

ARROWHEAD REGIONAL MEDICAL CENTER

HYPERBARIC OXYGEN THERAPY POLICIES AND PROCEDURES

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**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 101 Issue 1
Page 1 of 2**

SECTION: ADMINISTRATIVE

SUBJECT: STAFFING POLICY

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

- I. It is the policy of Arrowhead Regional Medical Center that Hyperbaric Oxygen (HBO) is staffed appropriately to meet service requirement. Staffing shall be according to the following patient care variables in addition to competence of the HBO staff.:
 - A. Functional Status
 - B. Medical Acuity
 - C. HBO Census

PROCEDURES

- I. Staffing Pattern for HBO
 - A. Standard operating hours shall be Monday-Friday, 0700-1530. Closed on holidays
 - B. Weekends, emergencies or after-hours HBO therapy shall be scheduled and assigned as clinically necessary by the department manager or a designee on a rotating basis.
 - C. Schedule daily HBO census of 5 or less patients requires 1 therapist (FTE).
 - D. Schedule daily HBO census of 6 or more patients requires 1.5 - 2 therapists (FTEs).
 - E. Weekend and after hours staffing on an emergent basis only.
 - F. Hours of operation may be adjusted for meeting service requirements.
 - G. Physicians practicing within HBO and who are qualified per hospital guidelines to care for patient's receiving Hyperbaric Oxygen Therapy will make the final determination regarding a patient's need for weekend or holiday therapy.

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

SUBJECT: STAFFING POLICY

HBOT Policy No. 101 Issue 1
Page 2 of 2**APPROVAL DATE:**

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/01/2023</u>	<u>Critical Care Committee</u> Applicable Administrator, Hospital or Medical Committee
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<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 101 Issue 2 Staffing Policy**EFFECTIVE:** 11/8/2023**REVISED:** N/A**REVIEWED:** N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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Standard Practice Policies and Procedures**

**Policy No. 102 Issue 1
Page 1 of 2**

SECTION: ADMINISTRATIVE

SUBJECT: HYPERBARIC OXYGEN THERAPY TEAM

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center that the Hyperbaric Oxygen (HBO) Therapy team shall be comprised of a Medical Director, Physicians, & HBO staff. Staff who provide HBO Therapy will be trained at an Undersea Medicine and Hyperbaric Society (UHMS) approved course for Hyperbaric Oxygen Therapy.

Procedures

- I. Physician Services
 - A. Physicians requesting practice privileges in HBO will be evaluated by the Medical Staff. They must be licensed to practice medicine in the State of California.
 - B. All Physicians requesting practice privileges in the art of Baromedicine (Hyperbaric Oxygen Therapy) must have completed an UMHS approved course in Hyperbaric Medicine with a minimum of 60 hours of instruction. Applicant with prior experience in the administration of Hyperbaric Oxygen (HBO) therapy may submit proof of having attended a UMHS approved course or provide documentation of same from another institution. Applicants who have completed a one-year military fellowship in the Air Force Aerospace and Hyperbaric Medicine will also be considered.

- II. Medical Director
 - A. The Medical Director shall be a physician, licensed to practice medicine in the State of California.
 - B. The Medical Director shall have completed an accredited course in the fundamentals of HBO Therapy.
 - C. The Medical Director shall be required to perform and provide documentation of appropriate CME units in HBO Therapy are required under Federal and State guidelines.

- III. HBO Staff
 - A. The HBO Supervisor will be credentialed in the use of HBO Therapy by an accredited course within 90 days of assignment
 - B. HBO staff shall hold a professional license and be employees of the hospital, and may include the following:
 1. Physical Therapists
 2. Respiratory Therapists
 3. Registered Nurses

SUBJECT: HYPERBARIC OXYGEN THERAPY TEAM

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4. Licensed Vocational Nurses
 5. (HBO) Dive Technicians
 6. Physician Assistants
- C. All HBO staff will complete an UMHS accredited course in the fundamentals of HBO Therapy before being allowed administer HBO treatments.

REFERENCES: Title 22 - 70559**DEFINITIONS:** N/A**ATTACHMENTS:** N/A**APPROVAL DATE:**

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 102 Issue 2 Wound Care Services Team**EFFECTIVE:** 11/8/2023**REVISED:** N/A**REVIEWED:** N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 103 Issue 1
Page 1 of 2**

SECTION: ADMINISTRATIVE

SUBJECT: DEMONSTRATION OF COMPETENCY

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Hyperbaric Oxygen (HBO) that the Employee Skills Checklist shall be completed by all new employees within the first thirty days of hire. Each new member of HBO shall be oriented to the department, its scope of services, mission and goals, policies and procedures and functional responsibility to the organization as a whole.

PROCEDURES

- I. Initial competency validation is begun during orientation and is completed within 90 days. Variances to these time frames are documented in the evaluation along with an action plan for completion. Annual competency validation and mandatory training occurs throughout the year and is documented in the annual performance appraisal.
- II. Annual HBO specific competencies include:
 - A. Dressing Removal Competency
 - B. HBO therapy Competency
 - C. ECG in HBO Competency
 - D. HBO Emergency Procedures Competency
 - E. Smoke Hood Competency
 - F. Transcutaneous Oximetry (TcPO₂) Competency
 - G. Accucheck Competency
- III. All skill will be observed/tested by HBO Supervisor or assigned staff designee.
- IV. Failure to demonstrate competency shall result in immediate feedback by the Supervising staff.
- V. Employee shall then be required to re-demonstrate performance of skill following training.
- VI. If competency is not achieved upon the second attempt to complete the skill, employee shall be scheduled for further in-servicing until successful completion of the skills. The employee will not be allowed to perform said skill on patients until completion.
- VII. Upon completion of all required skills, the HBO Supervisor or a designee will complete the checklist, which will be kept in employee's personnel file.

SUBJECT: DEMONSTRATION OF COMPETENCY

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Page 2 of 2

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
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	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 103 Issue 2 Demonstration of Competency

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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**Policy No. 200 Issue 1
Page 1 of 2**

SECTION: ENVIRONMENT OF CARE

SUBJECT: ENVIRONMENT OF CARE

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Ambulatory Services Wound Clinic to develop, implement, test, evaluate, and improve measures to ensure proper handling of protected health information. Ambulatory Services Wound Clinic shall comply with all ARMC HIPAA (Health Insurance Portability and Accountability Act) policies and procedures.

PROCEDURES

- I. Therapeutic, diagnostic, consultative, and educational Wound Care Services shall be provided in a location in which sufficient room is available for the provision of planned and, if necessary, emergency services.
- II. An environment that fosters a positive self-image for the patient and preserves her/his dignity shall be provided.
 - A. Areas in which services are provided shall be maintained in a clean, well-ventilated, and well-lighted manner.
 - B. Physical surroundings (furniture, artwork, bulletin boards, and computer hardware) shall promote a professional environment.
 - C. Informational and educational materials shall be developed, prepared, and offered in a manner which promotes and maintains patient confidentiality, compliance and understanding.
 - D. Patient sensitive information (e.g., paper medical records, oral communication of information, and information from a data management system viewed on a computer screen,) shall be kept secure to prevent access by unauthorized personnel.
- III. The physical environment shall provide appropriate privacy for patients.
 - A. Privacy screens and/or curtains, clothing (e.g., gowns or drapes), and procedure room doors shall be used to provide appropriate patient privacy prior to, during, and following the provision of services.
 - B. Patient/family education and/or consultation shall be conducted in a location and in a manner which assures that sensitive information/conversation cannot be overheard by unauthorized personnel.
- IV. Patient confidentiality topics shall be department and service specific, protecting physical privacy, confidential medical information, and educational needs.

SUBJECT: ENVIRONMENT OF CARE

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- A. Following all non-invasive vascular tests, the patient data will be printed and labeled with the patient information and bar code label for the appropriate test.
- B. The test will be sent to Health Information Management to be scanned into the patient's medical record.
- C. The exam will then be deleted from the monitor or storage devise.

REFERENCES: ARMC Standard Practice Manual, Sections 800, 900 and 1000**DEFINITIONS:** N/A**ATTACHMENTS:** N/A**APPROVAL DATE:**

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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 200 Issue 2 Environment of Care**EFFECTIVE:** 11/8/2023**REVISED:** N/A**REVIEWED:** N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 201 Issue 1
Page 1 of 3**

SECTION: ENVIRONMENT OF CARE

SUBJECT: INFECTION CONTROL

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Hyperbaric Oxygen (HBO) Therapy to establish standards of safety for staff, patients, and visitors by controlling the spread of infectious disease organisms. HBO shall comply with all ARMC Infection Control Manual policies and procedures.

PROCEDURES

- I. General Precautions
 - A. HBO Staff shall observe infection control procedures according to ARMC Infection Control Manual. This shall include, but is not limited to:
 1. Hand washing before and after contact with each patient.
 2. The use of PPE during wound care treatment procedures.
 3. The care and use of equipment for and between patients.
- II. Hyperbaric Oxygen Chamber - Care and Cleaning
 - A. Extreme caution shall be exercised when cleaning the Hyperbaric Oxygen (HBO) chambers to avoid scratches, nicks, or abrasions to the acrylic cylinders.
 1. Never use a dry cloth to remove dust.
 2. Never allow any liquids or solvents, which are not specifically approved to come into contact with the acrylic chambers.
 3. Solvents or cleaners containing alcohol in any form must NEVER be used due to danger of spontaneous combustion.
 - B. General Cleaning
 1. Cleaning of the HBO chambers should be done following each treatment.
 - a. Dust the chamber exterior surfaces with a water moistened soft, lint-free cloth.
 - b. Clean and disinfect the interior surfaces of the chamber by washing with hospital approved and manufacturer approved disinfectant using a soft, lint-free cloth. Rinse with water using a soft, lint-free cloth.
 - c. Clean and disinfect the mattress pad in the same manner.
 2. Care between Patients
 - a. Cleaning/disinfecting of the chambers/mattress etc. should be done following contamination by urine, stool, blood, or other body secretions. Accumulation of any fluids is not allowed under any circumstances.

- b. The gurney mattress should be wiped down with hospital approved disinfectant between each patient prior to changing linen. Approved hospital disinfectant must be alcohol and oil free due to the possibility of increasing intra-chamber fire hazard.
- c. The chamber cleaned and disinfected of the interior surfaces of the chamber by washing with hospital approved and manufactured approved disinfectant using a soft lint free cloth. Rinse chamber with water using a soft, lint free cloth.

III. Linen

- A. In order to minimize the potential of fire hazards in the HBO chambers, linen supplies, which are used in the chambers, are to be made of 100% cotton. Pillows will be Sechrist Manufacturing Hyperbaric Oxygen pillows.
 1. Each patient receiving HBO treatments will be assigned linen: pillows, pillowcases, and sheets.
 2. Patient's linens will be folded and place in a plastic bag clearly marked with the respective patient's name and stored for individual use during treatments.
 3. All patient's linens will be replaced with clean linen as follows:
 - a. After every treatment.
 - b. Anytime soiling or contamination of body fluids or other liquids occurs.
 4. Pillows will be kept for the patient (as above) until the course of HBO Therapy ends.
 5. Pillows that become soiled with blood, urine, feces, or other body fluids will be disinfected in accordance with hospital policy.
 6. Sechrist HBO pillows will be wiped clean with a hospital approved disinfectant between patients and as needed for soiling.

IV. Isolation Procedures

- A. HBO staff will provide extra precautions for patients who require isolation in order to protect the patient, the public, and other staff members from cross contamination. The use of gowns, gloves, masks, and other equipment will be utilized in accordance with standard hospital policy and procedure ARMC Infection Control Policy 402. HBO staff who are treating isolation patients with Hyperbaric Oxygen Therapy will adhere to the following procedures, in conjunction with established policy for Isolation Precautions:
 1. The patient will wear 100% cotton gowns provided by the Wound Care Service and will change clothing in his/her hospital room.
 2. The patient who requires Respiratory Isolation will wear a surgical mask during transport to the Hyperbaric Oxygen Chamber room. The surgical mask will be removed and disposed of in a contaminated waste receptacle prior to the patient entering the HBO chamber.
 3. Upon completion of therapy, the patient will be transported back to his/her room wearing a clean surgical mask.
 4. Used linens and gowns will be bagged according to hospital policy for contaminated linen and returned to the HBO department. Chamber pillows will be returned to the HBO room, and sterilized according to the policy for chamber disinfecting, Section C.
 5. If patient uses or change in changing room, curtains must be changed and dated.

