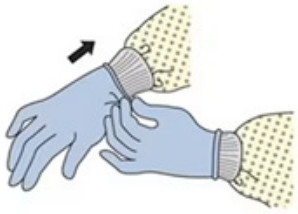
- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator

3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit

4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

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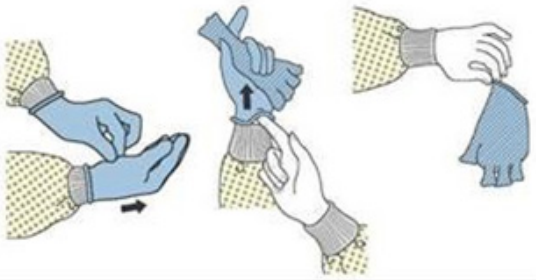
HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container

5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE

PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

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Initial Assessment

As Louis Pasteur wisely said, "Chance favors only the prepared mind." In dentistry, preparation begins with observation. The dental team's attentiveness must start the moment a patient first reaches out to the clinic.

Telephonic Screening / Preclinical Assessment:
The assessment process often begins well before a patient enters the dental office. For older or medically vulnerable patients, a preliminary phone screening plays a vital role. This includes asking about their current health status, any new or concerning symptoms, and offering guidance on safety measures such as minimizing companions and wearing a face covering. Such proactive steps not only protect the patient but also prepare the dental team for a safe and efficient visit.

During the Clinical Visit:
Front desk personnel are the first point of contact and serve as the eyes and ears of the dental team. Beyond managing appointments and insurance details, they can provide valuable observations about a patient's condition—without diagnosing or making assumptions. Subtle cues noticed at this stage can offer important insights for the clinical team.

- **Gait**: The way a patient walks can reveal much about their overall health. Research has shown that gait changes in older adults may signal early cognitive decline, including Alzheimer's disease, or physical conditions such as arthritis, osteoporosis, or Parkinson's disease

.

- **Dressing:** Clothing serves as more than a style statement—it can communicate aspects of mental, emotional, or physical well-being. For example, an elderly patient with unkempt or mismatched attire may be showing signs of cognitive impairment or even neglect, which warrants further attention.

- **Hair:** Hair condition can reflect both health and lifestyle. Unkempt hair or excessive dandruff might point to stress, depression, nutritional deficiencies, or skin conditions like eczema or psoriasis.

- **Nails:** Fingernails can serve as subtle indicators of underlying systemic conditions. Changes in color, shape, or texture may suggest issues such as diabetes, heart disease, liver dysfunction, or infection. Maintaining awareness of these details can aid in early detection and holistic care.

- **Speech:** Slurred or hesitant speech observed during casual conversation might indicate a history of stroke, medication side effects, or neurological conditions like apraxia. Additional clues such as skin tone, scleral color, or breathing patterns may also help identify underlying health concerns. Recognizing these small yet significant details allow the dental team to provide safer, more comprehensive, and compassionate care to every patient.

Physical Assessment

Treating elderly and medically compromised patients in a dental care setting have their own challenges that can potentially test any clinician to their limits, the physical symptoms present in elderly patients may include but not be limited to disability with motor function, balance, and other behavioral issues. For example, the greatest incidence of stroke is considered to be among **adults sixty years and older**, which further adds complexities to even simple dental procedures. Encountering more compromised elderly patients on a daily basis is never considered easy; however, with additional training the dental staff can improve their patient handling techniques and thus provide treatment to the best of their capacity, knowledge and clinical judgment.

The **American Society of Anesthesiologists (ASA)** Physical Status classification system was initially created in 1941 by the American Society of Anesthetists and as revised in 1961 by adding the sixth category. The purpose of the grading system was simply to assess the degree of a patient's "sickness" or "physical state" prior to providing any treatment (Table 1). Describing patients' preoperative physical status is used for record keeping, for communicating between colleagues, and to create a uniform system for statistical analysis.[39]

Table 1. ASA Physical Status Classification System.[39]

Classification	Description
ASA 1	Healthy patients
ASA 2	Mild to moderate systemic disease caused by the surgical condition or by other pathological processes, and medically well controlled
ASA 3	Severe disease process which limits activity but is not incapacitating
ASA 4	Severe incapacitating disease process that is a constant threat to life
ASA 5	Moribund patient not expected to survive 24 hours with or without an operation
ASA 6	Declared brain-dead patient whose organs are being removed for donor purposes

Taking a detailed medical history before starting any dental treatment is not only paramount but is a required 'standard of care.' Measuring the patient's vital signs, including blood pressure (B.P.), heart rate (H.R.), pulse, and respiratory rate (R.R.), should be a standard practice in all dental offices. **The dental team should consider the physical characteristics of the patient before concentrating on their dental problems.** A detailed medical history including medical diagnoses, an updated list of all medications along with past surgeries or hospitalizations give the clinician a fair chance to evaluate the given circumstances.[20] This history may also identify the need for the administration of a prophylactic antibiotic due to patient's orthopedic or cardiac status before proceeding intraorally.

