

CLINICAL MEDICAL POLICY	
Policy Name:	Hyperbaric Oxygen Therapy (HBOT)
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Products:	Highmark Health Options Medicaid
Application:	All participating hospitals and providers
Page Number(s):	1 of 42

DISCLAIMER

Highmark Health Options medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

POLICY STATEMENT

Highmark Health Options may provide coverage under the medical-surgical benefits of the Company's Medicaid products for medically necessary hyperbaric oxygen therapy (HBOT) services for specific medical conditions.

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

The qualifications of the policy will meet the standards of the National Committee for Quality Assurance (NCQA) and the Delaware Department of Health and Social Services (DHSS) and all applicable state and federal regulations.

DEFINITIONS

Hyperbaric Oxygen Therapy (HBO) – A procedure that delivers higher pressures of oxygen to the tissues.

Idiopathic Sudden Sensorineural Hearing Loss (ISSNHL) – Occurs when there is a 30 dB or greater hearing loss over less than 72 hours and affect the inner ear. ISSNHL is extremely rare, but can be caused by autoimmune disease, syphilis, trauma, neoplasia and vascular causes.

Central Retinal Artery Occlusion (CRAO) – A disease of the eye where the flow of blood through the central retinal artery is blocked. There are several different causes of this occlusion; the most common is carotid artery atherosclerosis.

PROCEDURES

1. Systemic Hyperbaric Oxygen Therapy is considered medically necessary to treat a patient with one of the following conditions:
 - A. Acute gas or air embolism; OR
 - B. Acute traumatic ischemia (e.g., crush injuries, reperfusion injury, compartment syndrome); OR
 - C. Acute cyanide poisoning; OR
 - D. Acute carbon monoxide poisoning; OR
 - E. Chronic deep non-healing wounds in patients meeting the following criteria:
 - 1) A lower extremity wound, not superficial lesion; AND
 - 2) Type I or Type II diabetes; AND
 - 3) Assessment & correction of all underlying vascular problems in the affected limb (when possible); AND
 - 4) All necessary treatment to resolve any infection has been completed; AND
 - 5) A wound classified as Wagner Grade III or higher (Refer to Attachment A); AND
 - 6) There are no measurable signs of healing after 30 days of an adequate course of standard wound therapy; AND
 - 7) The HBOT is used in conjunctions with standard therapy; OR
 - F. Decompression sickness (The “Bends”); OR
 - G. Gas gangrene (i.e., clostridial myositis and myonecrosis); OR
 - H. Emergent profound anemia when one of the following are met:
 - 1) Active hemolysis with progressive anemia; OR
 - 2) Active massive hemorrhage; OR
 - 3) Severe signs or symptoms unresponsive to volume replacement (e.g., tachycardia, hypotension)
 - I. Soft-tissue radiation necrosis, osteoradionecrosis, and chronic or delayed radiation enteritis, cystitis, or proctitis as an adjunct to conventional treatment; OR
 - J. Idiopathic sudden moderate to profound sensorineural hearing loss (ISSNHL), when treatment is within three months of diagnosis; OR
 - K. Compromised skin grafts and flaps; OR
 - L. Prophylactic pre- and post-treatment for patients undergoing dental surgery of a radiated jaw; OR
 - M. Central Retinal Artery Occlusion (CRAO); OR
 - N. Chronic refractory osteomyelitis, unresponsive to conventional surgical and medical treatment; OR

- O. Progressive necrotizing infections (necrotizing fasciitis, Fournier's gangrene, polymicrobial progressive necrotizing infections)
- P. Acute peripheral arterial insufficiency
- Q. Actinomycosis, as an adjunct to conventional therapy when the disease process is refractory to antibiotics and surgical treatment

2. Technical Requirements

Highmark Health Options may provide coverage for full body HBOT for conditions listed above as medically necessary per the following criteria:

- A. Treatment occurs in a full body monoplace or multiplace chamber; AND
- B. The patient is provided 100% systemic oxygen; AND
- C. The chamber can reach a pressurization of at least 1.4 ATA; AND
- D. A qualified and trained in hyperbaric medicine physician is onsite.

3. Contraindications

Relative contraindications to the use of HBOT include prior chest surgery, lung disease, untreated pneumothorax, viral infections, recent middle ear surgery, optic neuritis, seizure disorders, high fever, and congenital spherocytosis and claustrophobia.

Absolute contraindications to HBOT (Latham, 2014) include untreated pneumothorax, concurrent administration of disulfuram (Antabuse); concurrent administration of doxorubicin, bleomycin, disulfiram, sulfamylon and cisplatinum; and administration to premature infants (due to the risk of retrolental fibroplasias). It was also noted that a clinical trial is currently underway to evaluate the efficacy of HBOT in the treatment of bisphosphonate-associated osteonecrosis.