V. Disinfecting of the chamber/gurney

- A. Wash all exposed surfaces of the interior of the chamber, the transport gurney, the shuttle, and mattress with hospital approved disinfectant. Disinfectant solution must be alcohol and oil free.
- B. Rinse with a soft, lint-free cloth moistened with water.

REFERENCES: SECHRIST USER MANUEL

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 201 Issue 2 Infection Control

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 300 Issue 1
Page 1 of 10**

SECTION: PATIENT CARE

SUBJECT: ORDERING HYPERBARIC OXYGEN THERAPY

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Ambulatory Services Wound Clinic that delivery of any services requires a HBO certified physician's order prior to implementation. Hyperbaric Oxygen (HBO) Therapy orders are completed in the Electronic Health Record (EHR). Verbal or telephone orders may only be obtained in emergency situations pursuant to ARMC Department of Nursing policy 530.00 and in accordance with Medical Staff Privileges/Rules and Regulations.

PROCEDURES

- I. Therapy Criteria - Prior to the initiation of HBO Treatments, the patient will be assessed for qualifying diagnoses/conditions. Commencement of HBO Therapy may begin once the following criteria are met:
 - A. A Physician's electronic order is obtained.
 - B. A Complete history and physical, which support the medical necessity for HBO treatments, is documented.
 - C. A consent for HBO treatments signed by patient or responsible party if patient is unable to sign. (See Attached)

- II. Physician Orders for HBO - The prescribing physician will include the following on the electronic orders prior to the commencement of HBO treatments:
 - A. Frequency of Treatments
 - B. Treatment pressure listed in Absolute Atmosphere (ATA)
 - C. Treatment duration
 - D. Number of treatments to be given
 - E. Pre-treatment medication as indicated
 - F. Qualifying medical condition

- III. Consent for Hyperbaric Oxygen Therapy - Prior to the initial HBO treatment, Consent for Hyperbaric Oxygen Therapy must be signed. Signature may be obtained for the consent from:
 - A. The patient who is able to make his/her own medical decision
 - B. The responsible party for patients who are minors or are unable to make medical decisions on their own behalf.
 - C. The HBO Physician in an emergent situation when loss of life or limb is eminent, and the patient is not able to sign for his/herself

REFERENCES: Hyperbaric Oxygen Therapy Indications, Undersea & Hyperbaric Medical Society, 2008

DEFINITIONS: N/A

ATTACHMENTS: Attachment A - Informed Consent for Surgery or Special Diagnostic or Therapeutic Procedures (English and Spanish)

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u></u>	<u>Board of Supervisors</u> <small>Approved by the Governing Body</small>

REPLACES: Ambulatory Services Wound Clinic WC 300 Issue 2 Ordering Hyperbaric Oxygen Therapy

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A

To (name):	
1	This form is called an "Informed Consent Form." Its purpose is to inform you about the surgical, diagnostic or therapeutic procedure that your physician has recommended that you undergo. You should read the form carefully and ask questions before you decide whether or not to give your consent for this operation or procedure and for any anesthetic or sedation that is needed.
2	Your attending physician is Dr. _____ . He/She had recommended the following operation(s) or procedure(s): _____ which means _____ _____ _____
3	Upon your authorization and consent, the operation or procedure identified above, together with any different or further procedures which, in the opinion of your attending physician or surgeon, may be indicated due to any emergency, will be performed on you. The operation or procedure will be performed by Dr. _____ (or in the event that this physician is unable or unavailable to perform or complete the procedure, a qualified substitute physician or surgeon) together with associates and assistants from the medical staff of Arrowhead Regional Medical Center (ARMC) to whom your physician or surgeon may assign designated responsibilities, including competent Medical Residents. Any Resident involved in your procedure will be supervised by his/her Attending Physician. The persons in attendance for the purpose of performing specialized medical services, such as anesthesia, radiology or pathology, are independent medical practitioners, and are not agents, servants, or employees of ARMC. Any practitioners who are not physicians involved in your procedure only perform duties within their scope of practice and as defined in their hospital privileges.
4	You are also consenting to the possible placement of invasive physiologic monitors, including but not limited to: A-line (arterial line), TEE (trans esophageal echocardiogram), CVP (central venous pressure line) and PAC (pulmonary artery catheter) for anesthetic management during and after your surgical procedure.
5	You are also authorizing the use of anesthesia or deep sedation or moderate sedation. (a) For patients having Anesthesia: An Anesthesiologist employed by Inland Empire Anesthesia Medical Group will provide anesthesia: Anesthesia to be used: Circle one: MAC / General / Regional (b) For patients having Deep Sedation: An Emergency Medicine Physician employed by California Emergency Physicians will be supervising your deep sedation. (c) For patients requiring moderate sedation: Dr. _____ will order and supervise your moderate sedation.

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

**INFORMED CONSENT FOR SURGERY OR SPECIAL
DIAGNOSTIC OR THERAPEUTIC PROCEDURES**



LGLALCN

6	<p>All operations and procedures carry the risk of unsuccessful results, complications, injury, or even death, from both known and unforeseen causes, and no warranty or guarantee is made as to result or cure. You have the right to be informed of:</p> <ul style="list-style-type: none">• The nature of the operation or procedure, including other care, treatment or medications;• Potential benefits, risks or side effects of the operations or procedure, including potential problems that might occur during recuperation;• The likelihood of achieving treatment goals;• Reasonable alternatives and the relevant risks, benefits and side effects related to such alternatives, including the possible results of not receiving care or treatment; and• Any independent medical research or significant economic interests your doctor may have related to the performance of the proposed operation or procedure. <p>Except in cases of emergency, operations or procedures are not performed until you have had the opportunity to receive this information and have given your consent. You have the right to give or refuse consent to any proposed operation or procedure at any time prior to its performance.</p>
7	<p>If your doctor determines that there is a reasonable possibility that you may need a blood transfusion as a result of the surgery or procedure to which you are consenting, your doctor will inform you of this and will provide you with information concerning the benefits and risks of the various options for blood transfusion, including pre-donation by yourself or others. You also have the right to have adequate time before your procedure to arrange for pre-donation, but you can waive this right if you do not wish to wait.</p> <p>Transfusion of blood or blood products involves certain risks, including the transmission of disease such as hepatitis or Human Immunodeficiency Virus (HIV), and you have a right to consent or refuse consent to any transfusion. You should discuss any questions that you may have about transfusion with your doctor.</p>

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

**INFORMED CONSENT FOR SURGERY OR SPECIAL
DIAGNOSTIC OR THERAPEUTIC PROCEDURES**



LGLALCN

CONSENT FOR BLOOD TRANSFUSION

Your signature below indicates that:

1. You have received a copy of the brochure, *A Patient's Guide to Blood Transfusion*.
2. You have received information from your doctor concerning the risks and benefits of blood transfusion and of any alternative therapies and their risks and benefits.
3. You have had the opportunity to discuss this matter with your doctor, including pre-donation.
4. Subject to any special instructions listed below, you consent to such blood transfusion as your doctor may order in connection with the operation or procedure described in this consent form.

Special Instructions: _____

(Describe here any specific instructions for patient's blood transfusion, e.g., pre-donation, direct donation, etc.)

Date: _____ Time: _____ AM / PM

Signature: _____
(patient/legal representative)

If signed by someone other than patient, indicate relationship: _____

Print name: _____
(legal representative)

- | | |
|----|--|
| 8 | The operation or procedure will be performed at Arrowhead Regional Medical Center. The hospital maintains personnel and facilities to assist attending physicians in the performance of the operation or procedure in question. |
| 9 | By your signature below you acknowledge that there is the potential that observers associated with health care training programs, health care professionals or health care products may have occasion to be present during your procedure. |
| 10 | By your signature below, you authorize the pathologist to use his/her discretion in the disposition or use of any member, organ, or other tissue removed from your person during the operation(s) or procedure(s) identified above. |

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

**INFORMED CONSENT FOR SURGERY OR SPECIAL
DIAGNOSTIC OR THERAPEUTIC PROCEDURES**



LGLALCN

11 You are making a decision whether or not to consent to the performance of the operation or procedure that is described above and the associated anesthetic or sedation. Your signature on this informed consent indicates: 1) that you have read and understand the information provided in this form; 2) that you have been verbally informed about the operation or procedure; 3) that you had a chance to ask questions; 4) that you have received all of the information you desire concerning the operation or procedure; and 5) that you authorize and consent to the performance of the operation or procedure

INTERPRETER'S STATEMENT

I have accurately and completely read the foregoing document to *(patient or patient's legal representative)* _____
in the patient's or legal representative's primary language *(identify language)* _____
_____. He/she understood all of the terms and conditions and acknowledged his/her agreement by signing the document in my presence.

Date: _____ Time: _____ AM / PM

Signature: _____
(interpreter)

Print name: _____
(interpreter) *(interpreter ID number)*

Date: _____ Time: _____ a.m./p.m.	Physician/Provider who explained the procedure Signature: _____
Date: _____ Time: _____ a.m./p.m.	Patient/or Legal Guardian Signature: _____
Date: _____ Time: _____ a.m./p.m.	Witness: Name: _____ Title: _____ Signature: _____

Patient/Legal Guardian was able to recount what they were told:

Yes No Action Taken: _____

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

**INFORMED CONSENT FOR SURGERY OR SPECIAL
DIAGNOSTIC OR THERAPEUTIC PROCEDURES**



LGLALCN

Para (nombre):	
1	Este formulario se llama "Formulario de Consentimiento Informado." Su propósito es para informarle tocante la cirugía, el diagnóstico o el procedimiento terapéutico que han sido recomendados por su doctor para el que usted será sometido. Usted deberá leer el formulario cuidadosamente y hacer preguntas antes de decidir si debe dar o no dar su consentimiento para esta operación o procedimiento y para cualquier anestesia o sedación que sea necesaria.
2	Su médico de cabecera es el Dr. _____ . El/ella ha recomendado la siguiente operación(es) o procedimiento(s): _____ Lo que significa que _____ _____
3	Después de haber dado su autorización y consentimiento, la operación o procedimiento identificado arriba, junto con alguna diferencia a otros procedimientos de los cuales, con la opinión de su médico de cabecera o cirujano, pudiese ser identificado a causa de una urgencia y será llevada a cabo en usted. La operación o el procedimiento se llevará a cabo por el Dr. _____ (o en caso de que este doctor o cirujano) junto con los asociados y asistentes de parte del equipo médico del Arrowhead Regional Medical Center (ARMC) para quienes su médico o cirujano puede asignar responsabilidades asignadas, incluyendo a Residentes Médicos competentes. Cualquier Residente implicado con su procedimiento y tratamiento serán supervisados por su Médico de Cabecera. Las personas que asisten a los efectos de prestar servicios médicos especializados, como la anestesia, radiología o patología, son independientes practicantes médicos y no son agentes, servidores, o empleados del ARMC. Cualquier practicante que no sea médico que participe en su procedimiento sólo realizará tareas dentro de su alcance de acción y como se define en sus privilegios hospitalarios.
4	También está consintiendo a la posible colocación de monitores invasor fisiológico, incluyendo pero no limitados a: Línea A (línea arterial) la ETE (ecocardiograma trans esofágica), CVP (línea presión venosa central) y el PAC (catéter de arteria pulmonar) para manejo anestésico durante y después del procedimiento quirúrgico.
5	También usted está autorizando el uso de anestesia o sedación profunda o moderada. (a) Para pacientes con anestesia: Un Anestesiólogo empleado por el Inland Empire Anesthesia Medical Group proporcionará la anestesia: Anestesia que será utilizada: Circule uno: MAC / General / Regional (b) Para pacientes con sedación profunda: Un Médico Especialista en Medicina de Emergencia empleado por California Emergency Physicians estará supervisando su sedación profunda. (c) Para pacientes que requieren sedación moderada: el Dr: _____ ordenará y supervisará su sedación moderada.