The research suggests for efficient geriatric patient screening, diagnosis, and care against the COVID outbreak specific guidelines were set for managing the patients requiring dental treatment. Even before the patient comes, these stages are started via phone, text monitoring, or video calls. A decision-making algorithm for treatment of patients in dental clinics has been described in the flowchart below.

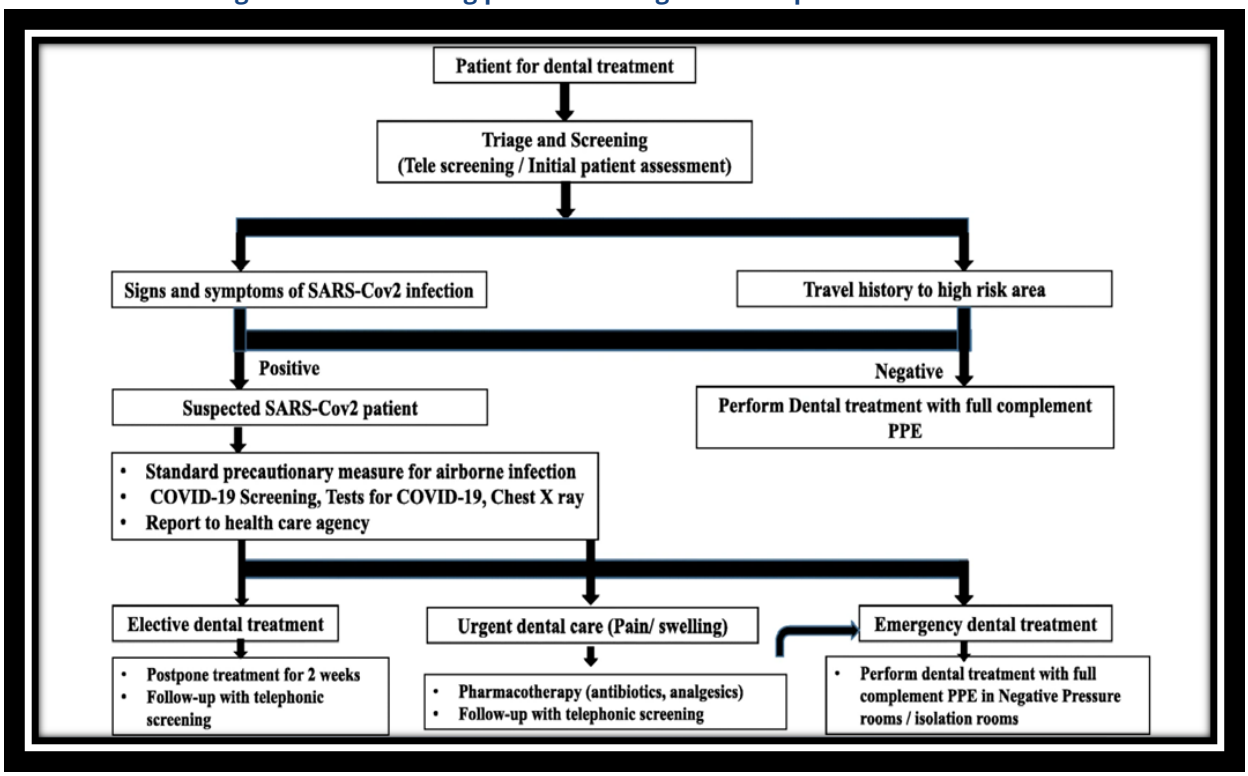
ADA provided detailed categorization of dental emergencies for treating dental patients amongst COVID 19 pandemic which are relevant under similar circumstances, given in table below.

Some common medical conditions that may potentially be identified include:

1. **Alzheimer's Disease:** Alzheimer's disease is the most common type of dementia. It is a progressive disease that in its advanced stages has the tendency to destroy memory and other important mental functions. It's considered to be part of a group of brain disorders that result in the loss of intellectual and social skills. These variations can be severe enough to interfere with the patient's day-to-day life. The dental team has to be considerate and understand the severity of the condition before providing any instructions or discharging the patient from the clinic.[41] A higher incidence of COVID-19 infection in older dementia patients also carries a higher risk of COVID-19 infection-related mortality. Although accurate data of the mortality rates linked to Alzheimer's Disease are still lacking, patients with Alzheimer's Disease have a greater rate of hospitalization, access to emergency rooms, and mortality from COVID-19 infection than elderly individuals without Alzheimer's.[88]

