

Standard for Ozone Therapy

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V1

1. Standard Scope

1.1 This standard applies to DOH licensed healthcare facilities (“HFs”) and healthcare professionals (“HCP”) by DOH to provide Ozone therapy services.

1.2 Ozone therapy plays a major role in the human body. The benefits are listed below:

1.2.1 Decreases or eliminates the pain.

1.2.2 Treats inflammation and decreases its symptoms.

1.2.3 Boosts the immune system and activates the antioxidant system.

1.2.4 Clears and eliminates toxins and waste products resulting from variable metabolic reaction in the body.

1.2.5 Improves blood circulation.

1.3 Adults (≥18 years old) are eligible for the treatment, according to their medical problems.

2. Definitions and Abbreviations

No.	Term / Abbreviation	Definition
2.1	DoH	Department of Health
2.2	HCP	Healthcare Professionals
2.3	HF	Healthcare Facility
2.4	Ozone therapy	It is a type of medical treatment where medical ozone gas is used for treating various medical illnesses and diseases.

3. Standard Requirements and Specifications

3.1 Healthcare Facility Requirements.

3.1.1 Facility Licensing

3.1.1.1 All HFs providing Ozone therapy shall adhere to the UAE Laws and Abu Dhabi standards and regulations for providing Ozone Therapy services in Abu Dhabi.

3.1.1.2 HF aiming to provide Ozone therapy, shall comply with the DoH licensure requirements.

3.1.2 Facility Infrastructure and services provided:

3.1.2.1 Ozone therapy services shall be provided in HF that are licensed by DoH to provide these services.

3.1.2.2 The HF should meet the HF requirement as per the DoH Health Facility Guidelines (Health Facility Briefing & Design - Complementary and Alternative Medicine Centre).

3.1.3 Staffing Requirements

- 3.1.3.1 All HCP should hold an active DoH license as per the Professionals Qualification Requirements (PQR) and work within their scope of practice.
- 3.1.3.2 The HF must ensure that its healthcare professionals are aligned with the licensed healthcare services and staffing requirements meet the patient load and age group.
- 3.1.3.3 Ozone therapy should be provided by a consultant/specialist physician privileged to provide ozone therapy with its related application
- 3.1.3.4 Physicians should have an advanced life support certificate according to age group.

3.1.4 Clinical services

- 3.1.4.1 Scope: Below are some of the conditions that may benefit from the possible use of Ozone Therapy

- 3.1.4.1.1 Chronic viral infection like hepatitis
- 3.1.4.1.2 Disinfecting wounds and chronic ulcer
- 3.1.4.1.3 Help in breathing disorders like Chronic obstructive pulmonary disease (COPD).
- 3.1.4.1.4 Reducing the risk of complications from diabetes, such as diabetic foot ulcers.
- 3.1.4.1.5 Boosting the immune system to combat infections and illnesses better.
- 3.1.4.1.6 Alleviating pain in conditions like fibromyalgia and arthritis.
- 3.1.4.1.7 Supporting neurological health in conditions like multiple sclerosis and Alzheimer's disease.

- 3.1.4.2 General requirements:

- 3.1.4.2.1 The HF should have an evidence based clinical practice guidelines/ protocols related to ozone therapy including but not limited to the following elements: indication, application routes, concentration, aseptic precautionary measures, therapeutic ranges for the use of ozone, contraindications, adverse effect and its management, toxicity.
- 3.1.4.2.2 The HF should develop policies and procedures in accordance with the legislations in force in the UAE and the regulations approved by the DoH; Including but not limited to:
 - 3.1.4.2.2.1 Patient screening.
 - 3.1.4.2.2.2 Patient registration.
 - 3.1.4.2.2.3 Patient eligibility criteria.
 - 3.1.4.2.2.4 Patient assessment
 - 3.1.4.2.2.5 Patient education and informed consent.
 - 3.1.4.2.2.6 Patient health record.
 - 3.1.4.2.2.7 Infection control measures and hazardous waste management.
 - 3.1.4.2.2.8 Clean needle technique

