

## QUESTIONNAIRE 1

### Integrating artificial intelligence (AI) in modern dental practice – Practical, Ethical, and Legal considerations. Page 3

- Which of the following are cornerstones of AI-technology?**
  - Big data
  - Computational power
  - Sophistication of AI algorithms
  - Geo-economic environment
  - Physics
- Which of the following tasks are typically performed by AI systems to simulate intelligent human cognitive functions?**
  - Visual image perception
  - Speech recognition
  - Decision-making
  - Language translation
  - All of above
- Augmented intelligence involves using AI as a supplementary tool to assist or enhance human intelligence, rather than replacing it.**
  - TRUE
  - FALSE
- Which of the following statements relating to current AI applications in dentistry are TRUE?**
  - Improve diagnostic accuracy and early detection of diseases
  - Improved efficiency and treatment outcomes
  - Saving time and improving productivity
  - Predict and prevent disease progression and complications
  - None of above
- The most eminent emerging trends of AI-driven technologies for dental practice use are:**
  - Early detection of oral cancer
  - Tele-dentistry
  - Virtual treatment planning
  - Interactive patient engagement with virtual assistants and chatbots
  - All of above
- In future dentists will be able to conduct continuing education and training by using virtual and augmented reality anywhere, or even at home.**
  - TRUE
  - FALSE
- Which of the following statements relating to logistical challenges of implementing AI technologies in dental practice are TRUE?**
  - Adoption of AI is not hindered by cost
  - Resistance to change has a negative effect on acceptance of AI
  - AI-technologies are compatible with all digital practice systems
  - AI systems must be updated continuously
  - Dentists need adequate training to operate AI-technologies effectively
- Which of the following ethical challenges of implementing AI technologies in dental practice are TRUE?**
  - Patient privacy and data security
  - Informed consent and patient autonomy
  - Algorithm bias and fairness
  - Professional judgement, oversight, and responsibility
  - All of above
- Which of the following legal challenges of implementing AI technologies in dental practice are TRUE?**
  - Dentists are not liable or accountable in cases where AI systems make errors
  - AI technologies are not subject to regulatory requirements and standards governing medical devices.
  - Failure to meet the standard of care in the use of AI in dental practice may result in allegations of professional misconduct, negligence or malpractice.
- Most AI software and technologies currently used in dental practice have reached full maturity and regulatory approval.**
  - TRUE
  - FALSE

## QUESTIONNAIRE 2

### Antibiotic stewardship in dentistry – review of evidence-based clinical recommendations on appropriate antibiotic prescribing in dental practice: Clinical guidelines and recommendations for antibiotic prescribing in dental practice. Page 15