2. **Arthritis:** Arthritis generally is defined as an inflammation of one or more of joints. The

Flowchart based algorithm for treating patients during COVID-19 pandemic.[93]



Dental Emergencies ✓ Potentially life-threatening ✓ Require immediate treatment to stop • Ongoing tissue bleeding • Alleviate severe pain • Alleviate severe infection	✓ Uncontrolled bleeding[40] ✓ Cellulitis or diffuse soft-tissue bacterial infection with intraoral or extraoral swelling that potentially compromises Patients' airway ✓ Trauma involving facial bones, potentially compromising patient's airway
Urgencies ✓ Management of conditions that require immediate attention to relieve severe pain and/or risk of infection and to alleviate the burden on hospital emergency departments ✓ Treat as minimally invasively as possible	✓ Severe dental pain from pulpal inflammation ✓ Pericoronitis or third-molar pain ✓ Surgical post-operative osteitis, dry socket dressing changes ✓ Abscess, or localized bacterial infection resulting in localized pain and swelling ✓ Tooth fracture resulting in pain or causing soft tissue trauma ✓ Dental trauma with avulsion/luxation ✓ Dental treatment required prior to critical medical procedures ✓ Final crown/bridge cementation if the temporary restoration is lost, broken, or causing gingival irritation ✓ Biopsy of abnormal tissue ✓ Extensive dental caries or defective restorations causing pain ✓ Manage with interim restorative techniques when possible (SDF, glass ionomer) ✓ Suture removal ✓ Denture adjustment on radiation/oncology patients ✓ Denture adjustments or repairs when function impeded

	✓ Replacing temporary fillings on endo access opening in patients experiencing pain ✓ Snipping or adjusting of an orthodontic wire or appliances piercing or ulcerating the oral mucosa
Routine or non-urgency	✓ Initial or periodic oral examinations, recall visits, routine radiographs ✓ Routine dental cleaning and preventative therapies ✓ Orthodontic procedures other than those to address acute issues (e.g. pain, infection, trauma) or other issues critically necessary to prevent harm to the patient ✓ Extraction of asymptomatic teeth ✓ Restorative dentistry including treatment of asymptomatic carious lesions ✓ Aesthetic dental procedures

most common forms are osteoarthritis that impact cartilage and rheumatoid arthritis that is considered to be an auto-immune disorder. The chief symptoms are joint pain and stiffness, which typically worsen with age. The sitting posture in a dental chair can be painful for the patient and must be corrected accordingly. There are specific pillows available (Figure 1) to provide extra support for the patients and make them more comfortable during their dental appointments.[42]

Figure 1.

3. **Congestive Heart Failure (CHF):** CHF, also known as "heart failure," occurs when heart muscles do not pump blood properly. Certain medical conditions, such as coronary artery disease and hypertension, gradually impact the heart's functionality to fill and pump efficiently. Every patient with a history of CHF should be made to relax during the whole appointment. Any change in posture or any procedure should be explained in advance so as to reduce moments of stress or even momentary panic.[43]

   There are substantial links between COVID-19 and Heart failure that go beyond pathophysiology. First and foremost, the COVID-19 pandemic affected hospitalization for heart failure (HF): a decline in HF hospital admission has been well documented, and this may have an effect on HF mortality. Second, people hospitalized for COVID-19 frequently have a history of heart failure (HF). Third, we've demonstrated the significant incidence of heart damage after COVID-19, which is frequently only detected through biomarker analysis. The prognosis can be drastically affected by HF, which may be a short- or long-term effect of COVID-19 inflammatory cardiomyopathy.[91]

4. **Diabetes Mellitus (DM II):** Type 2 diabetes is a chronic condition in which the way the body metabolizes blood glucose, is impaired. This is fairly important to both the dentist and dental hygienist as patients

with uncontrolled DM-2 generally suffer with acute oral infections, periodontal disease and delayed wound healing. It has been shown in the literature that dental teams have a fairly high likelihood of detecting Type 2 DM in undiagnosed cases during initial dental screening.[44,45]

1. Glycosylated Hemoglobin (Hb1Ac) is suggested to be less than 7%
2. Normal Blood Glucose level is considered to be 5-7 mmol/L
   i. **Hypoglycemia** (Blood Glucose level < 3mmol/L):
   Signs/Symptoms: Cold, Clammy skin
   Management:
   - Oral carbohydrate or 50% dextrose (if pt. is conscious)
   - Call 911 (if pt. is unconscious)

   ii. **Hyperglycemia** (Blood Glucose level > 15 mmol/L):
   Signs/Symptoms: Warm, Dry Skin
   Management:
   - Hospitalize (if pt. is conscious)
   - ABCs, Oxygen or Call 911 (if pt. is unconscious)