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

CONSENTIMIENTO INFORMADO PARA CIRUGIA O DIAGNOS
ESPECIAL O PROCEDIMIENTOS TERAPEUTICOS



LGLALCN

6	<p>Todas las operaciones y procedimientos pueden involucrar riesgos o resultados insatisfactorios, complicaciones, lesiones, o hasta la muerte, por ambas causas conocidas o imprevistas, y no se garantiza el resultado para la cura. Usted tiene el derecho para ser informado de:</p> <ul style="list-style-type: none">• La naturaleza de la operación o procedimiento, incluyendo otro tipo de atención, tratamiento o medicamentos;• Beneficios potenciales, riesgos o efectos secundarios de la operación o procedimiento, incluyendo problemas potenciales que pudiesen ocurrir durante la recuperación;• La probabilidad de lograr los objetivos del tratamiento;• Alternativas razonables y los riesgos, beneficios y efectos secundarios relacionados con tales alternativas, incluyendo los posibles resultados para no recibir atención o tratamiento; y• Cualquier investigación médica independiente o intereses económicos significativos que su médico pueda tener en relación a la realización de la operación o procedimiento propuesto. <p>Salvo en casos de emergencia, operaciones o procedimientos no se realizarán hasta que haya tenido la oportunidad de recibir esta información y haya dado su consentimiento. Usted tiene el derecho a dar o a negar el consentimiento a cualquier operación o procedimiento en cualquier momento antes de que se lleve a cabo.</p>
7	<p>Si su doctor determina que existe una posible razón para que usted necesite una transfusión de sangre como resultado de la cirugía o del procedimiento al cual usted ya ha dado su consentimiento, su doctor le informará sobre esto y además le proporcionará información con relación a los riesgos y beneficios de las varias opciones para una transfusión de sangre, incluyendo la donación previa por sí mismo o por otras personas. Usted también tiene el derecho a disponer del tiempo adecuado antes del procedimiento para hacer un arreglo de sangre pre donada y también puede diferir este derecho si es que usted no desea esperar</p> <p>La transfusión de sangre o productos de sangre involucra ciertos riesgos, incluyendo la transmisión de enfermedades tales como la hepatitis o el Virus de Inmunodeficiencia Humano (HIV), y usted tiene el derecho de autorizar o de rechazar su consentimiento a cualquier transfusión de sangre. Usted deberá de discutir cualquier pregunta que tenga relacionada con la transfusión con su doctor.</p>

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

CONSENTIMIENTO INFORMADO PARA CIRUGIA O DIAGNOS
ESPECIAL O PROCEDIMIENTOS TERAPEUTICOS



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CONSENTIMIENTO PARA LA TRANSFUSION DE SANGRE

Su firma abajo indica que:

1. Usted ha recibido una copia del folleto, *Guia del Paciente para la Transfusión de Sangre*.
2. Usted ha recibido información de su médico sobre los riesgos y beneficios de la transfusión de sangre y de las terapias alternativas y sus riesgos y beneficios.
3. Usted tuvo la oportunidad de discutir este asunto con su médico, incluyendo pre-donación.
4. Con sujeción a las instrucciones especiales que se indican a continuación, usted autoriza dicha transfusión de sangre ya que su médico puede solicitar en relación con la operación o procedimiento que se describe en este formulario de consentimiento.

Instrucciones especiales: _____

(Describa aquí las instrucciones específicas para la transfusión de sangre del paciente, como por ejemplo, pre-donación, donación directa, etc.)

Fecha: _____ Hora: _____ AM / PM

Firma: _____
(paciente/representante legal)

Si es firmado por alguien que no sea el paciente, indique el parentesco: _____

Escriba su nombre: _____
(representante legal)

- | | |
|----|--|
| 8 | La operación o el procedimiento será realizado en el Centro Médico Regional Arrowhead. El hospital cuenta con un personal e instalaciones para asistir a los médicos tratantes durante el desempeño de la operación o procedimiento en pregunta. |
| 9 | Por medio de su firma de abajo, usted reconoce la posibilidad de que observadores asociados con programas de capacitación de salud, los profesionales médicos o productos sanitarios pueden tener la oportunidad de estar presente durante su procedimiento. |
| 10 | Por medio de su firma de abajo, usted autoriza al patólogo a actuar a su discreción para disponer o para utilizar cualquier miembro, órgano u otro tejido extraído de su persona durante el procedimiento. |

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

CONSENTIMIENTO INFORMADO PARA CIRUGIA O DIAGNOS
ESPECIAL O PROCEDIMIENTOS TERAPEUTICOS



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11 Usted está tomando una decisión aunque no dé su consentimiento para realizar la operación o el procedimiento que está descrito arriba y a la anestesia asociada o sedación. Su firma en este consentimiento informado indica: 1) que usted ha leído y entendido la información proporcionada en este formulario; 2) que usted se le ha informado verbalmente acerca de la operación o del procedimiento; 3) que usted tuvo la oportunidad de hacer preguntas; 4) que ha recibido toda la información que usted deseaba tocante la operación o procedimiento; y 5) que usted autoriza y da su consentimiento para llevar a cabo la operación o el procedimiento.

DECLARACION DEL INTERPRETE

He leído completamente y con precisión el documento que precede a *(al paciente o al representante legal del paciente)* _____ en el idioma primario del paciente o del representante legal del paciente *(identifique el idioma)* _____. El/ella entiende los términos y condiciones y reconoce el acuerdo al firmar el documento en mi presencia.

Fecha: _____ Hora: _____ AM / PM

Firma: _____
(intérprete)

Nombre de imprenta: _____
(intérprete) *(número de ID del intérprete)*

Fecha:		Physician/Provider who explained the procedure
Hora:	a.m./p.m.	Signature:
Fecha:		Paciente/o Tutor Legal
Hora:	a.m./p.m.	Firma:
Fecha:		Testigo:
		Nombre:
		Título:
Hora:	a.m./p.m.	Firma:

Paciente/Tutor Legal fue capaz de contar lo que les dijeron:

Sí No Acción Tomada: _____

PATIENT IDENTIFICATION

ARROWHEAD REGIONAL MEDICAL CENTER

CONSENTIMIENTO INFORMADO PARA CIRUGIA O DIAGNOS
ESPECIAL O PROCEDIMIENTOS TERAPEUTICOS



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**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 301 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: PRIORITY FOR HYPERBARIC OXYGENATION TREATMENTS

APPROVED BY: _____

Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Hyperbaric Oxygen Therapy (HBO) to address emergency HBO treatments in a timely manner. The emergency treatments take priority over the regular HBO treatment for patients with chronic wounds. In order to accommodate the emergency needs for HBO, the temporary halt in the treatment protocol for any specific patient may occur.

PROCEDURES

- I. Patients with life or limb threatening disease conditions shall receive priority for all appropriate HBO treatments. Disease processes with a high potential for loss of limb or life may be, but is not limited to, the following list.
 - A. Clostridial gas gangrene
 - B. Acute crush injury
 - C. Compartment syndrome
 - D. Polymicrobial myonecrosis
 - E. Carbon monoxide poisoning
 - F. Decompression Illness
 - G. Arterial or Gas Embolism

- II. If the HBO Provider determines that HBO is appropriate for a case on the list, the patient's HBO treatment shall begin within 6 hours. In the event the HBO treatment schedule is full, the HBO provider(s) will determine if and what current HBO patient treatment will be suspended in order to begin the emergent case.

- III. Patients whose medical condition is characterized as an acute exacerbation of an existing chronic disease process already indicated for HBO, that is accompanied with an elevated temperature, leukocytosis, erythema and swelling.

- IV. Patients with sudden sensorineural hearing loss

- V. Central Retinal Artery Occlusion

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/01/2023</u>	<u>Critical Care Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/09/2023</u>	<u>Quality Management Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 301 Issue 2 Priority for Hyperbaric Oxygenation Treatments

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 303 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: PATIENT ORIENTATION

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Hyperbaric Oxygen (HBO) Therapy that all patients registered to the Ambulatory Services Wound Clinic will receive Wound Care Education Packet and be oriented to the services and department.

PROCEDURES

I. Orientation

- A. Proper orientation of HBO patients is extremely important to the success of the HBO treatment plan. Due to the complex issues associated with impaired healing of problematic wounds, patients and their caregivers must be actively involved in the plan of care. Understanding of their roles and compliance to the wound care treatment program is essential. Each patient shall receive an information packet during the first visit. It is the responsibility of the HBO staff to thoroughly review the topics outlined in the patient packet.
- B. Orientation for the treatment program shall include the following information:
 - 1. Explanation of clinic appointments, and procedures for making and canceling appointments.
 - 2. Discussing the importance dietary management.
 - 3. Discussing the effects of tobacco use on wound healing.
 - 4. Reviewing patient medications regarding the effects on wound healing.
 - 5. Explanation of the procedure for photographing wounds.
 - 6. Explanation of the clinical components of Wound Care and Hyperbaric Oxygen Therapy as it relates to the patient's condition.

II. Patient Information

- A. Patients shall be given a packet of information upon their initial visit to HBO Services. Information in this packet shall be reviewed with each patient prior to his or her next scheduled appointment.

III. If patient's primary language is Spanish, a Spanish version will be provided.

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
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<u>02/09/2023</u>	<u>Quality Management Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 303 Issue 2 Patient Orientation

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 305 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: PATIENT REASSESSMENT

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

It is the policy of Arrowhead Regional Medical Center's Hyperbaric Oxygen (HBO) Therapy that all patients receiving care shall be reassessed at every HBO visit. Reassessment shall be performed by a HBO Provider or other designated HBO staff.

PROCEDURES

- I. Outpatient reassessment may include any or all of the following.
 - A. Determination of patient's progress and response to treatment
 - B. Appropriateness of current therapy
 - C. Patient/family/caretaker education
 - D. Recommendations for further treatment
- II. Outpatient HBO patients shall be reassessed at a minimum of every 2 weeks. Their appointments will be with the Provider that ordered their HBO therapy and will include all the assessment indicators listed in above statement plus these HBO specific indicators.
 - A. Barotrauma and hyperoxia assessment
 1. Hearing loss
 2. Visual changes
 3. Sinus pain
- III. The reassessment may also include, as appropriate:
 - A. Pain level
 - B. Equipment needs, i.e., assistive devices, orthosis, etc.
 - C. Cognitive level
 - D. Wound Measurement
- IV. The HBO treatment plan shall be continued or altered based on conclusions of the reassessment process. Subsequent Ambulatory Services HBO visits will be planned at each visit.
- V. The reassessment will be documented in the electronic health record (EHR).

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 305 Issue 2 Patient Reassessment

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Policy No. 308 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: VISITORS IN HYPERBARIC OXYGEN THERAPY

APPROVED BY: _____
Mark Connolly, Department Manager

POLICY

Provide standard policy for patient visitors during the delivery of Hyperbaric Oxygen Therapy.

PROCEDURES

- I. Family member shall not be allowed to remain in the treatment area during the administration of HBO unless:
 - A. The presence of family or friends has a positive clinical effect on the patient.
 - B. Substantial language barrier exists which negates the ability to treat the patients.
 - C. A small infant or child is being treated, and may require the parents' presence within, or outside of, the chamber.

- II. Visitors will be asked to leave the HBO room as needed to assure patient confidentiality and privacy.

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
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<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WC 308 Issue 3 Visitors in Hyperbaric Oxygen Therapy

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures

Procedure No. 200 Issue 1
Page 1 of 3

SECTION: PATIENT CARE

SUBJECT: STANDARD HYPERBARIC OXYGEN (HBO) FORMAT

APPROVED BY: _____
 Mark Connolly, Department Manager

Provide a standard generalized format to follow before each HBO treatment is given.