- Which of the following statements are TRUE?**
  - Treating all oral infections with antibiotics is likely to do more harm than good.
  - The benefits of giving antibiotics should always outweigh the risks of adverse reactions and development of bacterial resistance.
  - It is the duty of every dentist to arrive at a correct diagnosis in order to avoid inappropriate use of antibiotics
  - It is unethical to decline a patients' request for a particular antibiotic treatment without any real indication.
- If there are possible clinical circumstances that may suggest a significant medical risk in providing dental care without antibiotic prescribing the following considerations should be taken into account**
  - The practitioner's professional judgement
  - Consultation with the patients' physician
  - The patients' needs and preferences
  - Product safety and cost
  - All of the above
- Antibiotic prophylaxis is recommended routinely in high-risk groups of patients to reduce bacteraemia, and the risk of developing infecting endocarditis when conducting the following procedures:**
  - Extractions
  - Prophylactic cleaning
  - Restoration of a tooth
  - Placement of implants
  - Placement of orthodontic brackets
- Antibiotics should not be prescribed for immune-competent adult patients with pulpal- or peri-apical-related conditions where definitive conservative dental treatment is available.**
  - TRUE
  - FALSE
- Which of the following statements are TRUE regarding use of antibiotics in children?**
  - Children presenting with aggressive periodontitis or ulcerative gingivitis should receive antibiotics.
  - Amoxicillin is the most commonly recommended antibiotic.
  - Tetracycline is the most commonly prescribed alternative antibiotic for penicillin-sensitive patients.
  - Antibiotics should be prescribed for short durations (3-5 days).
- Which of the following general statements relating to antibiotic prescribing in dental practice are TRUE?**
  - Antibiotic prophylaxis is used routinely in high-risk patients to reduce bacteraemia.
  - Prescribe broad spectrum antibiotics for the longest duration possible until the clinical cure of the patient is obtained.
  - Dentists should curb the use of Clindamycin due to high frequency of side effects.
  - In patients with clearly established oral and dental infections, antibiotic therapy should be reserved for those patients who have regional or systemic body manifestations.
- Amoxicillin is the preferred first-line antibiotic because it is more effective against various gram-negative anaerobes and has a lower incidence of gastrointestinal adverse effects. TRUE or FALSE?**
  - TRUE
  - FALSE
- Which of the following statements relating to infective endocarditis (IE) prophylaxis are TRUE?**
  - Patients with prosthetic cardiac valves are at increased risk of developing IE.
  - In the event that the dosage of antibiotics inadvertently is not administered, the procedure should be cancelled.
  - Oral amoxicillin is the antibiotic of choice to reduce bacteraemia.
  - Patients with trans-catheter implanted prostheses are not at increased risk of developing IE.
- Which of the following statements relating to prophylactic antibiotics in patients with prosthetic joint implants receiving invasive dental treatment are TRUE?**
  - In general, prophylactic antibiotics are always recommended for patients with prosthetic joint implants.
  - Dentists, patients and orthopaedic surgeons should discuss and weigh potential risks and benefits before making prescribing decisions.
  - It is not required that dentists respect the patients' specific needs and preferences when considering antibiotic before dental treatment.
  - In cases where antibiotics are deemed necessary, it is most appropriate that the orthopaedic surgeon recommend the appropriate antibiotic regimen.
- Which of the following antibiotic prescribing guidelines for treating oral and dento-facial infections are TRUE?**
  - Antibiotic therapy should be reserved for those patients with clearly established infections who have regional or systemic body manifestations.
  - In patients with life-threatening sepsis, patients should be treated with oral antibiotic therapy first before appropriate surgical interventions.
  - Chronic dental abscesses require immediate antibiotic therapy.
  - Topical or local administration of 10% Doxycycline can reduce or avoid the need for systemic antibiotic therapy as an adjunctive to scaling and root planing.

## QUESTIONNAIRE 3

### The moral compass of a dental practitioner: A balancing act between ethical principles, moral values, and professionalism. Page 20