Whether people with diabetes are more prone to contract COVID-19 than the general population cannot be determined from the available data. Instead of having a higher probability of contracting the virus, the issue that diabetics confront is that they are more likely to have worse complications if they do. Additionally, the likelihood that someone will have such catastrophic COVID-19 consequences increases the more health disorders they have (for instance, diabetes and heart disease). Additionally, older individuals are more likely to experience problems from the virus.[92]

5. **Hypertension:** High blood pressure or Hypertension (HTN) is a common condition in which the force of the blood against arterial walls is high enough that it may eventually cause health problems. A large number of older adults suffer from some form of HTN taking into consideration that narrowing of the arterial walls may be part of the normal aging process.[46] The dental team's role in screening undiagnosed and undertreated hypertension is very important since this may lead to improved monitoring and treatment.[47] Measuring blood pressure should become part of routine practice in all dental offices, as this may also impact the total amount of epinephrine that can administrated to the individual.[71] Risks among elderly patients as reported by the American Academy of Cardiology suggest "in patients over the age of 60, isolated systolic hypertension is more common, and SBP is a better predictor of cardiovascular risk when compared to diastolic blood pressure (DBP)".[75] Morbidity and mortality from hypertension is expected to increase due to rapid growth of the geriatric population and the high prevalence of hypertension among this group.[75] Blood pressure guidelines in adults is based on average blood pressure taken in a healthcare setting and is categorized into 4 levels: normal, elevated, hypertension stage 1 and hypertension stage 2 (Table 2).[67]

Table 2. Categories of BP in Adults*[54]

BP Category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120-129 mm Hg	and	<80 mm Hg
Hypertension			
Stage 1	130-139 mm Hg	or	80-89 mm Hg
Stage 2	≥140 mm Hg	or	≥90 mm Hg

*Individuals with SBP and DBP in 2 categories should be designated to the higher BP category. BP indicates blood pressure (based on an average of ≥2 occasions, as detailed in DBP, diastolic blood pressure; and SBP systolic blood pressure.

6. **Osteoporosis:** Osteoporosis causes bones to become weak and brittle and with post-menopausal older women being at highest risk, osteoporosis-related fractures commonly occur in the hip, wrist or spine.[49] Osteoporosis can lead to bone loss in the jaw and most commonly tooth loss. Delta Dental, in its 2008 report, stated the dentist may be the first health professional to suspect osteoporosis and to refer the patient to their primary physician for further investigation.[50]

   Oral health professionals must also be careful not to place their patients at risk for Bisphosphonate-Related Osteonecrosis of the Jaw (BRONJ) as it potentially can occur following invasive surgeries such as tooth extractions and generalized periodontal surgery. The incidence of BRONJ or medication Related Osteoporosis of Jaw (MRONJ)is much higher in patients who are on or have received intravenous form of bisphosphonate as compared to oral forms for various bone-related conditions.[68] Since bisphosphonates have a half-life ranging up to 10 years,[51] even those no longer on this medication may still be at risk. A detailed medical history for any patient with a diagnosis of osteoporosis along with the dosage, duration and route of bisphosphonate intake should be discussed before proceeding with any surgical procedures.[52]

   Infection and the COVID-19 death rate have a strong positive correlation with vitamin D deficiency. The majority of the world's countries employ glucocorticoid medication to treat COVID-19 patients. Glucocorticoids may hasten bone loss in elderly patients receiving COVID-19 clinical treatment, increasing their risk of developing osteoporosis. The relationships and interactions between COVID-19, glucocorticoids, and osteoporosis should therefore be brought to the attention of clinicians and researchers (especially in elderly patients).[89]

7. **Parkinson's Disease (PD)**: PD is a progressive neurodegenerative disorder caused by loss of dopaminergic and non-dopaminergic neurons in the brain affecting movement, muscle control, and balance as well as several other non- motor functions. The use of even the simplest oral hygiene aids such as toothbrushes, toothpaste, and floss can be challenging for these patients and need be examined in detail. The oral hygiene devices and techniques (Figure 2) may require possible modification by the dentist or hygienist in order to make them more easily usable by the patient.[20,53]

Figure 2.