PROCEDURES

I. Hyperbaric Oxygen Therapy Format

- A. Ensure that the HBO gurney mattress pad is made up with only 100% cotton sheets. Sheets are not to cover the bottom surface of the mattress pad but tucked in along the edges only. Contact between the metal grounding strips on the gurney sled and the mattress pad must be ensured to maintain proper ground connection. The patient will also be grounded by utilizing the wrist strap. Pillows used must be feather pillows, with 100% cotton ticking (Read the label), or Sechrist HBO pillows. All linen, clothing and material that enter the chamber must be 100% cotton to minimize the danger of electrical static.
- B. Open the chamber door, roll the gurney up toward the opened chamber and connect the rail system so that the male coupling of the gurney rail is completely inserted into the female couplings of the chamber rails. Lock all four wheels as per manufacturer instructions. Exercise extreme care when connecting the gurney and the chamber together so that no damage occurs to the chamber door, rubber gasket or the rubber bumper ends of the gurney rail system.
- C. Raise the bed rail on the opposite side of the gurney from where the patient will be mounting the mattress pad to facilitate easier transfer of the patient. This will also prevent the mattress from sliding.
- D. Close curtain in front of door for patient privacy.
- E. Make sure that the patient is clothed in 100% cotton material. No undergarments should be worn, even if all cotton. Most underwear contains elastic, which is not cotton. Assist the patient onto the gurney, making sure to protect his/her privacy and ensure their comfort once they are settled onto the gurney.
- F. Review middle ear equilibration with the patient.
- G. Cover the patient with a 100% cotton sheet. **ABSOLUTELY NO SYNTHETIC WEAVES OR WOOL BLANKETS MAY BE USED AS COVERS.** Using only cotton sheets will ensure that static electricity, which can cause chamber fires, is grossly minimized. **Note:** Synthetic fibers easily missed during the pre-HBO process include hair pieces, hair switches, implants, and weaves
- H. Take patient's vital signs and document. If the patient presents with a temperature of 39.5C, the treatment will be postponed, and the physician notified. The exception is if the patient has a life or limb threatening condition, which warrants continuation of the HBO therapy. A Physicians order to continue HBO therapy in a febrile state must be obtained.
- I. Patients who are diabetics (Type 1 or2) require blood glucose testing via finger stick method before each HBO treatment. Patient with blood glucose levels of 150 or less, are to be provided

with a static proof container of cranberry juice or a suitable replacement high sugar content beverage. Diabetic patients with a blood glucose level of less than 70 are not to be treated with HBO until the blood glucose rises to 150 or higher. Patients with blood sugar readings that are higher than 500 will not be given HBO treatments, and the patient will be referred to the emergency room for additional assessment and treatment.

J. Review Safety Checklist prior to placing the patient in the chamber.

REFERENCES: THE JOINT COMMISSION STANDARDS

DEFINITIONS: N/A

ATTACHMENTS: Attachment A - ARMC Wound Care Services/HBO Pre-HBO Safety Checklist

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/01/2023</u>	<u>Critical Care Committee</u> Applicable Administrator, Hospital or Medical Committee
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<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 200 Issue 2 Standard HBO Format

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A

ARROWHEAD REGIONAL MEDICAL CENTER						
WOUND CARE SERVICES						
PRE-HBO SAFETY CHECKLIST						
1. Verify that the following prohibited items are removed:						
	a.	All personal clothing and undergarments.				
	b.	No velcro, wool, polyester, nylon, rayon, or any other produced/synthetic products.				
	c.	All electronic devices/battery powered device, including hearing aids.				
	d.	Hard contact lens.				
	e.	Dentures.				
	f.	Watch.				
	g.	Jewelry - necklace, rings, earrings, peircings.				
	h.	Wigs, weaves, falls, toupees, hairpeices, twists.				
	i.	Makeup.				
	j.	Nailpolish.				
	k.	No peroleum products - salves, ointments.				
	l.	No alcohol based products - perfume, aftershave,cologne				
	m.	No hair products of any kind - hair spray, hair oil, gels				
	n.	No prosthetics, braces, or splints.				
	o.	No lighters, matches, or smoking/vaping products.				
	p.	No paper products.				
	q.	No pacemaker unless okayed by manufacturer				
3. Compression dressings are removed. Elastic wraps such as: Ace wrap, Surepress, Coban, 2 or 4 layer compression, Unna Boot, and all other dressings on prohibited						
2. Verify that the patient is dressed in cotton garments provided by the HBO staff.						
3. Ensure that the blood sugar is within HBO policy limits. (Diabetic patients)						
4. Ground patient using grounding wrist strap and verify continuity of ground strap using the gound strap tester.						
This checklist has been approved by:						



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 201 Issue 1
Page 1 of 3**

SECTION: PATIENT CARE

SUBJECT: STANDARD HYPERBARIC OXYGEN (HBO) PROCEDURE

APPROVED BY: _____

Mark Connolly, Department Manager

Provide a standard and usual procedure for routine Hyperbaric Oxygen treatment.

PROCEDURES

- I. Disengage the gurney sled latch at the left-hand side of the back of the sled. Roll the entire sled, mattress pad and patient into the hyperbaric oxygen cylinder. Inspect the area of the door gasket to ensure that no linen, lines, or other foreign material will impair a proper seal once the chamber door is closed. Be certain that the sled latch is locked to secure the sled. Plug in grounding cable
- II. Close the door and engage the door latch making certain that the latch is fully engaged. **IMMEDIATELY** go to the control panel and turn the Master Valve to the "on" position to begin the flow of oxygen through the HBO cylinder. (Note: Begin timing the treatment at this point for documentation purposes.)
- III. Check to make sure that both the green and red wink lights are activated, indicating both a charge oxygen supply and a positive chamber pressure. The sound of oxygen flow (low hissing sound) should also be evident as oxygen enters the chamber.
- IV. Using the patient intercom system, inform the patient that you are going to begin compression.
- V. Set the "RATE OF CHANGE" control knob to 1.5-2.0 psig change/min and adjust the CHAMBER PRESSURE knob to the prescribed treatment pressure per the physician's orders.
- VI. Quickly store and lock the gurney transport assembly in its place so that the immediate work area remains clear and safe.
- VII. Gather the patient's personal items from the changing room and place on top of the chamber at the far end so they are safe and in the patient's view.
- VIII. Observe the patient through the entire compression phase for signs of distress. If the patient indicates that they are experiencing ear or sinus squeeze, **IMMEDIATELY** stop the increase of chamber pressure:
 - A. Turn the CHAMBER PRESSURE knob counterclockwise until both the chamber pressure AND the pressure set gauges read **EXACTLY** the same pressure readings.
 1. Coach the patient through middle ear equilibration techniques to attempt to relieve the ear or sinus pain. Do not attempt to advance the chamber pressure until the patient confirms that the pain has subsided. The process may take several minutes.

2. Once the patient confirms that the ear or sinus pain is gone, you may begin increasing the chamber pressure again. Continue to observe the patient for addition signs of squeeze and repeat the process, if necessary.
 3. If the patient is unable to equilibrate middle ear pressure in 10-15 minutes, terminate the HBO procedure and inform the physicians of the problem.
- IX. Once the prescribed treatment pressure has been achieved, inform the patient that the compression phase is complete.
- X. If the patient desired to watch television, adjust the channel and volume accordingly.
- XI. Continue to observe the patient for signs of distress. Always stay within the patient's field of vision while conducting other department activities in order to minimize the patient anxiety. If you need to leave the chamber room, always have someone who is familiar with HBO chamber operations to relieve you. **NEVER LEAVE THE PATIENT UNATTENDED FOR ANY REASON.**
- XII. Terminating the Procedure:
- A. Once the ordered treatment time is completed, inform the patient via chamber intercom, that you will begin decompression.
 - B. Check and reset the RATE OF CHANGE knob to 1.5-2.0 psig change/min.
 - C. Turn the CHAMBER PRESSURE to the "0" pressure setting and allow the chamber pressure to vent off. (Note: the chamber pressure will not reach absolute "0" status due to the chamber's safety design.)
 - D. When the chamber pressure has reached approximately 1 psig, turn the MASTER VALVE to the OFF position.
 - E. Observe the Red wink light until it turns completely over to a black color. It is now safe to open the chamber door.
 - F. Carefully unlatch and open the chamber door.
 - G. Couple the transport assembly rails to the rails of the chamber. Ensure that the male couplings of the transport assembly are completely engaged with the female couplings of the chamber.
 - H. Lock all four wheels per manufacturer instructions.
 - I. Disengage the sled latch and pull the sled, mattress pad and patient out of the chamber. Be certain the sled latch is locked on the transfer assembly to prevent the sled from moving.
 - J. Assist the patient off of the gurney as needed, and provide whatever assistance is needed to return the patient to pre-HBO status. Return the patient's personal items to the changing room. The patient may then be discharged from the treatment area.
 - K. Document the procedure electronically in the patient's record in PCS. Charting must include the following information: Form in the patient's medical record. Charting must include the following information:
 1. Date
 2. Treatment pressure expressed in ATA
 3. Treatment duration
 4. Treatment serial number
 5. Patient's Vital Signs
 6. Patient's response to the treatment
 7. Description of any adverse reactions or consequences
 8. Signature of person who performed the treatment
 9. Air break given or not given and how long
 10. Consent obtained
 11. When compression starts and reached
 12. When decompression started and reached

L. Return the HBO chamber and gurney to its pre-treatment state.

REFERENCES: SECHRIST MONOPLACE HYPERBARIC CHAMBER MODEL 3200/3200R
USERS MANUAL

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u></u>	<u>Board of Supervisors</u> <small>Approved by the Governing Body</small>

REPLACES: Ambulatory Services Wound Clinic WC 201 Issue 3 Standard HBO Procedure

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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Standard Practice Policies and Procedures**

**Procedure No. 202 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: ELECTROCARDIOGRAM IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____

Mark Connolly, Department Manager

The Ambulatory Services Wound Clinic will monitor cardiac rate during Hyperbaric Oxygen Therapy only when ordered by the attending Ambulatory Services Wound Clinic HBO physician or policy and procedures. The monitoring of a patient's heart rate by means of an external, electronic cardiac monitor is to verify any changes in the patient's baseline heart rate only by a nurse. Cardiac monitoring during Hyperbaric Oxygen Therapy is not intended to be utilized as a diagnostic tool for any other parameter but cardiac rate.

PROCEDURES

- I. Electrocardiogram (ECG) Monitoring – Prior to connecting the cardiac monitor to the patient, the following procedure is to be followed:
 - A. Connect the interior pass through # 254-24 to the 19-pin connector inside the chamber housing.
 - B. Connect the exterior pass through #254-05 to the 19-pin connector outside the chamber housing.
 - C. Connect cable to the cardiac monitor in accordance with factory directions.
 - D. Connect appropriate, self-adhesive electrode to the spring clip ends of the patient cable.
 - E. Electrode cable configurations as follows for either 3 or 5 lead wiring harness:
 1. Black: Rt. upper chest
 2. White: Lt. upper chest
 3. Brown: Apical
 4. Red: Rt. lower abdominal (if available)
 5. Green: Lt. Lower abdominal (if available)
 - F. Determine patient's baseline cardiac rate. Set cardiac monitor low-rate alarms at 20% below the patient's baseline cardiac rate. Set cardiac monitor high-rate alarm at 20% above the patients' baseline cardiac rate. Monitor the patient's cardiac rate through the entire HBO treatment. **Note: If at any time during the Hyperbaric Oxygen Therapy procedure the patient's cardiac rate changes sufficiently to trigger the low or high alarm, discontinue the Hyperbaric Oxygen Therapy Treatment at the decompression rate of 1.5-2.0 psig/minute change.**
 - G. Prior to initiating HBO therapy, observe and chart the patient's cardiac rate and alarm settings for both high and low alarms.
 - H. After patient reaches the prescribed treatment pressure during HBO and has stabilized, observe and chart the patient's cardiac rate again. Repeat this observation and charting every 30 minutes until the HBO treatment has been completed. Charting of the patient's cardiac rate will be documented in the patient's Electronic Health Record by a nurse.

REFERENCES: THE JOINT COMMISSION STANDARDS

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 202 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



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**Procedure No. 203 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: CHEST TUBES IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____
Mark Connolly, Department Manager

Provide a basic procedure for the treatment of patients with chest tubes in Hyperbaric Oxygen. All patients with chest tubes must be monitored by cardiac monitor during HBO treatments.

PROCEDURES

- I. Chest tubes in Hyperbaric Chamber
 - A. Assemble Equipment:
 1. Large, rubber tipped Kelly clamp
 2. Sterile Heimlich valve(s)
 3. Sterile gloves
 4. Adhesive tape
- II. Using the rubber tipped Kelly clamp, clamp the tube(s) proximal to the patient.
- III. Inspect the chest tube to ensure that there are no holes, cracks or other breaks.
- IV. Once the chest tube is clamped, auscultate the patient's breath sounds on both sides and document.
- V. Using sterile technique, quickly disconnect the chest tube from the water seal pleurovac tubing and attach the Heimlich valve to the end of the patient's chest tube.
- VI. Once connected securely, disconnect the Kelly clamp.
- VII. Auscultate the patient's breath sounds again. Breath sounds should be consistent with previous assessment, which was done prior to disconnecting the water seal.
- VIII. Confirm the proper functioning of the Heimlich valve by checking for air or fluid leaks during respiratory phase.
- IX. When patient assessment is complete, and respiratory status is stable, place the end of the Heimlich valve in a sterile glove and tape securely. This procedure assures that any drainage from the chest tube occurring during HBO will be contained with the sterile glove.
- X. Attach cardiac monitor per manufacturer instruction.
- XI. Proceed with HBO treatments as per physician orders.