4. Potential Complications of HBOT

Frequent injuries caused by HBOT are categorized as barotrauma. These injuries are caused by pressure as a result of an inability to equalize pressure from an air-containing space and the surrounding environment (Kindwall, 2004). Other complications include visual refraction changes (progressive myopia and cataracts) and oxygen toxicity (seizures, dry cough, chest pain or burning and decrease vital capacity).

5. Pediatric Considerations

Due to the proportion of surface area to body mass that is much greater in children than adults, care must be taken to ensure that a child remains warm without causing hyperthermia. The child must be able to focus and equalize their ears for HBOT to prevent middle ear barotrauma. If the child cannot, tympanostomy tubes should be considered.

6. When the HBOT services are not covered

For conditions other than those listed above scientific evidence has not been established and are considered not medically necessary. Treatment for any noncovered medical condition will be denied as not medically necessary.

Additionally, there are several procedures that are not considered medically necessary because of insufficient evidence regarding the effectiveness and safety of the HBOT services, including but not limited to:

- A. Direct topical application of oxygen administered to an open wound; OR
- B. Devices used in the topical application of oxygen.

7. Place of Service

HBOT is typically an outpatient procedure. HBOT provided in an inpatient setting requires individual case review.

8. Post-payment Audit Statement

The medical record must include documentation that reflects the medical necessity criteria and is subject to audit by Highmark Health Options at any time pursuant to the terms of your provider agreement.

9. Length of Coverage

The Undersea and Hyperbaric Medical Society's 1999 and 2008 Hyperbaric Oxygen Therapy Committee Report recommends utilization review of need for continued HBOT at the following treatment thresholds:

- A. Gas or air embolism, acute: 5 to 10 treatments
- B. Carbon monoxide poisoning: 5 treatments
- C. Chronic non-healing wounds: 30 treatments (one or two treatments daily)
- D. Decompression Sickness: 5 to 10 treatments
- E. Gas gangrene: up to 10 treatments
- F. Acute Traumatic Ischemia:
 - 1) Crush injury: 3 treatments per day for 48 hours followed by 2 treatments per day over the 2nd 48 hours and 1 treatment per day over the third period of 48 hours. (3-12 treatments)
 - 2) Compartment syndrome: 2 treatments per day for 24 to 36 hours
 - 3) Reperfusion injury - 1 treatment
- G. Radiation tissue injury, chronic: 60 treatments
- H. Chronic refractory osteomyelitis: no recommendations were made for a total number of treatments. For patients that respond to initial treatment with antibiotics, surgical debridement and HBO therapy, HBOT should be continued for approximately 4 to 6 weeks, for 20 – 40 postoperative treatments.
- I. Severe anemia: HBOT treatments should continue until such time that red blood cells have been satisfactorily replaced by patient regeneration or the patient can undergo transfusion.
- J. Soft tissue necrosis: 30 to 60 treatments
- K. Chronic wound – 30 days of treatment
- L. Idiopathic sudden sensorineural hearing loss: 20 treatments
- M. Skin grafts and flaps (compromised): 6 to 40 treatments
- N. Necrotizing soft tissue infections: 5 to 30 treatments
- O. Thermal burns: 5 to 45 treatments

GOVERNING BODIES APPROVAL

Hyperbaric oxygen chambers are regulated by the FDA as Class II medical devices. As of August 2, 2017, there are a total of 66 registered devices that have met all requirements of the 510(k) approval process. Devices that are not implantable and pose no risk of fatal outcome to the consumer should they malfunction are assigned Class II status and must meet FDA performance standards.

On December 20, 2002, the vacuum assisted closure (VAC) device received premarket approval to include the indication of partial-thickness burns. On November 13, 2009, the U.S. Food and Drug Administration (FDA) released a Medical Device Alert regarding the use of negative pressure wound therapy systems. The alert notified medical practitioners of possible death or serious complications due to the use of the vacuum assisted wound therapy systems. Per the FDA, it had received reports of six deaths and 77 injuries associated with this device over two years. Major complications reported included bleeding and infection. The alert provided the recommendations to reduce risks with the device:

- A. More careful selection of patients for vacuum assisted wound therapy;
- B. Assure that patient monitoring is performed frequently in an appropriate care setting by a trained practitioner. To determine the frequency of monitoring, the provider must consider the patient's condition, including wound status, wound location and comorbidities;
- C. Proper training must be obtained prior to prescribing and using the device;
- D. Instructions for proper home use of the vacuum assisted wound therapy device must be given to the patient and/or caregiver. This instruction is to include how to use the device, potential complications and their signs and symptoms, and management of complications.