- Ethical principles deals with key aspect of human behaviour and decision making relating to:**
  - What is 'right' or 'wrong'
  - What is 'good' or 'bad'
  - What is 'just' or 'unjust'
  - All of above
- Ethical principles are a fundamental cornerstone of professional practice that upholds the reputation of the dental profession and fosters trust between patients and practitioners. (TRUE or FALSE?)**
  - TRUE
  - FALSE
- Ethical behaviour is voluntary for a career in dentistry (TRUE or FALSE?)**
  - TRUE
  - FALSE
- Which of the following statements relating to the ethical principle of autonomy are TRUE?**
  - Refers to respecting the patients' right to self-determination
  - Is the foundational ethical principle on which CPD is based
  - The patients decision to choose treatment must be free from manipulation, coercion and deceit
  - Is the foundational ethical principle on which confidentiality is based
  - Is the foundational ethical principle on which informed consent is based
- Which of the following statements relating to the ethical principle of 'beneficence' are TRUE?**
  - Refers to 'doing good'
  - Providing care that is in the patients' best interest
  - The interests of the practitioner always takes precedence over the patients' interests
  - Professional decisions by the dentist must always consider patient values and preferences
- Which of the following statements relating to the ethical principle of 'non-maleficence' are TRUE?**
  - Avoid harming a patient intentionally or unintentionally
  - Both intentional or unintentional harm to patients can apply to laws of negligence
  - Non-maleficence includes preventing and removing harm
  - Dentists have no obligation to prevent harm
  - Non-maleficence and beneficence are non-complementary principles
- Which of the following statements relating to the ethical principle of 'justice' are TRUE?**
  - The principle of justice means 'treating all patients fairly'
  - Avoid discrimination and ensure that all patients receive an appropriate standard of care
  - Fundamental to the principle of justice is an effort to treat people who have similar needs, in a similar or identical manner
  - Recommending a product to a patient for own benefit is ethically justified
  - Be mindful of cultural backgrounds, adapting care to accommodate individual needs and preferences
- Which of the following statements relating to the ethical principle of 'veracity' are TRUE?**
  - Refers to the principle of 'excellence'
  - Involves truthful communication without deception
  - Truthfulness is the bedrock of the dentist-patient relationship
  - The obligation of 'veracity' is based on respect for patient 'fairness'
  - Is defined as 'being honest'
- Which of the following statements relating to moral values are TRUE?**
  - They are a person's most central ideas or beliefs about themselves
  - It shapes a person's behaviour and decision-making
  - They are not influenced by culture or religion
  - They are determined by professional and legal norms
  - Moral values vary between individuals
- Which of the following statements relating to professionalism are TRUE?**
  - Refers to how we ought to act or behave professionally
  - Doing what is legally, ethically and morally right
  - Professionalism does not vary between individuals
  - Involves consistent upholding high standards of professional conduct
  - CPD compliance is not mandatory by law for practitioners registered with the HPCSA

## QUESTIONNAIRE 4

### Navigating the bi-directional relationship between oral diseases and mental disorders – Clinical management implications and ethical considerations for dental practitioners. Page 24

- Which of the following general statements relating oral and mental health is TRUE?**
  - Mental health negatively impacts on oral health
  - Poor oral health can exacerbate mental illness
  - Patients with mental illnesses are generally more susceptible to oral disease
  - Maintaining good oral health is important for psychological well-being
  - All of above
- Addressing ethical challenges when dealing with patients with mental problems requires the following actions:**
  - Sensitivity
  - Understanding
  - Paternalism
  - Adherence to professional guidelines
  - Compassion
- Which of the ethical considerations arise from the fundamental ethical principle of 'Autonomy'?**
  - Informed consent
  - Compassion
  - Truth telling
  - Confidentiality
  - Fairness
- Autonomy is defined as the right to self-determination and respect the individuals' right to make informed decisions (TRUE or FALSE?)**
  - TRUE
  - FALSE
- Which of the following statements relating to ethical principle of Autonomy are TRUE?**
  - A legal guardian or healthcare proxy is required where a patients does not have the mental capacity to consent
  - A patient with dementia has the capacity to understand and consent
  - Use of medical jargon when is acceptable when communicating with patients with cognitive impairments or anxiety
  - A patients mental health status is sensitive information and must be handled with confidentiality.
  - Sharing patient information with other health care providers should be done only with the patient's consent of if legally required.
- Which of the following statements best describe the fundamental ethical principle of 'Beneficence'?**
  - Avoiding harm
  - Providing therapeutic benefit
  - Providing fair and equitable care
  - Acting in the patients best interest
  - Compassion and caring
- Which of the following statements relating to the provision of 'appropriate care' for patients with mental illnesses are TRUE?**
  - Recommending radiographic examinations that have no therapeutic benefit
  - Providing treatments that might make patients more vulnerable to stress
  - Creating a supportive and non-judgemental environment to reduce anxiety
  - Use of behaviour management techniques and sedation
  - Refer patients who exhibit behaviours that will impede good outcome to a provider that has the necessary skills
- Use of antidepressants and anxiolytics by patients with depression and anxiety often cause xerostomia and other side effects that increase the risk of dental and periodontal problems (TRUE or FALSE?)**
  - TRUE
  - FALSE
- Which of the following statements relating to the impact of oral diseases on mental health are TRUE?**
  - Tooth loss is positively associated with an increased risk of dementia in adults
  - Patients with periodontal disease have a two-fold likelihood of developing depression
  - Poor oral health manifested through visible decay can affect self-esteem
  - Dental appearance does not play any role in body image and social interaction
  - Neglected and missing teeth does not affect an individuals ability to interact socially
- Which of the following statements relating to interventions required to address oral diseases in patients with mental disorders are TRUE?**
  - The clinician should be non-judgemental in assessment of medical and dental history to allow for more information to be disclosed
  - Record all medications and be aware of possible side effects and interactions
  - Replacing amalgam restorations is of critical importance to prevent anxiety and depression
  - A customized oral hygiene plan that accommodates the patients' unique needs should be established
  - Collaborating with mental health care workers can improve treatment outcomes