- XII. Upon completion of HBO treatment, remove the tape and disconnect the glove from the end of the Heimlich valve. Dispose of the glove, and any accumulated drainage in accordance with Infection Control precautions.
- XIII. Clamp the chest tube(s) with the rubber tipped Kelly clamp and disconnect the Heimlich valves from the chest tube. Dispose of the Heimlich valve in accordance with infection Control Policy precautions
- XIV. Reconnect the water seal pleurovac to the chest tube. Release the Kelly clamps.
- XV. Auscultate the patient’s breath sounds and compare with pre-treatment documentation.
- XVI. Disconnect cardiac monitor.
- XVII. Document patient assessment, and completion of HBO treatment.
- XVIII. Once the patient is determined stable, transport patient back to his/her room.

REFERENCES: THE JOINT COMMISSION STANDARDS

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u></u>	<u>Board of Supervisors</u> <small>Approved by the Governing Body</small>

REPLACES: Ambulatory Services Wound Clinic WCC 203 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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**Procedure No. 204 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: GASTRIC TUBES IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____
Mark Connolly, Department Manager

Provide basis policy for treating patient with nasogastric or feeding tube in Hyperbaric Oxygen. Feeding tubes should be clamped one hour prior to HBO treatments so that the stomach is relatively empty of contents during HBO treatments.

PROCEDURES

- I. Gastric Tubes for Feeding
 1. Assemble Equipment: Gloves
 2. Tape
 - A. Disconnect tube feeding if attached to pump.
 - B. Plug the tube with standard feeding plug.
 - C. Place the tip of the tube in the glove and secure with tape. This will ensure that any leakage of stomach contents will be contained during treatment.
 - D. Following HBO treatment, reconnect feeding tube as required. (RN will resume pump feedings as ordered.)

- II. Nasogastric (NG) Suction - Follow the same procedure as for tube feedings. However, prior to disconnecting the tube from the pump, have the attending RN ensure that stomach contents have been emptied. (This is usually done by disconnecting the NG tube and aspirating with a large syringe.) Once the treatment is completed and the patient returned to his/her room, notify the attending RN so that the NG may be reconnected to suction.

REFERENCES: THE JOINT COMMISSION STANDARDS

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 204 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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Standard Practice Policies and Procedures**

**Procedure No. 205 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: ENDOTRACHEAL TUBES IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____
Mark Connolly, Department Manager

Establish standard procedure for treating patients with endotracheal tubes in Hyperbaric Oxygen (HBO)

PROCEDURES

- I. Endotracheal tube care
 - A. Ensure that the Endotracheal/Tracheostomy tube is secured to prevent decannulation. (See hospital Respiratory Care Procedure Manual.)
 - B. Evacuate all air from the cuff of the tube and replace with an appropriate amount of sterile water or normal saline to establish minimum occlusive volume. (Refer to Respiratory Care Manual)
 - C. Suction the patient thoroughly prior to HBO treatments.
 - D. Connect the patient to cardiac monitor as per Procedure 202.
 - E. Establish baseline vital signs, lung sound and document.
 - F. Proceed with HBO treatments according to procedure and Physician order, observing patient for the following adverse conditions:
 1. Changes in cardiac rate or rhythm increased respiratory rate from baseline documentation
 2. Respiratory distress
 3. Increase, accumulating secretions
 4. Anxiety/restlessness
 - G. Any adverse signs/symptoms may require premature discontinuation of the HBO treatments. Clinical judgment for terminating treatments is at the discretion of the HBO Technician based on their assessment of the patient's condition.
 - H. Following the completion of the HBO procedure, thoroughly suction the patient below the cuff, and then above the cuff.
 - I. Assess vital signs and breath sounds. Document.
 - J. Evacuate the fluid from the tube cuff and replace with air as per Respiratory Care Manual instructions. Any changes in the patient's condition should be reported to the attending physician.
 - K. Transport the patient to appropriate unit and report status of the patient of attending licensed staff.

**REFERENCES: RESPIRATORY CARE SERVICES PROCEDURAL COMPETENCY MANUAL:
RCSPC-7 AIRWAY MANAGEMENT
WOUND CARE SERVICES DEPARTMENT POLICIES AND PROCEDURES
MANUAL: POLICY 202**

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	Policy, Procedure and Standards Committee
<u>11/08/2023</u>	Carlos Prieto, Associate Hospital Administrator Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	Patient Safety / Quality Committee Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	Nursing Standards Committee Applicable Administrator, Hospital or Medical Committee
	Board of Supervisors Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 205 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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Standard Practice Policies and Procedures**

**Procedure No. 206 Issue 1
Page 1 of 3**

SECTION: PATIENT CARE

SUBJECT: VENTILATOR SUPPORT IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____
Mark Connolly, Department Manager

Establish a basic procedure for providing positive pressure ventilation during Hyperbaric Oxygen (HBO)

PROCEDURES

- I. Ventilator Management in HBO
 - A. Before initiating ventilation of a patient, you must explain to the patient what you are going to be doing and why you will be doing it.
 - B. All patients who require ventilator support either in the acute or alternate care setting will likely require ventilator support during HBO Therapy. To ensure patient safety and continuity of care, nurses and/or respiratory therapist or caregivers from the alternate care setting must accompany the patient to the HBO Service area. To maintain the patient's current respiratory status, the nurse/therapist or the alternate setting caregiver must provide a minimum of the following information to HBO staff.
 1. Inspiratory time
 2. Tidal volume
 3. Average Minute Volume
 4. Respiratory rate
 5. Inspiratory/expiratory ratio
 6. High pressure relief settings
 - C. Before the patient is transported to the HBO Service within the Acute Care Hospital, the gas volume of the cuff of the endotracheal or tracheostomy tube must be replaced with sterile normal saline in accordance with Wound Clinic Procedure 205 Endotracheal Tubes in HBO. Patients who arrive from an alternate care setting will have the cuffs of the endotracheal or tracheostomy tubes filled with sterile saline at the Wound Care Service prior to the scheduled Hyperbaric Oxygen Therapy in accordance with the same policy.
 - D. All patients who require ventilator support during Hyperbaric Oxygen Therapy will also have cardiac monitoring in accordance with Wound Clinic Procedure 202 Electrocardiogram in HBO.
 - E. Ventilator Setup (Sechrist Hyperbaric Ventilator Model 500A)
 1. Ensure that the "MASTER" valve is in the "OFF" position. Rotate the knobs labeled "FLOW (VOL.)", "INH. TIME" AND "EXH. TIME" counterclockwise to the stops position.
 2. Connect the oxygen "INLET" supply line in oxygen source that can supply a gas pressure of 70-80 PSI. Oxygen source gas may be either an integrated supply line or an "H" tank with the oxygen appropriate D.I.S.S. fittings and regulator.
 3. Connect the "OUTLET" gas line to the "Chamber Door Ventilator Pass-Thru" fitting located in the chamber door.

F. Ventilator Manifold Assembly

1. Assemble ventilator manifold in accordance with ventilator manifold manufacturer instructions.
2. Sterilize between each patient use. Sterilization must include all of the following:
 - a. Metal ventilator manifold
 - b. Safety pop-off valve
 - c. Emergency Intake valve
 - d. Nebulizer and all component parts
 - e. Venturi entertainment assembly
 - f. Exhalation valve assembly
 - g. Gas supply line for the exhalation valve, venturi and nebulizer
 - h. 22mm adapters
 - i. 22mm flex tubing
 - j. Patient "Y" connection
3. Be certain to remove the Breathing Circuit Manometer before sterilizing the manifold.
4. Hang the Ventilator manifold assembly on the inside of the chamber door using the "pins" provided. Connect the "OUTLET" gas supply line to the inside D.I.S.S. oxygen fitting.
5. Install the expiratory spirometer on the exhalation valve assembly with the 22/35mm adapter provided.

G. Initial Ventilator Settings

1. Rotate the "MASTER" valve to the "on" position.
2. Turn the "FLOW (VOL.)" knob clockwise one full, 360 degrees turn to initiate oxygen Flow. You will observe the left "Phase Indicator" wink light actuate indicating that inspiratory gas flow has begun.
3. Turn the "INH. TIME" knob clockwise to increase inspiratory time. Adjust the "INH. TIME" knob to the approximate inspiratory time being utilized to ventilate the patient in either the acute care or alternate care setting.
4. Rotate the "EXH. TIME" knob until the approximate respiratory rate being used to ventilate the patient in the acute or alternate care setting is achieved.
5. In a clean manner, occlude the patient's "Y" connector and set the High-Pressure pop-off by rotating the white, inside spring loaded valve so that during the inspiratory phase, the excess pressure will be vented at the same high pressure setting used in the acute or alternate care setting.

H. Ventilating Patient during Hyperbaric Oxygen Therapy - Patients who are to be ventilated during Hyperbaric Oxygen Therapy must be ventilated with a handheld resuscitation assembly or portable ventilator until the patient is completely ready to be put into the chamber. The very last task to be performed before closing the chamber door will be to connect the patient to the breathing circuit of the ventilator. All parameters such as tidal volume, respiratory rate and high-pressure pop-off should be set before closing the chamber door. If indicated, suction the patient prior to placement in the chamber.

1. After closing the chamber door, immediately turn the chamber "MASTER VALVE" to the "ON" position to begin oxygen flow into the chamber. Observe the patient for any changes in vital signs. Observe the expiratory spirometer to confirm that the appropriate tidal volume is being delivered to the patient. When parameters are stable, the Hyperbaric Oxygen Therapy may begin as per Policy and Procedure.
2. For the duration of the Hyperbaric Oxygen Therapy, vital signs (respiratory rate, heart rate), chamber pressure, exhaled minute volume and airway pressure will be monitored and charted at a minimum of Q 30 minutes. Values may be charted in the body of the Hyperbaric Chart Record under free-style charting.
3. At the completion of the Hyperbaric Oxygen Therapy, decompress the chamber pressure in the usual manner. After the chamber door has been opened and the gurney assembly has been partially removed from within the chamber to a point where the patient's artificial

airway is accessible, ventilation of the patient by handheld resuscitation device or portable ventilator must resume immediately.

- 4. When the patient is stable, the patient may be transported back the Acute Care or Alternate Care setting.

REFERENCES: THE JOINT COMMISSION STANDARDS
WOUND CLINIC PROCEDURE 202 ELECTROCARDIOGRAM IN HBO
WOUND CLINIC PROCEDURE 205 ENDOTRACHEAL TUBES IN HBO

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 206 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 207 Issue 1
Page 1 of 2**

SECTION: PATIENT CARE

SUBJECT: INTRAVENOUS THERAPY IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____
Mark Connolly, Department Manager

Establish basic procedure for the delivery of intravenous (IV) therapy during Hyperbaric Oxygen (HBO)

PROCEDURES

I. General Principles of IV Therapy in HBO

- A. Intravenous therapy performed during the administration of Hyperbaric Oxygen Therapy has several inherent risks associated with the fact that the nurse can not reach the patient to fix or adjust problems that may occur with the IV. Among the most common are the inadvertent disconnection of the tubing from the intravenous catheter, displacement of the IV entirely, clogged IV sites and pinched tubing. Given the potential for problems developing with the IV for patients who are receiving Hyperbaric Oxygen Therapy, it is advisable that IV therapy be limited to the delivery of life sustaining medications. To minimize the incidence of IV related problems, Hyperbaric Oxygen Therapy should be scheduled so that IV medications can be given between HBO treatments. All IVs that are not being used to deliver life-sustaining medications should be disconnected and flushed in accordance with existing Hospital policy.
- B. The management of the IV circuit or the administration of any intravenous medication must be performed by registered nurse or other qualified hospital personnel.
- C. HBO staff will assist the RN in setting up the equipment as is necessary.
- D. IV therapy during Hyperbaric Oxygen Therapy may be configured so that medication can be given either by IV push or by mechanical pump. In either case, a Sechrist Hyperbaric Intravenous Infusion Extension Set (P/N 44045) is required.