In addition, the FDA listed the following contraindications for vacuum assisted wound therapy:

- A. Necrotic tissue with eschar present
- B. Untreated osteomyelitis
- C. Non-enteric and unexplored fistulas
- D. Malignancy (within the wound)
- E. Exposed blood vessels, nerves, anastomoses, or organs

To review the full text of the FDA warning, please see:

<https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm193277.htm>

The FDA release an updated Safety Communication on February 24, 2011 regarding major complications of the vacuum assisted wound therapy device. The update addressed the use of the device in the treatment of infants and children. Specifically 'The safety and effectiveness of vacuum assisted wound therapy devices in newborns, infants and children has not been established at this time and currently, there are no such devices cleared for use in these populations. The FDA defines a child as "greater than 2 to 12 years of age" (U.S. FDA Premarket Assessment of Pediatric Medical Devices, 2004).

CODING REQUIREMENTS

Procedure Codes

CPT/HCPCS Codes	Description
99183	Physician Attendance and supervision of hyperbaric oxygen therapy, per session
G0277	Hyperbaric oxygen under pressure, full body chamber, per 30 minute intervals

Non-covered Procedure Codes

HCPCS Codes	Description
A4575	Topical hyperbaric oxygen chamber, disposable
E0446	Topical oxygen delivery system, not otherwise specified, includes all supplies and accessories

*Requests for either of the two non-covered procedure codes listed above require review by a Medical Director.

Diagnosis Codes

ICD-10 Codes	Description
A41.4	Sepsis due to anaerobes [progressive necrotizing soft tissue anaerobic infections]
A42.0	Pulmonary actinomycosis
A42.1	Abdominal actinomycosis
A42.2	Cervicofacial actinomycosis
A42.81	Actinomycotic meningitis
A42.82	Actinomycotic encephalitis
A42.89	Other forms of actinomycosis
A42.9	Actinomycosis, unspecified
A48.0	Gas gangrene
B47.1	Actinomycetoma
B78.1	Cutaneous strongyloidiasis
D50.0	Iron deficiency anemia secondary to blood loss (chronic) [overwhelming and transfusion is impossible because there is no suitable blood available or religion does not permit transfusion]
D62	Acute post-hemorrhagic anemia
E08.51	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene
E08.52	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene
E08.621	Diabetes mellitus due to underlying condition with foot ulcer
E08.622	Diabetes mellitus due to underlying condition with other skin ulcer
E09.52	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene
E09.59	Drug or chemical induced diabetes mellitus with other circulatory complications
E09.621	Drug or chemical induced diabetes mellitus with foot ulcer
E09.622	Drug or chemical induced diabetes mellitus with other skin ulcer
E10.52	Type I diabetes mellitus with diabetic peripheral angiopathy with gangrene
E10.59	Type I diabetes mellitus with other circulatory complications
E10.65	Type 1 diabetes mellitus with hyperglycemia
E10.69	Type 1 diabetes mellitus with other specified complication
E10.621	Type 1 diabetes mellitus with foot ulcer
E10.622	Type 1 diabetes mellitus with other skin
E10.628	Type 1 diabetes mellitus with other skin complications
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene
E11.59	Type 2 diabetes mellitus with other circulatory complications
E11.620	Type 2 diabetes mellitus with diabetic dermatitis
E11.621	Type 2 diabetes mellitus with foot ulcer
E11.622	Type 2 diabetes mellitus with other skin ulcer

E11.628	Type 2 diabetes mellitus with other skin complications
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma
E13.52	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene
E13.59	Other specified diabetes mellitus with other circulatory complications
E13.621	Other specified diabetes mellitus with foot ulcer
E13.622	Other specified diabetes mellitus with other skin ulcer
E13.628	Other specified diabetes mellitus with other skin complications
H34.10	Central retinal artery occlusion, unspecified eye
H34.11	Central retinal artery occlusion, right eye
H34.12	Central retinal artery occlusion, left eye
H34.13	Central retinal artery occlusion, bilateral
H90.3	Sensorineural hearing loss, unspecified
H90.41	Sensorineural hearing loss, unilateral, right ear, with unrestricted hearing on the contralateral side
H90.42	Sensorineural hearing loss, unilateral, left ear, with unrestricted hearing on the contralateral side
H90.5	Unspecified sensorineural hearing loss
I70.231	Atherosclerosis of native arteries of right leg with ulceration of thigh
I70.232	Atherosclerosis of native arteries of right leg with ulceration of calf
I70.233	Atherosclerosis of native arteries of right leg with ulceration of ankle
I70.234	Atherosclerosis of native arteries of right leg with ulceration of heel and midfoot
I70.235	Atherosclerosis of native arteries of right leg with ulceration of other part of foot
I70.238	Atherosclerosis of native arteries of right leg with ulceration of other part of lower right leg
I70.239	Atherosclerosis of native arteries of right leg with ulceration of unspecified site
I70.241	Atherosclerosis of native arteries of left leg with ulceration of thigh
I70.242	Atherosclerosis of native arteries of left leg with ulceration of calf
I70.243	Atherosclerosis of native arteries of left leg with ulceration of ankle
I70.244	Atherosclerosis of native arteries of left leg with ulceration of heel and midfoot
I70.245	Atherosclerosis of native arteries of left leg with ulceration of other part of foot
I70.248	Atherosclerosis of native arteries of left leg with ulceration of other part of lower left leg
I70.249	Atherosclerosis of native arteries of left leg with ulceration of unspecified site
I70.331	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of thigh
I70.332	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of calf
I70.333	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of ankle
I70.334	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of heel and midfoot
I70.335	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of other part of foot
I70.338	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of other part of lower leg
I70.339	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of unspecified site
I70.341	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of thigh
I70.342	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of calf
I70.343	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of ankle