8. **Stroke:** A stroke is a kind of "brain attack" with the main reason being the death of brain cells due to shortage of blood and deprivation of essential oxygen. This directly impacts the parts of the body under the control of that area of brain that's affected. As a result, speech, stability or other muscle coordination may be lost. Also, these patients may have higher potential for bleeding issues after surgeries depending upon if the patient is on any blood thinners.[54,55]

   Previously, dental practitioners used to generally postpone dental treatment until 6-12 months after a stroke, based on the presumed risk of recurrent stroke. However, current literature suggests that stroke patients including patients with higher risks of bacteremia who undergo dental procedures within one month to six months after ischemic vascular event, were not at an increased risk of experiencing a second event.[59]

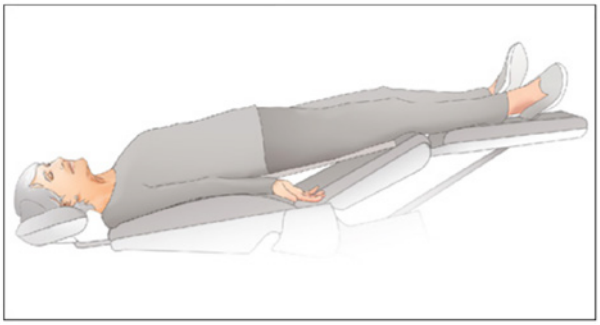


Figure 3.

Figure 5.
Source: *Vitality Medical*

Figure 4.
Source: *Medicaleshop Inc*

Figure 6.
Source: *EZ Way, Inc.*

Figure 7.
Source: *EZ Way, Inc*

Signs/Symptoms:
- Severe headache, mostly affects one side of body
- Visions changes
- Speech impairment

Management:
Hospitalize/call 911

9. **Asthma:** As per current studies, older patients who are diagnosed with mild asthma can demonstrate the same level of breathing difficulties as any younger patient with severe asthma. According to the American Academy of Allergy, Asthma and Immunology, the senior age group represents the fastest growing segment in North America with more than two million cases above age 65 and older suffer from Asthma in some capacity.[46]

   Researchers have examined the connection between COVID-19 and asthma. The great majority of these investigations so far have not discovered an elevated risk of COVID-19 disease severity in asthmatics. Furthermore, there doesn't seem to be any evidence that asthma increases the likelihood of getting COVID-19 disease.[90]

   Signs/Symptoms:
   - Shortness of breath
   - Chest tightness or pain
   - Trouble sleeping caused by shortness of breath, coughing or wheezing

   Management:
   - Albuterol (Salbutamol) (2 puffs)
   - Epinephrine (0.3-0.5 mg IV)
   - Avoid ASA
   - Avoid NSAIDS in cases of persistent or active asthma

   The key for those who have asthma during this epidemic is to continue doing what you have been doing so far, taking your controlled medication as prescribed and notifying your healthcare practitioner of any new symptoms you may experience.

10. **Syncope:** The correlation of older adults and syncope is poorly understood. However, transient loss of consciousness and related falls can be regularly witnessed and is most frequently seen in dental clinics. Approximately, 3% of all visits to the emergency departments are due to syncope and older adults are especially vulnerable to these syncope related falls. It is commonly suggested that mechanisms such as dehydration, dental procedures related fear or stress or patients on hypertensive medications such as diuretics are more susceptible to syncope.[76]

    Signs/Symptoms:
    - Pupil dilation
    - Increased BP and pulse rate
    - Vertigo, weakness

    Management:
    - Oxygen administration
    - Patient should be made to rest in Trendelenburg Position (Figure 3) to increase oxygen flow to the brain

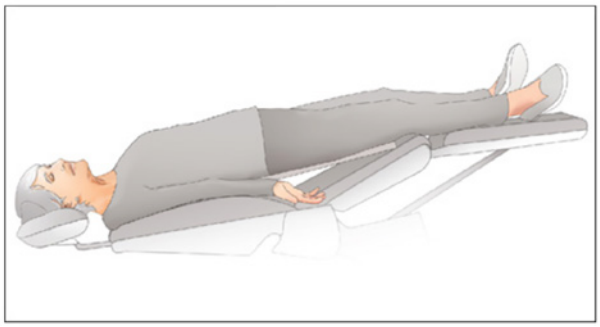


Figure 3.

Medical and Dental Records

Most important, if the patient has a medical diagnosis or is currently on any medications, it is highly recommended for the dental hygienist or even the treating dentist to contact the patient's primary physician or cardiologists to discuss drug regimens and plan optimal patient management before altering any medications. Also, it is suggested that updating medical records should include requesting latest copies of clinical test reports such as INR and patient's current and compete medical diagnoses list, along with other medications.[70] This requires active communication, building trust and frequent engagement with other healthcare professionals such as physicians, nurses, aides, pharmacists and anyone involved in

providing care for the elderly patient. Even a minor fluctuation in the dosage of a patient's current medication can hamper the outcome of the dental procedure. In order to have a better understanding of a patient's dental outcome, a direct conversation with the previous dentist can be beneficial in understanding the behavioral patterns and any modifications in the treatment approach. Of utmost importance is the maintenance of comprehensive and accurate medical and treatment records, as all practitioners are required by law to maintain these records in order to provide evidence of continuity of care as well these records may be subpoenaed in medico-legal or insurance fraud cases.[56]

For wheelchair bound patients, the wheelchair should be moved as close as possible to the dental chair[57] for the dental staff to have full access to their dental equipment. In some cases where the patient cannot be transferred to the dental chair, special head and neck support systems (Figure 4) can be employed that will provide support for the patient's neck and head to minimize patient discomfort.