II. Setup For IV Therapy During Hyperbaric Oxygen Therapy

- A. In accordance with standard nursing practice, replace the patients IV tubing from the intravenous catheter using Sechrist Hyperbaric Intravenous Infusion Set (P/N 44045) be certain to flush and prime the new IV tubing with the ordered IV solution. Sechrist Infusion Sets are provided by the HBO staff.
- B. When the patient has been placed on the Hyperbaric Oxygen Therapy transfer dolly and is ready for therapy, you must assemble the IV pass-thru device in the following order.
 - 1. Remove the metal plug from the chamber door. Remove the "O" ring, feral and nut.
 - 2. Insert the female Luer Connector end of the IV tubing set into and through the open port of the chamber door from the inside to the outside. IV pass-thru fitting must extend through the door.
 - 3. Slide the "O" ring, feral and nut back over the tubing and reconnect these over the pass-thru fitting and tighten the nut.

- 4. Proceed with existing hospital policy to connect the Sechrist Intravenous Infusion Set for either IV push use or IV pump.
- C. After the Hyperbaric Oxygen Therapy procedure is completed, the patient will be reconnected to the intravenous pump and tubing that will continue to be used on the Nursing Unit.

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u></u>	<u>Board of Supervisors</u> <small>Approved by the Governing Body</small>

REPLACES: Ambulatory Services Wound Clinic WCC 207 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
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**Procedure No. 208 Issue 1
Page 1 of 3**

SECTION: PATIENT CARE

SUBJECT: ACUTE CARBON MONOXIDE (CO) POISONING

APPROVED BY: _____

Mark Connolly, Department Manager

Provide uniform guidelines and protocol for treating acute CO Poisoning that is consistent with National and Regional standards of practice. Provide a procedure to treat the patient with Hyperbaric Oxygen (HBO) Therapy suffering from acute CO poisoning when the patient presents in the Emergency Department (ED) or when a patient is transferred to ARMC from another facility for acute CO poisoning.

PROCEDURES

- I. In the field
 - A. 100% Oxygen via non-rebreather mask
 - B. Draw venous blood using an Arterial Blood Gas (ABG) kit to determine initial Carboxyhemoglobin (COHb) levels
 - C. Determine if loss of consciousness occurred at any time

- II. In the Emergency Department
 - A. Continue 100% Oxygen via non-rebreather mask for 4 hours at minimum
 - B. Recheck COHb after 4 hours of 100% Oxygen
 - C. If COHb levels have dropped to below 10% and symptoms have cleared, HBO Therapy is not indicated

- III. Consider Hyperbaric Oxygen (within the first 6 hours after exposure) if
 - A. If COHb level is > 40% at the scene or > 25% on admission to Emergency Department (ED)
 - B. Pregnant patient with a COHb level > 15%
 - C. Protracted, severe headache
 - D. Metabolic acidosis
 - E. Continued neurological impairment i.e., Unable to answer simple, logical questions.
 - F. Loss of consciousness at the scene
 - G. Continued symptoms after 4 hours of 100% Oxygen i.e., nausea, vomiting, dizziness, shortness of breath or an abnormal electrocardiogram EKG with signs of myocardial ischemia

- IV. Patients transferred to Arrowhead Regional Medical Center (ARMC) from another facility for HBO Therapy will be admitted to the ED prior to receiving HBO Therapy, following the process stated in section E.

- V. Process for getting Hyperbaric Oxygen for the ED patient exposed to CO.

- A. The ED physician will contact the HBOT Physician on call; Dr. Davis, pager: 909-349-8209 or Dr. Fenati: 858-344-7074, or Dr. Crouch: 818-642-1564 or Dr. Archambeau: 720-413-6225
- B. HBO Physician will determine if the patient requires HBO Therapy on an emergent basis.
- C. HBO Physician will contact the HBO staff directly, or through the HBO Supervisor, if after normal business hours of 0800-1730. The HBO physician will issue the appropriate orders and ensure that the treatment will be provided in a timely fashion.
- D. All patients with acute CO poisoning will be admitted to the appropriate area following HBO Therapy. E.g., ICU, telemetry, 23-hour hold, etc.
- E. HBO Physician will determine if the patient will be admitted under General Surgery Services or another service.
- F. Admission orders should be completed in the electronic health record (EHR) as soon as possible.
- G. to the HBO staff will contact bed management as soon as possible, and then call for a bed assignment. If no bed is available, the patient will be admitted to the Post Anesthesia Care Unit (PACU) and will be followed by the admitting service.
- H. HBO staff will call the assigned Nurse and give report.
- I. Immediately following the HBO Therapy, the patient will be transported to the assigned floor for follow up care.

Note: HBO Therapy Chambers at ARMC are not configured to treat intubated and ventilated patients.

- VI. Patient may develop delayed effects from exposure to Carbon monoxide that include
 - A. Aphasia, bradykinesia, or other communication difficulties
 - B. Apathy
 - C. Disorientation or hallucinations
 - D. Nuchal rigidity
 - E. Gait disturbance
 - F. Incontinence
- VII. Follow the Standard Protocol for HBO Therapy for CO Poisoning except:
 - A. All patients must be on a cardiac monitor during the HBO Therapy treatment via nurse
 - B. All patients must have an IV line with a pigtail for IV push medication
 - C. Treatment prescription to be:
 - 1. 3 Atmospheres (ATA) for 50 minutes with a 10 minute "air break" after the first 30 minutes. If a prolonged compression phase is needed due to squeeze or other problems, 5 minute "air breaks" every 30 minutes during the compression phase must be delivered. Begin the treatment time after the patient reaches 3 ATA. (Note: a 10 minute "air break" is needed because the FiO₂ of air at 3 ATA is > 60%)
 - 2. Reduce the pressure to 2 ATA, with 5 minute "air breaks" every 30 minutes until a total treatment time reaches 120 minutes from the point that the patient reached the initial treatment pressure.

REFERENCES: N/A

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/01/2023</u>	<u>Critical Care Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/09/2023</u>	<u>Quality Management Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 208 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 300 Issue 1
Page 1 of 4**

SECTION: ENVIRONMENT OF CARE

SUBJECT: EMERGENCIES IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____

Mark Connolly, Department Manager

Define appropriate actions to be taken by Hyperbaric Oxygen (HBO) Therapy staff during HBO emergencies, and to insure the proper reporting of such emergencies.

PROCEDURES

- I. Emergencies in Hyperbaric Oxygen
 - A. Emergency Decompression of the HBO Chamber - In the event of an emergency in which rapid removal of the patient is indicated, accelerated decompression of the chamber is imperative. The following procedures may be utilized.
 1. Emergency Decompression (Preferred method)
 - a. By setting the "CHAMBER PRESSURE" knob to "0" and the "RATE OF FLOW" knob to "5", the patient can be extracted from the chamber in approximately 3 minutes. When the green pressure chamber "wink light" begins to turn from green to black, the chamber door can be safely opened. (Refer to Sechrist Operating Manual)
 2. Emergency Vent
 - a. **NOTE:** The "Emergency Vent" may be used for intubated patients only or fire inside the chamber. However, EXTREME CAUTION must be used, because rapid decompression of the chamber may result in pulmonary rupture and/or massive air embolism.
 - b. Turn the Master Valve to "Emergency Vent" setting, press the red Emergency Vent button for one second approximately every 6 seconds (10 times per minute). Once the "wink light" turns from green to black, patient may be removed.
- II. Medical Emergencies:
 - A. Cardiac/Respiratory Arrest - In the event of a suspected cardiac/respiratory arrest of a patient receiving HBO therapy, follow Emergency Decompression guidelines.
 1. During decompression at 1 PSI/min, activate the **Code Blue procedure** by dialing 44444 on the telephone.
 2. Following decompression, immediately remove the patient from the chamber.
 3. Initiate CPR, per hospital policy, and assist trained hospital personnel with advanced life support as needed. Check glucose.
 4. Once the patient has stabilized, or the emergency team has assumed care of the patient, notify the attending Wound Care HBO Certified physician for further orders.
 5. Document the incident.

- B. Seizures - The following factors may contribute to oxygen seizures in patients receiving Hyperbaric Oxygen Therapy. Prevention of oxygen seizures may be possible by assessing the following conditions and withholding therapy if any one or more of these conditions are present.
1. **Fever:** Patients present with a temperature > 39.0 degrees Celsius (102.2 degrees Fahrenheit) will not receive routine Hyperbaric Oxygen Treatments. In the case of an emergency, the prescribing physician will make the determination whether to treat the patient, or not.
 2. **CO₂ Buildup:** Occurs with flow-rate failure of the chamber.
 3. **Extreme apprehension or panic.**
 4. **Smoking/Other use of Tobacco.**
 5. **Certain Drugs:** Aspirin, Corticosteroids, "street" drugs, and certain stimulants.
 6. **Low Blood Sugar:** Blood sugar less than 70 dc/l.
- C. Signs/Symptoms of impending seizure activity in patient
1. Nausea/Vomiting
 2. Shortness of Breath
 3. Air Hunger
 4. Eyes rolled upward
 5. Blank, vacant staring
 6. Twitching
 7. Tunnel Vision
 8. Tinnitus (ringing in the ears)
 9. Onset of Confusion
 10. Extreme apprehension/panic
 11. Onset of diaphoresis
 12. Restlessness

NOTE: Seizure may occur suddenly with no warning signs. >

- D. Treatment of Seizure
1. Activate the Rapid Response Team procedure per Hospital policy.
 2. Turn the Source Selector Knob on side of chamber to AIR instead of Oxygen (two turns to right). Have the patient (if conscious) take an air break when seizure is over.
 3. Conduct emergency decompression of the patient.
 4. Always perform decompression during the clonic stage of the seizure (patient is relaxed). Never decompress during the tonic stage (patient is in tetany, and most likely not breathing).
 5. After the patient has relaxed and resumed breathing turn the "Pressure Set" knob to "0" and the "Rate of Change" knob to "5".
 6. While chamber is decompressing, attempt to communicate with the patient via the chamber intercom. Explain what is happening, and what you are doing. The patient may not respond to you but will most likely hear you. Make every attempt to calm the patient verbally.
 7. When the chamber pressure is at surface pressure, ("wink" light turns from red to black), remove the patient from the chamber.
 8. Immediately position the patient on his/her side to prevent aspiration of stomach contents should vomiting occur.
 9. Raise the side rails and remain with the patient until he/she is stable.
 10. Obtain the patient's vital signs (Pulse and BP).
 11. Once the patient is stable, notify the Wound Care Clinic physician for further orders.
 12. Continue to monitor vital signs, and level of consciousness q. 15 minutes until patient is discharged or treatment resumes.
 13. Document the Incident.

E. Pneumothorax

1. Signs/Symptoms of Pneumothorax

- a. Sudden, stabbing chest pain.
- b. Sudden onset of shortness of breath.
- c. Tracheal shift toward the affected side.
- d. Asymmetrical chest movement during respiration.
- e. Increase in respiratory distress during decompression.
- f. Increase in respiratory distress during decompression.

2. Treatment

- a. If pneumothorax is suspected, immediately notify the Surgeon on call, and prepare equipment for thoracentesis procedure:
- b. Thoracentesis Tray (kept in HBO room)
- c. Claggett Needle (kept in HBO room)
- d. Notify the Wound Care Clinic physician as soon as possible. **DO NOT DECOMPRESS THE CHAMBER!**
- e. Once the physician who is to perform the thoracentesis has arrived, and the necessary equipment is ready, begin decompression of the chamber at 1 psig/min.
- f. When the chamber pressure has reached surface ("wink" lights turns from red to black), immediately remove the patient from the chamber. Check vital signs and blood glucose.
- g. The attending physician will confirm the presence of pneumothorax and will treat the patient in accordance with acceptable medical practices.
- h. Once patient is stable, arrange for discharge from HBO and hospital admission per physician orders.
- i. Document the incident.

F. Barotrauma - Atmospheric pressure changes in the chamber during HBO treatments may produce physical symptoms in some patients. This may include, but is not limited to ear/sinus squeeze, and tooth pain. Patients will be oriented regarding prevention and alleviation of problems associated with administration of Hyperbaric Oxygen Therapy prior to commencement of treatment.