- 3.1.4.2.2.9 Patient Safety and Occupational Health & Safety management
- 3.1.4.2.2.10 Incident reporting
- 3.1.4.2.2.11 Patient privacy and confidentiality.
- 3.1.4.2.2.12 Medication management, Storage and Dispensing.
- 3.1.4.2.2.13 Emergency action plan.
- 3.1.4.2.2.14 Fire safety.
- 3.1.4.2.2.15 Patient discharge/transfer.
- 3.1.4.2.2.16 Equipment maintenance services.
- 3.1.4.2.2.17 Business continuity plan
- 3.1.4.3 Access
 - 3.1.4.3.1 Patients seen at Ozone therapy facility through referral by healthcare facility e.g. primary health clinic and specialty clinic with referral request/medical report.
- 3.1.4.4 Contraindications
 - 3.1.4.4.1 Ozone allergy or individual intolerance to ozone
 - 3.1.4.4.2 Favism (glucose-6-phosphate-dehydrogenase deficiency; G6PD)
 - 3.1.4.4.3 Pregnancy
 - 3.1.4.4.4 Hyperthyroidism
 - 3.1.4.4.5 Patients receiving anticoagulant drugs or with blood clotting disorders like hemophilia, thrombocytopenia, coagulopathy.
 - 3.1.4.4.6 Severe cardiovascular diseases like arrhythmia, hypertensive crisis, recent myocardial infarction
 - 3.1.4.4.7 Acute alcoholism
 - 3.1.4.4.8 Sickle cell anemia
 - 3.1.4.4.9 Patients receiving copper or iron therapy, or with hemochromatosis.
 - 3.1.4.4.10 Acute and chronic bleeding tendencies, conditions after hemorrhage
 - 3.1.4.4.11 Seizures/convulsions or mental diseases in the acute stage
 - 3.1.4.4.12 Poorly controlled diabetes
 - 3.1.4.4.13 Terminal states
 - 3.1.4.4.14 Citrus allergy
 - 3.1.4.4.15 Patients being treated with Angiotensin-converting enzyme (ACE) inhibitors.
 - 3.1.4.4.16 Severe acute leukemia.
 - 3.1.4.4.17 Hemophilia

3.1.4.5 Interactions

3.1.4.5.1 Vitamins and ozone: During the treatment with ozone, it is necessary to suspend all the antioxidant supplements that contain vitamin C and vitamin E. The presence of these compounds in high concentrations in the blood interferes with the ozone's action as an oxidant agent and therefore the good course of the therapy. It is important to communicate to the patient that s/he must not consume excessive quantities of foods very rich in these vitamins. Consequently, vitamins or antioxidants should be given before or after the ozone therapy but never during the treatment.

3.1.4.5.2 Drug interactions and Ozone: Drug interactions with Ozone therapy should be considered.

3.1.4.6 Assessment and patient care

3.1.4.6.1 Before starting ozone therapy, the patient's assessment should include the following laboratory tests, and the healthcare facility should have guidelines on the frequency of conducting those tests that align with national and federal laws, regulations, and policies:

3.1.4.6.1.1 Human Immunodeficiency Viruses (HIV),

3.1.4.6.1.2 Hepatitis B Virus (HBV),

3.1.4.6.1.3 Hepatitis C Virus (HCV),

3.1.4.6.1.4 Thyroid Function Test (TFT) and

3.1.4.6.1.5 G6PD deficiency tests

3.1.4.6.2 The nurse is required to check the patient's vital signs (blood pressure, temperature, weight, height, etc.).

3.1.4.6.3 The patient checks into the treatment room to see the physician and to receive medical care.

3.1.4.6.4 The frequency of treatment depends on the type of medical disease and the treatment protocol.

3.1.4.6.5 The Licensed healthcare professional bears the responsibility of maintaining a comprehensive record about their patient, including pursuit of diagnostic tests and consultations in a timely fashion, and collaborating with other healthcare professionals.