170.344	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of heel and midfoot
170.345	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of other part of foot
170.348	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of other part of lower leg
170.349	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of unspecified site
170.361	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, right leg
170.362	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, left leg
170.363	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, bilateral legs
170.368	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, other extremity
170.369	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, unspecified extremity
170.431	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of thigh
170.432	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of calf
170.433	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of ankle
170.434	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of heel and midfoot
170.435	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of other part of foot
170.438	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of other part of lower leg
170.439	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of unspecified site
170.441	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of thigh
170.442	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of calf
170.443	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of ankle
170.444	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of heel and midfoot
170.445	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of other part of foot
170.448	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of other part of lower leg
170.449	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of unspecified site
170.461	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, right leg
170.462	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, left leg
170.463	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, bilateral legs
170.468	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, other extremity
170.469	Atherosclerosis of nonautologous vein bypass graft(s) of the extremities with gangrene, unspecified extremity
170.531	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of thigh
170.532	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of calf
170.533	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of ankle
170.534	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of heel and midfoot

170.535	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of other part of foot
170.538	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of other part of lower leg
170.539	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of unspecified site
170.541	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of thigh
170.542	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of calf
170.543	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of ankle
170.544	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of heel and midfoot
170.545	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of other part of foot
170.548	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of other part of lower leg
170.549	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration unspecified site
170.561	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, right leg
170.562	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, left leg
170.563	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, bilateral legs
170.568	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, other extremity
170.569	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, unspecified extremity
170.631	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of thigh
170.632	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of calf
170.633	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of ankle
170.634	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of heel and midfoot
170.635	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of other part of foot
170.638	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of other part of lower leg
170.639	Atherosclerosis of nonbiologic bypass graft(s) of the right leg with ulceration of unspecified site
170.641	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of thigh
170.642	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of calf
170.643	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of ankle
170.644	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of heel and midfoot
170.645	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of other part of foot
170.648	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of other part of lower leg
170.649	Atherosclerosis of nonbiologic bypass graft(s) of the left leg with ulceration of unspecified site
170.731	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of thigh
170.732	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of calf
170.733	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of ankle
170.734	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of heel and midfoot
170.735	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of other part of foot

I70.738	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of other part of lower leg
I70.739	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of unspecified site
I70.741	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of thigh
I70.742	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of calf
I70.743	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of ankle
I70.744	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of heel and midfoot
I70.745	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of other part of foot
I70.748	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of other part of lower leg
I70.749	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of unspecified site
I73.00	Raynaud's syndrome without gangrene
I73.01	Raynaud's syndrome with gangrene
I73.1	Thromboangiitis obliterans (Buerger's disease)
I74.2	Embolism and thrombosis of arteries of the upper extremities
I74.3	Embolism and thrombosis of arteries of the lower extremities
I74.5	Embolism and thrombosis of iliac artery
I96	Gangrene not elsewhere classified
K52.0	Gastroenteritis and colitis due to radiation
K62.7	Radiation proctitis
L08.0	Pyoderma
L08.1	Erythrasma
L08.81	Pyoderma vegetans
L59.8	Other specified disorders of the skin and subcutaneous tissue related to radiation
L59.9	Disorder of the skin and subcutaneous tissue related to radiation, unspecified
L88	Pyoderma gangrenosum
L92.8	Other granulomatous disorders of the skin and subcutaneous tissue
L97.102	Non-pressure chronic ulcer of unspecified thigh with fat layer exposed
L97.103	Non-pressure chronic ulcer of unspecified thigh with necrosis of muscle
L97.104	Non-pressure chronic ulcer of unspecified thigh with necrosis of bone
L97.105	Non-pressure chronic ulcer of unspecified thigh with muscle involvement without evidence of necrosis
L97.106	Non-pressure chronic ulcer of unspecified thigh with bone involvement without evidence of necrosis
L97.108	Non-pressure chronic ulcer of unspecified thigh with other specified severity
L97.109	Non-pressure chronic ulcer of unspecified thigh with unspecified severity
L97.112	Non-pressure chronic ulcer of right thigh with fat layer exposed
L97.113	Non-pressure chronic ulcer of right thigh with necrosis of muscle
L97.114	Non-pressure chronic ulcer of right thigh with necrosis of bone
L97.115	Non-pressure chronic ulcer of right thigh with muscle involvement without evidence of necrosis
L97.116	Non-pressure chronic ulcer of right thigh with bone involvement without evidence of necrosis
L97.118	Non-pressure chronic ulcer of right thigh with other specified severity
L97.119	Non-pressure chronic ulcer of right thigh with unspecified severity
L97.122	Non-pressure chronic ulcer of left thigh with fat layer exposed
L97.123	Non-pressure chronic ulcer of left thigh with necrosis of muscle