The staff should also be trained in understanding the basic concepts of Safe Patient Handling (SPH) and be aware and accountable for providing appropriate assistance during the movement of patients.58,59 For patients having difficulty standing up or have reduced weight bearing capacities, they should be assisted when moving from their wheelchair to the dental chair and then back to their wheelchair using patient transfer devices or other mechanical, devices. The determination to have either a one-person or two-person transfer should be made considering the staff training and the disability of the patient. Transfer Boards, Pivot Discs, Transfer belts (Figure 5), EZ lift (Figure 6) or Hoyer lifts (Figure 7) can be used by the staff in transferring the patient to or from the wheelchair.

Oral Assessment

A patient's teeth can demonstrate the lifestyle of the patient and can perfectly reflect years of trauma from faulty toothbrushing, use of acidic and chemical agents or even eating habits. The appearance and structure of the teeth tends to change with time, and recognizing these

Figure 4.
Source: *Medicaleshop Inc*

Figure 5.
Source: *Vitality Medical*

Figure 6.
Source: *EZ Way, Inc.*

Figure 7. Hoyer Lift
Source: *EZ Way, Inc*

patterns is the first step in the oral assessment of the elderly patient. We cannot predict what the oral symptoms will be as everyone is different. However, some of the more common features will be discussed. Often, there are some obvious changes in the thickness of the enamel and dentin, the presence of gingival recession leading to a higher incidence of root caries especially in teeth with crowns or bridges, and even reduced sensitivity to cold or hot. There may be noticeable signs of reduced keratinization, increased xerostomia or periodontal disease leading to loose teeth and subsequent tooth loss.[60] In cases of elderly patients with partial or complete edentulism, the alveolar ridges are most likely to be resorbed or knives edged and often have low success rates with both the fabrication and wearing of dental prostheses.

There are many other factors that can have direct or indirect impact on the oral health of the elderly. Physical and cognitive status, socioeconomic conditions, educational background, personal motivation levels, etc. are some of the aspects that need to be considered before offering extensive treatment options. It's advisable not to schedule elderly patients for dental appointments with multiple procedures planned during a single session. The ability of elderly patients to handle complicated dental procedures tends to decline with time, particularly with diminishing health status.

The dental team must appreciate these limitations and understand that we still do not possess the '**Golden Key**' to solve all dental problems. Every elderly patient will present with a unique set of conditions that needs to be respected. It is understandable it's easier said than done. However, to become a successful practice that includes the care of elderly patients, it is essential to identify areas of improvement, train the staff and search for innovative ways to provide effective and efficient treatment for the elderly.

Even scheduling a routine dental appointment can prove to be stressful for many older adults. Past experiences or stories shared by other people has the potential to leave a lasting negative impact on their memories. It can be a result of a painful procedure or a mild allergic reaction that can make it harder for them to accept the concept of painless dentistry or latest medical achievements. The next section is intended to shed light of some of the most common allergic reactions that take place in a dental clinic along with its preventive measures before the event can turn into a life threating condition.

Allergic Reactions

Most common signs and symptoms can range from but not limited to the following:[65,74]

- Localized redness
- Pruritis
- Edema
- Urticaria
- Conjunctivitis
- Rhinitis

In case of mild to moderate allergic reactions, administrating Antihistamines such as Diphenhydramine (Benedryl)-50 mg i.m. is highly recommended.

Potential triggers in dentistry may include:

A. Latex Allergy which is commonly seen in health care workers.
B. Aspirin or ASA hypersensitivity: This is also known as the Samter's Triad or ASA triad or Aspirin-Exacerbated Respirator Disease (AERD).[73] It is a chronic condition comprising of asthma, sinus inflammation with recurring nasal polyps, and aspirin sensitivity. The treating dentists are recommended to avoid ASA and update the medical records for future references.