3.1.4.6.6 Licensed healthcare professionals shall ensure a safe, clean, and hygienic environment and take appropriate actions and precautions to ensure infection control and act in accordance with infection control guidelines.

3.1.4.6.7 Licensed healthcare professional should assist the patients in assessing the possible benefits and risks of other types of treatment, helping them to consider conventional

diagnostic procedures; routine screening tests etc., acknowledging the usefulness of such procedures at appropriate times, even for those who may wish to avoid conventional treatment.

3.1.4.6.8 Application of Ozone Therapy

3.1.4.6.8.1 Healthcare workforce should comply with DoH healthcare workforce bioethics guidelines.

3.1.4.6.8.2 Application of ozone therapy requires a written informed consent, followed by strict measures of asepsis and sterility.

3.1.4.6.8.3 Application Routes for Ozone Therapy:

3.1.4.6.8.3.1 Major Autohemotherapy.

3.1.4.6.8.3.2 Minor Autohemotherapy.

3.1.4.6.8.3.3 Ozone Injection (subcutaneous)

3.1.4.6.8.3.4 Ozone topical application (Ozone water and Ozone cream).

3.1.4.6.8.3.5 Ozone Bag.

3.1.4.6.8.3.6 Ozone Dressing.

3.1.4.6.8.4 Application route **prohibited**.

3.1.4.6.8.4.1 Direct intravenous injection of ozone

3.1.4.6.8.4.2 Inhalation route: The inhalation route is absolutely prohibited because of being highly toxic.

3.1.4.6.8.4.3 Ozonized Saline Solution

3.1.4.6.9 As with any other medical practice, all the material used in ozone therapy that is in contact with the patient's tissue or fluids must be either disposable after only one use or be sterilized (ex. surgical equipment).

3.1.4.7 Continuity of care

3.1.4.7.1 Healthcare facilities should ensure co-ordination of care with other professionals.

3.1.4.7.2 The Licensed healthcare professional is obligated to refer to a specialist when there is any doubt about the patient's diagnosis or response to therapy. A referral must not be withheld or discouraged when the patient asks for a second opinion.

3.1.4.8 Patient rights and responsibilities

3.1.4.8.1 Healthcare facilities must Comply with the Ministerial Resolution No. (14) of 2021 on the Patient's Rights & Responsibilities Charter and deliver culturally and socially relevant patient information and education.

4.Key stakeholder Roles and Responsibilities

- 4.1 Licensed Healthcare Professionals: All DoH licensed healthcare professionals involved in Ozone therapy must provide clinical services in accordance with the requirements of this Standard, and the relevant DoH Standards.
- 4.2 Licensed Healthcare Facilities: All DoH licensed healthcare facilities should comply with the requirement of this standard, and the relevant DoH Standards.
- 4.3 Patient: should comply with their responsibilities as per Ministerial Resolution No. (14) of 2021 on the Patient's Rights & Responsibilities Charter

5.Monitoring and Evaluation

- 5.1 Patient experience (Target **≥90**) on a quarterly basis.
- 5.2 Percentage of reported complications (e.g., Air embolism, Myocardial infarction, Irritation, and damage to the and vaginal mucus membrane and Increases risk of infections) (Target **≤0.5 per 100,000** treatments) on a monthly basis.
- 5.3 Healthcare facility should comply with Jawda indicators guidelines and achieved Adjusted composite score **>5** (Specialized and General Hospitals)
- 5.4 The Healthcare facility maintains at least **3** Diamonds of Muashir Ranking (or equivalent score in the new Muashir Ranking) as applicable.

6.Enforcement and Sanctions

DoH may impose sanctions in relation to any breach of requirements under this Standard in accordance with the disciplinary regulation of the healthcare sector.