L97.124	Non-pressure chronic ulcer of left thigh with necrosis of bone
L97.125	Non-pressure chronic ulcer of left thigh with muscle involvement without evidence of necrosis
L97.126	Non-pressure chronic ulcer of left thigh with bone involvement without evidence of necrosis
L97.128	Non-pressure chronic ulcer of left thigh with other specified severity
L97.129	Non-pressure chronic ulcer of left thigh with unspecified severity
L97.202	Non-pressure chronic ulcer of unspecified calf with fat layer exposed
L97.203	Non-pressure chronic ulcer of unspecified calf with necrosis of muscle
L97.204	Non-pressure chronic ulcer of unspecified calf with necrosis of bone
L97.205	Non-pressure chronic ulcer of unspecified calf with muscle involvement without evidence of necrosis
L97.206	Non-pressure chronic ulcer of unspecified calf with bone involvement without evidence of necrosis
L97.208	Non-pressure chronic ulcer of unspecified calf with other specified severity
L97.209	Non-pressure chronic ulcer of unspecified calf with unspecified severity
L97.212	Non-pressure chronic ulcer of right calf with fat layer exposed
L97.213	Non-pressure chronic ulcer of right calf with necrosis of muscle
L97.214	Non-pressure chronic ulcer of right calf with necrosis of bone
L97.215	Non-pressure chronic ulcer of right calf with muscle involvement without evidence of necrosis
L97.216	Non-pressure chronic ulcer of right calf with bone involvement without evidence of necrosis
L97.218	Non-pressure chronic ulcer of right calf with other specified severity
L97.219	Non-pressure chronic ulcer of right calf with unspecified severity
L97.222	Non-pressure chronic ulcer of left calf with fat layer exposed
L97.223	Non-pressure chronic ulcer of left calf with necrosis of muscle
L97.224	Non-pressure chronic ulcer of left calf with necrosis of bone
L97.225	Non-pressure chronic ulcer of left calf with muscle involvement without evidence of necrosis
L97.226	Non-pressure chronic ulcer of left calf with bone involvement without evidence of necrosis
L97.228	Non-pressure chronic ulcer of left calf with other specified severity
L97.229	Non-pressure chronic ulcer of left calf with unspecified severity
L97.302	Non-pressure chronic ulcer of unspecified ankle with fat layer exposed
L97.303	Non-pressure chronic ulcer of unspecified ankle with necrosis of muscle
L97.304	Non-pressure chronic ulcer of unspecified ankle with necrosis of bone
L97.305	Non-pressure chronic ulcer of unspecified ankle with necrosis of bone
L97.306	Non-pressure chronic ulcer of unspecified ankle with muscle involvement without evidence of necrosis
L97.308	Non-pressure chronic ulcer of unspecified ankle with other specified severity
L97.309	Non-pressure chronic ulcer of unspecified ankle with unspecified severity
L97.312	Non-pressure chronic ulcer of right ankle with fat layer exposed
L97.313	Non-pressure chronic ulcer of right ankle with necrosis of muscle
L97.314	Non-pressure chronic ulcer of right ankle with necrosis of bone
L97.315	Non-pressure chronic ulcer of right ankle with muscle involvement without necrosis of bone
L97.316	Non-pressure chronic ulcer of right ankle with bone involvement without evidence of necrosis
L97.318	Non-pressure chronic ulcer of right ankle with other specified severity
L97.319	Non-pressure chronic ulcer of right ankle with unspecified severity
L97.322	Non-pressure chronic ulcer of left ankle with fat layer exposed
L97.323	Non-pressure chronic ulcer of left ankle with necrosis of muscle
L97.324	Non-pressure chronic ulcer of left ankle with necrosis of bone