1. Ear/Sinus Squeeze - Prevention and Treatment

- a. Unless contraindicated, the following medications may assist in the prevention of Barotrauma and ordered by the prescribing physician to be taken by the patient prior to each treatment:
- b. Nasal decongestants (Afrin, Neosynephrine, etc)
- c. Oral decongestants (Psuedophed, Entex LA, etc)
- d. Patients who have a history of inner or middle ear surgery must have an ENT consult prior commencement of HBO therapy.
- e. Some patients find that blowing their noses, yawning, forward jaw thrust, chewing gum, and swallowing alleviate ear/sinus squeeze.
- f. If conservative measures fail to prevent or eliminate Barotrauma, an ENT consult to assess the need for myringotomy is indicated.

2. Tooth Pain - Prevention/Treatment

- a. Patients who experience pain as a result of tooth squeeze will be referred to an oral surgeon or dentist for correction of the problem.

3. Barotrauma

- a. Ask patient to attempt equalization methods
- b. If unable ascend 1.0 PSI/min

- c. When chamber is at surface pressure, "wink" light turns from red to black, remove patient from chamber

REFERENCES: SECHRIST MONOPLACE HYPERBARIC CHAMBER MODEL 3200/3200R
USERS MANUAL

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u>02/01/2023</u>	<u>Critical Care Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u></u>	<u>Board of Supervisors</u> <small>Approved by the Governing Body</small>

REPLACES: Ambulatory Services Wound Clinic WCC 300 Issue

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 301 Issue 1
Page 1 of 2**

SECTION: ENVIRONMENT OF CARE

SUBJECT: EQUIPMENT FAILURE IN HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____
Mark Connolly, Department Manager

Provides standard procedure for equipment failure.

PROCEDURES

- I. Jammed chamber door - If the chamber door lock cannot be disengaged following completion of decompression of the chamber, the safety-locking pin may be jammed.
 - A. To release the lock pin, insert a blunt probe (i.e., a pencil, pen, other such object) into the hole at the bottom of the chamber hinge and press the locking pin into the unlocked position. Remove the patient from the chamber in the usual manner.
 - B. Secure the effected chamber from further use. Cancel any HBO treatments scheduled for the effected chamber. Notify the following:
 1. The attending Hyperbaric Oxygen (HBO) Therapy Physician or Medical Director
 2. Contact Sechrist International to schedule an on-site inspection of the effected chamber. Repair as indicated.
 3. The HBO Supervisor

- II. Failure of Oxygen Flow Rate or Sudden Increase in Oxygen Pressure
 - A. Initiate Emergency Decompression (Hyperbaric Oxygen Therapy 300 Emergencies in HBO)
 1. Turn oxygen shut-off valve to off position
 - B. Remove patient from the chamber.
 - C. Perform patient assessment: Vital signs, level of consciousness, color, etc. and document. If patient exhibits any untoward signs/symptoms, notify the physician immediately for further orders.
 - D. Notify Biomedical Engineering Department.
 - E. Document the incident.

**REFERENCES: WOUND CLINIC PROCEDURE 300 EMERGENCIES IN HBO
THE JOINT COMMISSION STANDARDS**

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 301 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
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**Procedure No. 302 Issue 1
Page 1 of 4**

SECTION: ENVIRONMENT OF CARE

SUBJECT: EQUIPMENT CARE

APPROVED BY: _____

Mark Connolly, Department Manager

To assure the safe operation of all equipment utilized during Hyperbaric Oxygen (HBO) Therapy, staff shall be responsible for the daily care of the HBO Chamber and ancillary equipment in the clinic area. All equipment utilized by HBO Therapy shall be maintained through a program of regular Preventive Maintenance in accordance with the HBO Therapy Policy and Procedure.

PROCEDURES

I. Hyperbaric Oxygen Installation Requirements

A. General Installation Requirement

1. The Hyperbaric Chamber must not be installed close to any heat sources.
2. The room housing the Hyperbaric Chamber should be used exclusively as a hyperbaric treatment facility.
3. All electrical equipment in the Hyperbaric treatment facility must be properly grounded and in optimum working condition.
4. Stringent fire precautions must be taken.
5. Fire extinguishers must be installed and fire hoods

B. Chamber Facility specifications

1. **Room size** should be a minimum of 16 feet (5m) long by 8 feet (2.5m) wide.
2. **Temperature:** The facility should be heated and air-conditioned with a system capable of maintaining the environment at 68-70 degrees Fahrenheit. (20-22 degrees Celsius)
3. **Flooring:** The floor should be tile or hard surface. Carpeting is not acceptable as it may generate static electricity, which is an ignition fire hazard.
4. **General Construction:** The room construction should meet the requirements of local codes that govern housing of class "B" Hyperbaric Chambers. Construction to NFPA Code 99 specifications is recommended.
5. **Window treatment:** Windows must be covered with drapes or blinds to shield the Hyperbaric Chamber acrylic cylinders from direct sunlight.
6. **Lighting:** Fluorescent lighting is **NOT** recommended.

C. Oxygen Requirements

1. Oxygen Consumption
 - a. Minimum: 240 LPM (8.5 cu ft./min.)
 - b. Maximum: 450 LPM (15.9 cu ft./min.)
 - c. Average: 300 LPM (10.6 cu ft./min.)

2. Estimated Oxygen Consumption
 - a. Per Typical Treatment: (90 minutes @ 10.6 cu ft/min) = 954 cu ft/treatment.
 - b. Per Day: (at five 90 minutes treatments per day): 5 x 954 = 4,770 cu ft/day
 - c. Per Week: (five days/week @ five treatments/day: 5 x 4,770=23,850 cu ft/week
 3. Estimated Oxygen Consumption as Liquid Oxygen (One gallon of liquid Oxygen=115 cu ft.)
 - a. Per 90 minute treatment = 8.3 gallons/treatment
 - b. Five treatments/day @ 90 min/treatment - 41.5 gal/day
 - c. Five days/week @ five treatments/day = 207.4 gal/week.
- D. Utility connections: (All connections must be within six (6) feet of the rear of the Hyperbaric Chamber).
- E. Oxygen Supply Lines:
1. The oxygen supply line must be capable of maintaining a minimum pressure of 50 p.s.i. at a flow rate of 20 SCFM (Standard Cubic Feet per Minute) of oxygen.
 2. The supply line pressure must not exceed 70 p.s.i.
 3. The line must terminate with a female ½ inch brass pipe thread.
 4. A pressure gauge and shut-off valve must be installed in line for each individual chamber.
 5. All fittings should be brass - which do not spark - to prevent fire hazards.

II. Equipment Care and Inspection

A. General Care/Safety

1. Always keep the chamber covered with a clean cloth sheet when not in use.
2. Keep the chamber door closed and locked when not in use.
3. Do not store items near the chamber if there is a possibility that they can fall on or against the chamber.
4. Do not allow unauthorized personnel in the chamber area.

B. Daily Care/Inspection - The following inspection must be performed on a daily basis prior to chamber use.

1. Thoroughly inspect inner and outer acrylic cylinder for scratches and crazing (fine hairline cracks). **NOTE: If crazing or deep scratches are present, do not use the chamber. Contact the manufacturer immediately.**
2. Inspect the door gasket for foreign materials, gouges, tears, etc. Clean if required. Replace if tears or gouges are present.
3. Inspect the chamber for cleanliness.
4. Inspect the chamber supply and vent hoses for kinks and loose connections or damage.
5. Check all grounding cords for integrity and proper connections. Verify ground wire resistance
6. Check grounding test light for proper continuity.
7. Check intercom power module as outlined in technical procedure.
8. Check oxygen pressure at wall outlet (must be at or above 50 p.s.i. – 70 p.s.i.
9. Check and connect hoses for oxygen supply to the chamber.
10. Monitor for oxygen leaks at:
 - a. Oxygen inlet sites and hoses
 - b. Seal of the chamber doors
 - c. Exhaust hoses

d. Chamber exhaust outlets

C. Weekly Inspection - The following inspections should be performed weekly:

1. Pressurize the chamber to 3 ATA and verify that the chamber purge rate is approximately 240 LPM or greater when the chamber purge rate control is set at minimum.
2. Use the emergency vent to de-pressurize the chamber to check for proper operation of the same.

D. Semi-Annual Inspection - The following inspections should be performed semi-annually:

1. The chamber pressure gauge should be checked for proper calibration. This can be done by connecting a calibrated pressure gauge to the chamber through one of the IV ports and pressurizing the chamber. The two gauges should be compared during pressurization. If the gauges do not read the same, the chamber pressure gauge should be calibrated.

Note: The chamber pressure gauge can be calibrated by the manufacturer or by the designee of the hospital Bio-Medical Department.

REFERENCES: ARMC WOUND CARE DEPARTMENT DAILY PERFORMANCE VERIFICATION LOG
SEMI-ANNUAL PERFORMANCE VERIFICATION
SECHRIST MONOPLACE HYPERBARIC CHAMBER MODEL 3200/3200R
USER'S MANUAL

DEFINITIONS: N/A

ATTACHMENTS: N/A

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
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<u>05/03/2022</u>	<u>Nursing Standards Committee</u> <small>Applicable Administrator, Hospital or Medical Committee</small>
<u></u>	<u>Board of Supervisors</u> <small>Approved by the Governing Body</small>

REPLACES: Ambulatory Services Wound Clinic WCC 302 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 303 Issue 1
Page 1 of 3**

SECTION: ENVIRONMENT OF CARE

SUBJECT: FIRE STANDARDS FOR HYPERBARIC OXYGEN (HBO)

APPROVED BY: _____

Mark Connolly, Department Manager

Provide a standard procedure in the event of a fire or other disasters occurring during Hyperbaric Oxygen (HBO) Therapy.

PROCEDURES

- I. *It is universally accepted that a fire within an oxygen environment under hyperbaric condition may likely be fatal to the patient, as oxygen supports combustion. Therefore, careful attention must be paid to ensure that no materials that could generate ignition enter the HBO chamber at any time.*
- II. Prevention of chamber fires requires that the HBO staff check the following items before each HBO treatment.
 - A. The patient must wear a 100% cotton gown, which is supplied by HBO staff. No undergarments of any type may be worn during the treatment. This includes panties, briefs, bras, hosiery, socks, etc. Patients will be oriented to danger of potential chamber fires and will be checked prior to each treatment.
 - B. All linen will be 100% cotton.
 - C. Pillows will be feather, with 100% cotton ticking, or Sechrist HBO pillows.
 - D. All patients will be grounded by utilizing the ground wrist strap.
 - E. All jewelry will be removed prior to placing patients in the chamber. This includes rings, watches, bracelets, earrings, and etc. Any jewelry, which cannot be removed, must be taped to conceal all exposed surfaces.
 - F. All electronic devices worn or used by the patient will be removed prior to placing the patient in the chamber. This includes hearing aids, TENS units, bone growth stimulators, etc.
 - G. All other paraphernalia must be removed before treatment begins. This includes Leg braces, prosthetics, wigs/toupee, sanitary napkins, removable retainers, hairpins/accessories, makeup, perfume/deodorant, and etc.
 - H. No cream, alcohol or deodorant on the patient
 - I. HBO staff, at their own discretion, may withhold any treatment if they feel that safety standards may be compromised.
- III. Extinguishing HBO Chamber fires
 - A. Activate the Fire Alarm by dialing 44444 on the telephone and or file pull station
 - B. Unplug all electrical connections to the effected HBO Chamber
 - C. Activate the **EMERGENCY DECOMPRESSION VENT. DO NOT OPEN THE CHAMBER DOOR!** (Patient will be removed from the chamber when the Fire Department arrives.)
 - D. Turn oxygen shut-off valve to the off position once reaching surface