3. Local Anesthetic Content allergy.
   a. Amide or Ester or Both
   b. Epinephrine or Levonordefrin
   c. Metabisulfite (used as preservative in local anesthetic carpules)

Emergencies

A medical emergency can occur in any dental office, and managing it successfully requires advanced preparation of the entire dental staff. The dentist, with the guidance of Emergency Medical Systems (EMS) professionals, should develop a basic action plan that can be easily followed by all staff members. The main focus here is to manage the patient's condition until he or she recovers fully or until further help arrives. As per the latest guidelines from the American Heart Association (AHA), in cases of an emergency, EMS should be activated as soon as possible followed by hands-on **Cardio-Pulmonary Resuscitation (CPR)**, if required. The goal is to provide continuous oxygenation to the brain to minimize permanent damage. **Every clinical staff member** should have CPR training, and certification should be renewed every two years.[61]

Elderly patients, especially with complicated medical histories, are estimated to be more prone to emergencies in the waiting area as compared to a healthy adult individual. There can be some unexpected events including syncope, cardiac arrests, falls, allergic reactions, hypercapnia, asthmatic attacks, hypoglycemia etc. that require attention as soon as possible to prevent long-term complications.[62] Early recognition of signs of distress by the dental staff can be critical in providing time for the emergency team to arrive and initiate rescue protocols. Every professional who is a part of the dental team should be trained in dealing with mock emergency situations on a regular basis. Simulating emergency scenarios and preparing for unexpected events are great methods for improving not only staff readiness but also developing methodical approaches required during challenging circumstances. Clear and effective communication among the members is crucial during any given emergency.

In 2002, the ADA Council on Scientific Affairs published a report in the *Journal of the American Dental Association (JADA)* titled 'Office Emergencies and Emergency Kits,' in which they covered the topic in great detail and recommended the most essential drugs to be a part of every dental clinic's emergency kit to facilitate handling of common dental office emergencies. This critical list (Table 3) of medications remains the standard for all dental clinics.

Table 3. Emergency Kit Basics for Dental Practices.[63]

- Epinephrine 1:1,000 (injectable)
- Histamine-blocker (injectable)
- Oxygen with positive-pressure administration capability
- Nitroglycerin (sublingual tablet or aerosol spray; be aware of contraindications)
- Bronchodilator (asthma inhaler)
- Sugar (a quick source of glucose such as orange juice)
- Aspirin

Emergency kits can also include many more products such as airbags, blood pressure apparatus, blood sugar monitors, ammonia gas, etc. to handle other complicated situations.

Discharging the Patient

Discharging a geriatric dental patient requires careful, personalized instruction, often involving a caregiver, due to potential medical complexities, physical limitations, or cognitive impairments. In addition to standard post-procedure care, a comprehensive plan should address transportation, medication management, and ongoing support.

Avoid accidental falls/ injuries post procedure:

There are some precautionary steps that need to be followed even after completion of the dental procedure. At the completion of the appointment, regardless of its duration, the elderly patient should not be allowed to sit erect from a supine posture and walk straight out of the operatory. Taking into consideration their medical diagnosis and medications, the elderly patient may have a higher tendency for **orthostatic hypotension** when moved from one posture to another in quick succession.

This can lead to dizziness and a potential fall either inside or outside the clinic that could lead to serious injury and in rare circumstances even death. The best practice approach would be to change the patient's posture very slowly from supine to erect and continuously confirming the comfort levels of the patient.

The patient in most cases will inform the clinician regarding any discomfort, but in cases where patients have cognitive decline or communication problems, their facial expressions should continuously be monitored to analyze any concerns. For body equilibrium to re-establish, they should be asked to sit at least for a couple of minutes before helping them to stand or shift. Any sudden or abrupt motion should be avoided in all circumstances.

Post-operative instructions should preferably be given **both verbally and in writing**. The instructions regarding any potential swelling, post-operative bleeding, post anesthetic trauma or any other dental/medical emergency should be communicated in simple English. The contact number for the clinic during and after hours should be provided in a clear and readable form. It's advisable to have a staff member go through the instructions with the patient (and caregiver if present) to ensure they clearly comprehend the instructions.

Every elderly patient should be thoroughly evaluated before discharging them from the clinic.

- Their speech, balance and basic understanding of simple instructions should be carefully observed. Any deviation from the baseline vitals should immediately be brought to the attention of the dentist.
- The patient should be under constant supervision, and in some cases emergency contacts can be requested to pick up the patient after the appointment.
- These patients in most cases can be expected to have an uneventful recovery after operative or surgical procedures. In cases of severely frail patients, those on anti-coagulants or anti-platelet therapy or with histories of delayed healing may require a follow up call either the same evening or the next morning to check on their status. This is not only vital in ensuring the well-being of the patient but also goes a long way in securing the patient's confidence in the dental staff.
- All interactions with the patient, and if applicable, their caregivers, and family members as well as any observed changes should be documented in the patient's records for future reference.
- The dental staff should also instruct patients to notify the clinic if they develop symptoms or are diagnosed with a communicable disease within 14 days of their appointment.