L97.325	Non-pressure chronic ulcer of left ankle with muscle involvement without necrosis of bone
L97.326	Non-pressure chronic ulcer of left ankle with bone involvement without evidence of necrosis
L97.328	Non-pressure chronic ulcer of left ankle with other specified severity
L97.329	Non-pressure chronic ulcer of left ankle with unspecified severity
L97.402	Non-pressure chronic ulcer of unspecified heel and midfoot with fat layer exposed
L97.403	Non-pressure chronic ulcer of unspecified heel and midfoot with necrosis of muscle
L97.404	Non-pressure chronic ulcer of unspecified heel and midfoot with necrosis of bone
L97.405	Non-pressure chronic ulcer of unspecified heel and midfoot with muscle involvement without necrosis of bone
L97.406	Non-pressure chronic ulcer of unspecified heel and midfoot with bone involvement without evidence of necrosis
L97.408	Non-pressure chronic ulcer of unspecified heel and midfoot with other specified severity
L97.409	Non-pressure chronic ulcer of unspecified heel and midfoot with unspecified severity
L97.412	Non-pressure chronic ulcer of right heel and midfoot with fat layer exposed
L97.413	Non-pressure chronic ulcer of right heel and midfoot with necrosis of muscle
L97.414	Non-pressure chronic ulcer of right heel and midfoot with necrosis of bone
L97.415	Non-pressure chronic ulcer of right heel and midfoot with muscle involvement without necrosis of bone
L97.416	Non-pressure chronic ulcer of right heel and midfoot with bone involvement without evidence of necrosis
L97.418	Non-pressure chronic ulcer of right heel and midfoot with other specified severity
L97.419	Non-pressure chronic ulcer of right heel and midfoot with unspecified severity
L97.422	Non-pressure chronic ulcer of left heel and midfoot with fat layer exposed
L97.423	Non-pressure chronic ulcer of left heel and midfoot with necrosis of muscle
L97.424	Non-pressure chronic ulcer of left heel and midfoot with necrosis of bone
L97.425	Non-pressure chronic ulcer of left heel and midfoot with muscle involvement without necrosis of bone
L97.426	Non-pressure chronic ulcer of left heel and midfoot with bone involvement without evidence of necrosis
L97.428	Non-pressure chronic ulcer of left heel and midfoot with other specified severity
L97.429	Non-pressure chronic ulcer of left heel and midfoot with unspecified severity
L97.502	Non-pressure chronic ulcer of other part of unspecified foot with fat layer exposed
L97.503	Non-pressure chronic ulcer of other part of unspecified foot with necrosis of muscle
L97.504	Non-pressure chronic ulcer of other part of unspecified foot with necrosis of bone
L97.505	Non-pressure chronic ulcer of other part of unspecified foot with muscle involvement without necrosis of bone
L97.506	Non-pressure chronic ulcer of other part of unspecified foot with bone involvement without evidence of necrosis
L97.508	Non-pressure chronic ulcer of other part of unspecified foot with other specified severity
L97.509	Non-pressure chronic ulcer of other part of unspecified foot with unspecified severity
L97.512	Non-pressure chronic ulcer of other part of right foot with fat layer exposed
L97.513	Non-pressure chronic ulcer of other part of right foot with necrosis of muscle
L97.514	Non-pressure chronic ulcer of other part of right foot with necrosis of bone
L97.515	Non-pressure chronic ulcer of other part of right foot with muscle involvement without necrosis of bone
L97.516	Non-pressure chronic ulcer of other part of right foot with bone involvement without evidence of necrosis
L97.518	Non-pressure chronic ulcer of other part of right foot with other specified severity
L97.519	Non-pressure chronic ulcer of other part of right foot with unspecified severity
L97.522	Non-pressure chronic ulcer of other part of left foot with fat layer exposed
L97.523	Non-pressure chronic ulcer of other part of left foot with necrosis of muscle