- E. If other patients are receiving Hyperbaric Oxygen Therapy
 1. **IMMEDIATELY** begin decompression of those occupied chambers in the usual manner.
 2. Reassure the patients that they are not in danger
 3. Once decompression has been successfully completed, remove the patients and evacuate them to a safe area.
 - F. After the fire department has arrived, and no visible signs of flames are present in the affected chamber, clearance may be given to open the chamber door and remove the patient.
 1. DUE TO THE POSSIBILITY OF RE-IGNITION OF A FIRE, IT IS RECOMMENDED THAT FIREMEN, WHO ARE PROPERLY EQUIPED WITH PROTECTIVE GEAR, OPEN THE CHAMBER DOOR TO REMOVE THE PATIENT.
 2. HBO THERAPIST WILL GET A FIRE EXTINGUISHER AND FIRE HOOD
 - G. Notify the Wound Care Clinic physician.
 - H. Document according to hospital policy.
- IV. Fire in HBO chamber room, or immediate area.
- A. Close the chamber room door and activate fire pull station. Don fire hood.
 - B. Explain to the patient what is occurring, and that emergency decompression will begin immediately.
 - C. Begin Emergency Decompression in the following manner:
 1. Start ascent to surface at 5 psi/min
 2. Turn off oxygen valve at wall upon reaching the surface
 - D. Once decompression has been achieved (the "wink" light has turned from green to black"), extract the patient from the chamber, and proceed for follow emergency procedure for fires, as per hospital policy. Turn off zone valve outside of chamber.
 - E. Evacuate patient to safe location.
- V. Fire in a distant location
- A. Close the chamber room door.
 - B. Inform the patient, via the chamber intercom, that there is a FIRE DRILL.
 - C. Instruct the patient that decompression will begin shortly.
 - D. Begin decompression at the usual rate of 2.0 – 3.0 psig/min.
 - E. Once the chamber is decompressed ("wink" light turns from green to black), remove patient from the chamber. Turn off oxygen valve at wall upon reaching the surface.
 - F. Follow hospital protocol for evacuation during a fire.
- VI. Fire/Disaster Drills
- A. Close the HBO chamber room door.
 - B. Inform the patients via the chamber intercom, of the fire drill exercise, and that you are going to begin decompression the usual manner.
 - C. Decompress the chamber at the rate of 1.5-2.0 psig/min. Do not leave the patient unattended.
 - D. When decompression is complete, remove the patient from the chamber.
 - E. Follow routine hospital procedure for fire drills.
 - F. When termination of the drill has been announced, treatment of the patient may resume.



**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 304 Issue 1
Page 1 of 4**

SECTION: ENVIRONMENT OF CARE

SUBJECT: PERFORMANCE VERIFICATION OF HYPERBARIC OXYGEN (HBO) CHAMBER

APPROVED BY: _____
Mark Connolly, Department Manager

The Hyperbaric Oxygen (HBO) Therapy department will verify that Sechrist HBO chamber(s) is in safe operating condition in accordance with the manufacturer's guidelines. The personnel of the HBO therapy will verify the safe operating condition of the Sechrist HBO chambers on a daily, weekly and a semi-annual basis. Data will be recorded on the Performance Verification Logs.

PROCEDURES

I. Performance Verification

- A. The staff will check the following items daily:
 1. Supply line pressure is between 50-70 psig
 2. Cylinder condition (no crazing, chips or cracks)
 3. Unit is clean
 4. Hatch gasket is intact without cracks, rips or tears
 5. Ground wire is intact (attached to wall plug and back of the chamber). Check chamber ground wire resistance.
 6. Vent hose is intact
 7. Intercom is in working order
 8. Patient Call system operates
 9. Close/check master valve

- B. On a weekly basis, the staff will check the following for proper operation
 1. Purge rate will fall no lower than 240 L/min.
 2. Emergency Vent operation from 3 ATA
 3. External exhaust outlets are not obstructed
 4. Hatch safety lock operation

II. Chamber Pressure Gauge Accuracy Verification

- A. On a semi-annual basis, the HBO staff will verify the following parameters regarding chamber pressure settings per manufacturer's guidelines. A calibrated, external pressure gauge attached to a pass-through assembly will confirm accuracy of chamber pressure settings as follows.
 1. Check pressure variance at 15 psig, 20 psig and 30m psig.
 2. If system pressure reading variance is greater than +/- 2.0 psig, secure the chamber from further patient care.
 3. Contact Sechrist Industries to schedule maintenance.

REFERENCES: SECHRIST 3200 OPERATIONS MANUAL

DEFINITIONS: N/A

ATTACHMENTS: A. HYPERBARICS DAILY/WEEKLY PERFORMANCE VERIFICATION LOG
B. CHAMBER DAILY, WEEKLY AND MONTHLY CHECKLIST

APPROVAL DATE:

<u>N/A</u>	<u>Policy, Procedure and Standards Committee</u>
<u>11/08/2023</u>	<u>Carlos Prieto, Associate Hospital Administrator</u> Applicable Administrator, Hospital or Medical Committee
<u>01/25/2023</u>	<u>Patient Safety / Quality Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/01/2023</u>	<u>Critical Care Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/09/2023</u>	<u>Quality Management Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>02/23/2023</u>	<u>Medical Executive Committee</u> Applicable Administrator, Hospital or Medical Committee
<u>05/03/2022</u>	<u>Nursing Standards Committee</u> Applicable Administrator, Hospital or Medical Committee
<u></u>	<u>Board of Supervisors</u> Approved by the Governing Body

REPLACES: Ambulatory Services Wound Clinic WCC 304 Issue 2

EFFECTIVE: 11/8/2023

REVISED: N/A

REVIEWED: N/A

Attachment A

ARMC - HYPERBARICS
Daily/Weekly Performance Verification Log
Week Of:

Daily	Day Chamber	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
		#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2
1. Assure that gas supply pressure is between (50.0 - 70.0 psi).															
2. Visually inspect the acrylic for scratches and signs of crazing.															
3. Visually inspect the chamber interior and exterior for cleanliness.															
4. Visually inspect the door gasket for damage and cleanliness. Replace or clean as necessary.															
5. Check all ground wire connections. If any ground wires are loose, repair them before use. Verify ground wire resistance. Check chamber ground and patient ground.															
6. Inspect the gas supply lines and vent hoses for kinks and loose connections. Insure proper function before use.															
7. Perform a visual inspection of the complete chamber for damage, loose knobs, etc. The chamber must be in optimum working condition before use.															
8. Verify that the patient intercommunication system is functional. (see attached process)															

Weekly	Chamber	#1	#2
9. Verify that purge flow is a minimum of 240 lpm.			
10. Check the proper function of the emergency vent from 3 ATA.			
11. Check exterior vent exhaust line. Assure the end is not occluded. Exhaust air and oxygen hoses secure and free of kinks.			
12. Check the safety pin operation.			

Print: _____

Signature: _____

Initials: _____

Print: _____

Signature: _____

Initials: _____

Print: _____

Signature: _____

Initials: _____

Attachment B

**Chamber Daily, Weekly and Monthly Checklist
All Sechrist Monoplace Hyperbaric Models**

Month: _____ Year: _____

Chamber Serial#: _____

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		SEMI-ANNUAL CHAMBER CHECKS																															
Date completed:	Completed by:	Record Timing Results														Comments																	
Verify timing of compression rate at 1 at 4-5 psi. Factory specification one minute +/- 10 seconds.																																	
Verify timing of compression rate at 3 at 9-12 psi. Factory specification one minute +/- 10 seconds.																																	
Verify timing of compression rate at 5 at 16-17 psi. Factory specification 1/2 second test +/- 3 seconds																																	
Verify timing of compression rate at 3 at 21-24 psi. Factory specification one minute +/- 10 seconds																																	
Verify timing of compression rate at 1 at 27-28 psi. Factory specification one minute +/- 10 seconds																																	
Verify timing of decompression rate at 1 at 28-27 psi. Factory specification one minute +/- 10 seconds																																	
Verify timing of decompression rate at 3 at 24-21 psi. Factory specification one minute +/- 10 seconds																																	
Verify timing of decompression rate at 5 at 17-16 psi. Factory specification 12 seconds +/- 3 seconds																																	
Verify timing of decompression rate at 3 at 12-9 psi. Factory specification one minute +/- 10 seconds																																	
Verify timing of decompression rate at 1 at 5-4 psi. Factory specification one minute +/- 10 seconds																																	

Notes:

Suggestions for use: Check each box and initial column once tasks are completed. * Requires a numeric value to be entered in the box. This document may be used as an outline for the general care and safety checks on your chamber. Please refer back to the User's Manual for detailed information.





**ARROWHEAD REGIONAL MEDICAL CENTER
HYPERBARIC OXYGEN THERAPY
Standard Practice Policies and Procedures**

**Procedure No. 400 Issue 1
Page 1 of 3**

SECTION: SAFETY

SUBJECT: BODY MECHANICS

APPROVED BY: _____
Mark Connolly, Department Manager

Ambulatory Services Wound Clinic Staff will practice proper body mechanics during all activities. Good body mechanics keeps the spine balanced during any kind of movement. Poor body mechanics are the uncoordinated movement that eliminates the balance of the spine's three natural curves.

PROCEDURES

- I. Stand with feet apart, in slight stepage pattern and planted firmly for increased stability.
- II. Keep the center of gravity as low as possible and centered over your base of support by flexing from the hips and knees. **Maintain normal spinal curves.**
- III. Prepare muscles for action – stabilize the position of the pelvis by contracting the abdominal muscles.
- IV. Use the large leg muscles and joints rather than the small back muscles and joints.
- V. Flex knees and keep back straight when lifting/reaching for an item off a low surface.
- VI. Position the body to face the direction of the intended movement with foot pointed in the direction of the move. Move torso as one solid unit from the shoulders to the hips. **Do not twist spine when moving a load.**
- VII. Keep the load close to the body, near your center of gravity.
- VIII. Methods
 - A. How to turn the patient toward you:
 1. Lower the bed rail and head of the bed. Adjust the bed height to waist or hip level.
 2. Assist the patient to flex his/her knees.
 3. Place one hand behind the patient's farther shoulder and the other hand behind the patient's hip.
 4. Turn the patient toward you.
 - B. How to turn a TOTAL ASSIST patient (with 2 people):
 1. Lower the bed rail and head of bed. Adjust the bed height to waist or hip level.
 2. Position the patient's legs to one side of the bed. Using a draw sheet, move the patient's trunk to the side of the bed. The person on the side of the bed the patient is going from, lifts the draw sheet while the person on the side of the bed the patient is going to pulls on the draw sheet.

3. Flex the patient's knees and place one hand behind the patient's farther shoulder and hip.
 4. Turn the patient toward you, with assistance, if needed.
 5. Place pillows behind the patient's back to secure him/her on his/her side.
 6. Adjust the patient's head, upper and lower extremities in a position of comfort and pressure release.
- C. How to reposition a patient closer to the head of the bed:
1. Lower the bed rail and head of bed. Adjust the bed height to waist or hip level.
 2. With an assistant, grasp the draw sheet, pointing one foot in the direction of the movement.
 3. Slightly lean into the direction of the move, using your legs with one knee bent towards the direction of the movement.
 4. On the count of three, lift the draw sheet and slide the patient up towards the head of the bed.
 5. Instruct the patient to push with his/her feet. Give the patient an object to push against with his/her feet.
- D. Putting the patient onto a bedpan:
1. Lower the bed rail and head of bed. Adjust the bed height to waist or hip level.
 2. Assist the patient to roll away from you and reach for the opposite bed rail.
 3. Position bedpan properly under patient and assist patient to roll as a unit onto the bedpan.
- E. Reaching for high objects:
1. Do not hyperextend the arm and trunk while reaching.
 2. Use a step stool or ladder to get closer to the object.
- F. Correct sitting posture:
1. Lower back supported with lumbar support or rolled towel.
 2. Hip and knees positioned at least 90 degrees.
 3. Feet flat on the floor.
 4. Maintain normal spinal curves, keep neck in good alignment. Avoid a "forward" head, slumped shoulder position.
 5. Shift positions frequently.
 6. The working surface should be at a level, which allows the body to be erect, and the work to be performed at elbow height.
- G. Lifting an object from a low surface:
1. Bend from the knees and hips with abdominal muscles contracted.
 2. Place one knee on floor for added stability and increase width of base of support.
- H. Lowering a patient to the floor:
1. When a patient begins to fall, do not attempt to catch them. Once the momentum has started, it is almost impossible to stop a fall.
 - a. Holding onto the gait belt, assist the patient fall to the floor with as little impact as possible.
 - b. If you are near a wall, gently push the patient against it to slow the fall.
 - c. If possible, move close enough to "hug" the patient.
 - d. Focus on protecting the patient's head as you move to the floor.

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