Conclusion

With the rapidly changing demographics of the elderly population, it has become increasingly difficult for any dental practice to overlook this fastest-growing segment of society. Unlike younger, generally healthier adults, older patients often present with complex clinical scenarios that demand heightened vigilance and individualized care at every visit. While these encounters may pose challenges, they ultimately offer deeply rewarding experiences for both patients and the dental professionals who serve them. Ensuring successful outcomes requires a coordinated effort from the entire dental team, adherence to established emergency protocols, and preparedness to act swiftly before calling 911, if necessary.

The COVID-19 pandemic has further amplified the challenges faced by dental and oral healthcare professionals, extending beyond clinical practice to financial, moral, social, and professional dimensions. Implementing effective coping strategiessuch as enhanced infection control measures, improved patient management techniques, and the integration of virtual technologiescan help mitigate these concerns and strengthen the resilience of oral healthcare systems.[80]

Overall, the profession's collective response to the pandemic reflects resilience, adaptability, and a steadfast commitment to patient care, demonstrating that many dental professionals have risen to the challenge of safeguarding both public health and professional integrity in unprecedented times.

Course Test Preview

To receive Continuing Education credit for this course, you must complete the online test. Please go to: *www.dentalcare.com/en-us/ce-courses/ce586/test*

1. Baby boomers are considered to be born between what years?

A. 1946-1964
B. 1955-1985
C. 1980-1999
D. 2001-2010

2. What is the current estimation of the percentage of older adults in the American population today and what are the future projections for 2050?

A. 5%, 35%
B. 26%, 51%
C. 9%, 15%
D. 18%, 23%

3. Geriatric dentistry, or gerodontics, is generally considered to be a part of which division of dentistry?

A. Orthodontics
B. Endodontics
C. Special Care Dentistry
D. Community Dentistry

4. When should the physical evaluation of an elderly patient begin during a dental appointment?

A. Before the patient is being discharged from the clinic
B. As soon as they enter the clinic
C. After evaluation by the dental hygienist
D. After the dental procedures are being completed

5. What are the roles of the front desk staff?

A. Evaluate the physical characteristics of the elderly patient as soon they walk into the clinic
B. Help patients schedule appointments
C. Help patients with their insurance policies and coverage
D. All of the above.

6. Which age group is considered to have the greatest incidence of stroke among the elderly population?

A. 30
B. 45
C. 60
D. 75

7. CPR in medical/dental terminology stands for?

A. Cardio-Pulmonary Resuscitation
B. Creating Positive Relationships
C. Constant Prepayment Rate
D. Caffeine Produced Resistance

8. Which of the following members of the dental team are recommended to renew their CPR license every two years?

A. Dentist only
B. Dentist + Dental Hygienist
C. Dentist + Dental Hygienist + Dental Assistant
D. All clinical staff

9. What is the prescribed concentration of epinephrine in dental emergencies?

A. 1:100,000
B. 1:200,000
C. 1:1,000
D. 1:50,000

10. A sudden dip in the blood pressure of an elderly patient resulting in a sudden change in body posture is known as _____.

A. orthostatic hypotension
B. syncope
C. eczema
D. stroke

11. Post-operative instructions to any elderly patient should always be _____.

A. Verbal
B. Both written and verbal
C. Written
D. Not required

12. COVID-19 spreads primarily through which of the following?

A. Airborne droplets
B. Contact with the infected individual
C. Food
D. Both A and B

13. What kind of PPE is worn by front-line healthcare providers and other crucial personnel?

A. Masks
B. Gloves
C. Gowns
D. Goggles/Face shields
E. All of the above

14. Which is not a common change observed during the oral assessment of elderly patients?

A. Increased thickness of enamel
B. Gingival recession
C. Reduced keratinization
D. Increased xerostomia

15. Which of the following best describes COVID-19?

A. It is caused by bacteria.
B. It is a fake disease.
C. It is just like the flu.
D. It is caused by a virus

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Additional Resources

- No Additional Resources Available.

About the Author

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Dr. Grover attained his Bachelor's in Dental Sciences (BDS) from the prestigious Manipal University, India, in 2006 and currently resides in Toronto, Canada, with his spouse, Richa. He completed his clinical fellowship in Oral Health Services for Older Adults (OHSOA) program in 2010 and Masters of Sciences (MS) in Geriatric Dentistry in 2013 from the University of Minnesota (UMN), School of Dentistry. He obtained his Aging Studies Certificate from UMN School of Public Health in 2014. The topic for his MS dissertation was focused on 'The Impact of 2010 Minnesota Medicaid Budget Cutbacks on Dental Service Utilization in Nursing Home Residents.' He has authored several publications related to the dental consideration of elderly and medically compromised patients and is currently working on other projects in collaboration with the UMN School of Dentistry faculty members.

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