L97.524	Non-pressure chronic ulcer of other part of left foot with necrosis of bone
L97.525	Non-pressure chronic ulcer of other part of left foot with muscle involvement without necrosis of bone
L97.526	Non-pressure chronic ulcer of other part of left foot with bone involvement without evidence of necrosis
L97.528	Non-pressure chronic ulcer of other part of left foot with other specified severity
L97.529	Non-pressure chronic ulcer of other part of left foot with unspecified severity
L97.802	Non-pressure chronic ulcer of other part of unspecified lower leg with fat layer exposed
L97.803	Non-pressure chronic ulcer of other part of unspecified lower leg with necrosis of muscle
L97.804	Non-pressure chronic ulcer of other part of unspecified lower leg with necrosis of bone
L97.805	Non-pressure chronic ulcer of other part of unspecified lower leg with muscle involvement without necrosis of bone
L97.806	Non-pressure chronic ulcer of other part of unspecified lower leg without evidence of necrosis
L97.808	Non-pressure chronic ulcer of other part of unspecified lower leg with other specified severity
L97.809	Non-pressure chronic ulcer of other part of unspecified lower leg with unspecified severity
L97.812	Non-pressure chronic ulcer of other part of right lower leg with fat layer exposed
L97.813	Non-pressure chronic ulcer of other part of right lower leg with necrosis of muscle
L97.814	Non-pressure chronic ulcer of other part of right lower leg with necrosis of bone
L97.815	Non-pressure chronic ulcer of other part of right lower leg with muscle involvement without necrosis of bone
L97.816	Non-pressure chronic ulcer of other part of right lower leg with bone involvement without evidence of necrosis
L97.818	Non-pressure chronic ulcer of other part of right lower leg with other specified severity
L97.819	Non-pressure chronic ulcer of other part of right lower leg with unspecified severity
L97.822	Non-pressure chronic ulcer of other part of left lower leg with fat layer exposed
L97.823	Non-pressure chronic ulcer of other part of left lower leg with necrosis of muscle
L97.824	Non-pressure chronic ulcer of other part of left lower leg with necrosis of bone
L97.825	Non-pressure chronic ulcer of other part of left lower leg with muscle involvement without necrosis of bone
L97.826	Non-pressure chronic ulcer of other part of left lower leg with bone involvement without evidence of necrosis
L97.828	Non-pressure chronic ulcer of other part of left lower leg with other specified severity
L97.829	Non-pressure chronic ulcer of other part of left lower leg with unspecified severity
L97.902	Non-pressure chronic ulcer of unspecified part of lower leg with fat layer exposed
L97.903	Non-pressure chronic ulcer of unspecified part of lower leg with necrosis of muscle
L97.904	Non-pressure chronic ulcer of unspecified part of lower leg with necrosis of bone
L97.905	Non-pressure chronic ulcer of unspecified part of unspecified lower leg with muscle involvement without evidence of necrosis
L97.906	Non-pressure chronic ulcer of unspecified part of unspecified lower leg with bone involvement without evidence of necrosis
L97.908	Non-pressure chronic ulcer of unspecified part of unspecified lower leg with other specified severity
L97.909	Non-pressure chronic ulcer of unspecified part of lower leg with unspecified severity
L97.912	Non-pressure chronic ulcer of unspecified part of right lower leg with fat layer exposed
L97.913	Non-pressure chronic ulcer of unspecified part of right lower leg with necrosis of muscle
L97.914	Non-pressure chronic ulcer of unspecified part of right lower leg with necrosis of bone
L97.915	Non-pressure chronic ulcer of unspecified part of right lower leg with muscle involvement without evidence of necrosis
L97.916	Non-pressure chronic ulcer of unspecified part of right lower leg with bone involvement without evidence of necrosis
L97.918	Non-pressure chronic ulcer of unspecified part of right lower leg with other specified severity

L97.919	Non-pressure chronic ulcer of unspecified part of right lower leg with unspecified severity
L97.922	Non-pressure chronic ulcer of unspecified part of left lower leg with fat layer exposed
L97.923	Non-pressure chronic ulcer of unspecified part of left lower leg with necrosis of muscle
L97.924	Non-pressure chronic ulcer of unspecified part of left lower leg with necrosis of bone
L97.925	Non-pressure chronic ulcer of unspecified part of left lower leg with muscle involvement without evidence of necrosis
L97.926	Non-pressure chronic ulcer of unspecified part of left lower leg with bone involvement without evidence of necrosis
L97.928	Non-pressure chronic ulcer of unspecified part of left lower leg with other specified severity
L97.929	Non-pressure chronic ulcer of unspecified part of left lower leg with unspecified severity
L98.413	Non-pressure chronic ulcer of buttock with necrosis of muscle
L98.414	Non-pressure chronic ulcer of buttock with necrosis of bone
L98.415	Non-pressure chronic ulcer of buttock with muscle involvement without evidence of necrosis
L98.416	Non-pressure chronic ulcer of buttock with bone involvement without evidence of necrosis
L98.418	Non-pressure chronic ulcer of buttock with other specified severity
L98.423	Non-pressure chronic ulcer of back with necrosis of muscle
L98.424	Non-pressure chronic ulcer of back with necrosis of bone
L98.425	Non-pressure chronic ulcer of back with muscle involvement without evidence of necrosis
L98.426	Non-pressure chronic ulcer of back with other specified severity
L98.428	Non-pressure chronic ulcer of back with other specified severity
L98.493	Non-pressure chronic ulcer of skin of other sites with necrosis of muscle
L98.494	Non-pressure chronic ulcer of skin of other sites with necrosis of bone
L98.495	Non-pressure chronic ulcer of skin of other sites with muscle involvement without evidence of necrosis
L98.496	Non-pressure chronic ulcer of skin of other sites with bone involvement without evidence of necrosis
L98.498	Non-pressure chronic ulcer of other sites with other specified severity
L98.8	Other specified disorders of the skin and subcutaneous tissue
M27.2	Inflammatory conditions of the jaws [radiation necrosis of jaw]
M27.8	Other specified diseases of jaw [prophylactic pre- and post-treatment for members undergoing dental surgery of a radiated jaw]
M46.20	Osteomyelitis of vertebra, site unspecified
M46.21	Osteomyelitis of vertebra, occipito-atlanto-axial region
M46.22	Osteomyelitis of vertebra, cervical region
M46.23	Osteomyelitis of vertebra, cervicothoracic region
M46.24	Osteomyelitis of vertebra, thoracic region
M46.25	Osteomyelitis of vertebra, thoracolumbar region
M46.26	Osteomyelitis of vertebra, lumbar region
M46.27	Osteomyelitis of vertebra, lumbosacral region
M46.28	Osteomyelitis of vertebra, sacral and sacrococcygeal region
M72.6	Necrotizing fasciitis
M86.00	Acute hematogenous osteomyelitis, unspecified site
M86.011	Acute hematogenous osteomyelitis, right shoulder
M86.012	Acute hematogenous osteomyelitis, left shoulder
M86.019	Acute hematogenous osteomyelitis, unspecified shoulder
M86.021	Acute hematogenous osteomyelitis, right humerus
M86.022	Acute hematogenous osteomyelitis, left humerus
M86.029	Acute hematogenous osteomyelitis, unspecified humerus
M86.031	Acute hematogenous osteomyelitis, right radius and ulna
M86.032	Acute hematogenous osteomyelitis, left radius and ulna
M86.039	Acute hematogenous osteomyelitis, unspecified radius and ulna