7. Relevant Reference Documents			
No.	Reference Date	Reference Name	Relation Explanation / Coding / Publication Links
1	April 2007	Policy for Infection Control in the HCFs	https://www.doh.gov.ae/en/resources/standards
2	May 2007	Medical Waste Management in Health Care Facilities	https://www.doh.gov.ae/en/resources/standards
3	February 2008	Patient Rights and Responsibilities	https://www.doh.gov.ae/en/resources/standards
4	August 2011	Traditional, Complementary and Alternative Medicine Scope of Practice	https://www.dha.gov.ae/uploads/112021/8ffadaa8-95d2-42e8-8c9a-f75fcc532873.pdf
5	December 2012	Ozone in medicine: the low dose ozone concept- Guidelines and treatment strategies	https://www.tandfonline.com/doi/full/10.1080/01919512.2012.717847
6	March 2013	MADRID DECLARATION ON OZONE THERAPY	https://ozonesociety.s3.eu-west-2.amazonaws.com/PDF+Files/Ozone+Therapy+Madrid_declaration.pdf
7	Jan 2016	Guidelines for patient consent	https://www.doh.gov.ae/en/resources/guidelines
8	April 2016	Ozone in Medicine: Clinical Evaluation and Evidence Classification of the Systemic Ozone Applications, Major Autohemotherapy and Rectal Insufflation, according to the Requirements for Evidence-Based Medicine	https://www.tandfonline.com/doi/full/10.1080/01919512.2016.1191992
9	July 2018	Ozone therapy as a primary and sole treatment for acute bacterial infection: case report	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6178636/
10	2019	Part B – Health Facility Briefing & Design 70 Complementary and Alternative Medicine Centre	https://stem.doh.gov.ae/HealthFacilityGuidelines/ViewPDF/ViewIndexPDF/DOH_part_b_complementary_alternative_medicine_centre

11	March 2020	MADRID DECLARATION ON OZONE THERAPY	https://isco3.org/madrid-declaration-on-ozone-therapy-3rd-edition-isco3/
12	November 2020	Standards for Outpatient Complementary and Alternative Medicine (CAM)	https://dhcc.ae/gallery/DHCR%20complimentary%20and%20Alternative%20Medicine%20(CAM)%20Standards%20SD-HCO-001-01.pdf
13	2021	Ministerial Resolution No. (14) of 2021 on the Patient's Rights & Responsibilities Charter	https://www.ehs.gov.ae/App_Content/Legislations/EHS-LAW-EN-1/files/basic-html/page1.html
14	August 2021	Ozone in Medicine. The Low-Dose Ozone Concept and Its Basic Biochemical Mechanisms of Action in Chronic Inflammatory Diseases	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8346137/
15	2022	Unified Healthcare Professional Qualification Requirements	https://www.doh.gov.ae/en/pqr
16	March 2023	STANDARD FOR CLINICAL PRIVILEGING OF HEALTHCARE WORKFORCE AND CLINICAL SERVICES	https://www.doh.gov.ae/en/resources/standards
17	May 2024	COMPLEMENTARY MEDICINE SERVICES	https://dha.gov.ae/uploads/122021/673d4ceb-e2d0-4546-9a61-942caf29ea26.pdf
18	May 2024	Ozone World Congress	http://ozongesellschaft.de/aim_and_state_of_the_art_57.htm
19	May 2024	DOH Healthcare Workforce Bioethics Guidelines	https://www.doh.gov.ae/en/resources/guidelines
20	May 2024	Jawda Indicators Submission Guidelines	https://www.doh.gov.ae/en/programs-initiatives/muashir/jawda-indicators-submission-guidelines
21	June 2024	Ozone therapy: an overview of pharmacodynamics, current research, and clinical utility	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5674660/

22	June 2024	Ozone therapy in COVID-19: A narrative review	https://doi.org/10.1016/j.virusres.2020.198207.
23	June 2024	The Relationship between Ozone and Human Blood in the Course of a Well-Controlled, Mild, and Transitory Oxidative Eustress	https://doi.org/10.3390/antiox10121946.
24	June 2024	Ozone therapy: clinical and basic evidence of its therapeutic potential.	https://doi.org/10.1016/J.ARCMED.2007.07.005.
25	June 2024	Ozone in the adjunct medical treatment. The round personality of a molecule with hormetic properties.	https://doi.org/10.1177/09603271231218926.