## QUESTIONNAIRE 5

### Duties, responsibilities and obligations to patients, colleagues, society, and self. Page 30

1. **A dental practitioners (DP) primary duty is which of the following?**
    - a Run a business
    - b Patient care and serving the patients' best interest
    - c Infection control
    - d Record keeping
  2. **Which of the following duties relate to directly serving the patients' best interest?**
    - a Providing competent high quality care
    - b Ensuring patient safety
    - c Upholding informed consent and confidentiality
    - d Minimizing environmental degradation
    - e Advertising on social media
  3. **The rationale behind patient care duties is based on which of the following ethical principles?**
    - a Integrity
    - b Fairness
    - c Beneficence
    - d Autonomy
    - e Non-maleficence
  4. **Which of the following statements regarding informed consent are TRUE?**
    - a Is rooted in the principle of autonomy
    - b In non-voluntary
    - c Absence of cognitive impairment is a prerequisite for informed consent
    - d Is an ethical and legal duty
    - e It is a patients right to make informed decisions about their treatment
  5. **Which of the following statements relating to confidentiality and privacy of personal information are TRUE?**
    - a Is a legal obligation
    - b Is central to trust between patient and dentist
    - c Personal information can only be shared with someone in the healthcare team if the patient consents
    - d Dental practices are not legally required to protect personal information during data capture and storage processes
    - e The purpose of the POPI Act is to safeguard the privacy of personal information
  6. **Which of the following statements relating to continuous professional development (CPD) are TRUE?**
    - a Maintaining and updating professional competence is a legal requirement
    - b CPD requirements are 30CEUs per 12 month period of which 5CEUs should be for ethics, human rights or law
    - c All CEUs are valid for a period of 5 years
    - d Issuance of a CPD certificate is mandatory
    - e Accredited international professional meetings are recognized for CPD purposes
  7. **Which of the following principles relating to dental practitioners duties towards colleagues and peers are TRUE?**
    - a Collaboration and teamwork
    - b Timely and accurate referrals
    - c Patient consent for sharing of personal information for referral to a specialist is not required
    - d Report violations of patient rights
    - e Report impairment due to substance abuse
  8. **Which of the following statements relation to dental practitioners social responsibilities are TRUE?**
    - a Active participation in oral health education campaigns to promote oral health awareness
    - b Avoid wasteful and inefficient practices
    - c Maximizing environmental degradation
    - d Non-disclosure of commercial relationships
  9. **Dental practitioners have a personal and professional responsibility to:**
    - a Prioritize selfcare
    - b Manage workload stress
    - c Maintain work-life balance
    - d Seek physical and mental health support when needed
    - e All of above
  10. **Which of the following are legal and regulatory frameworks that govern the profession and which dental practitioners are expected to adhere to?**
    - a Indemnity cover
    - b Licensing requirements
    - c Continuing education
    - d Compliance with public health guidelines
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