M86.041	Acute hematogenous osteomyelitis, right hand
M86.042	Acute hematogenous osteomyelitis, left hand
M86.049	Acute hematogenous osteomyelitis, unspecified hand
M86.051	Acute hematogenous osteomyelitis, right femur
M86.052	Acute hematogenous osteomyelitis, left femur
M86.059	Acute hematogenous osteomyelitis, unspecified femur
M86.061	Acute hematogenous osteomyelitis, right tibia and fibula
M86.062	Acute hematogenous osteomyelitis, left tibia and fibula
M86.069	Acute hematogenous osteomyelitis, unspecified tibia and fibula
M86.071	Acute hematogenous osteomyelitis, right ankle and foot
M86.072	Acute hematogenous osteomyelitis, left ankle and foot
M86.079	Acute hematogenous osteomyelitis, unspecified ankle and foot
M86.08	Acute hematogenous osteomyelitis, other sites
M86.09	Acute hematogenous osteomyelitis, multiple sites
M86.10	Other acute hematogenous osteomyelitis, unspecified site
M86.111	Other acute hematogenous osteomyelitis, right shoulder
M86.112	Other acute hematogenous osteomyelitis, left shoulder
M86.119	Other acute hematogenous osteomyelitis, unspecified shoulder
M86.121	Other acute hematogenous osteomyelitis, right humerus
M86.122	Other acute hematogenous osteomyelitis, left humerus
M86.129	Other acute hematogenous osteomyelitis, unspecified humerus
M86.131	Other acute hematogenous osteomyelitis, right radius and ulna
M86.132	Other acute osteomyelitis, left radius and ulna
M86.139	Other acute osteomyelitis, unspecified radius and ulna
M86.141	Other acute osteomyelitis, right hand
M86.142	Other acute osteomyelitis, left hand
M86.149	Other acute osteomyelitis, unspecified hand
M86.151	Other acute osteomyelitis, right femur
M86.152	Other acute osteomyelitis, left femur
M86.159	Other acute osteomyelitis, unspecified femur
M86.161	Other acute osteomyelitis, right tibia and fibula
M86.162	Other acute osteomyelitis, left tibia and fibula
M86.169	Other acute osteomyelitis, unspecified tibia and fibula
M86.171	Other acute osteomyelitis, right ankle and foot
M86.172	Other acute osteomyelitis, left ankle and foot
M86.179	Other acute osteomyelitis, unspecified ankle and foot
M86.18	Other acute osteomyelitis, other site
M86.19	Other acute osteomyelitis, multiple sites
M86.20	Subacute osteomyelitis, unspecified site
M86.211	Subacute osteomyelitis, right shoulder
M86.212	Subacute osteomyelitis, left shoulder
M86.219	Subacute osteomyelitis, unspecified shoulder
M86.221	Subacute osteomyelitis, right humerus
M86.222	Subacute osteomyelitis, left humerus
M86.229	Subacute osteomyelitis, unspecified humerus
M86.231	Subacute osteomyelitis, right radius and ulna
M86.232	Subacute osteomyelitis, left radius and ulna
M86.239	Subacute osteomyelitis, unspecified radius and ulna
M86.241	Subacute osteomyelitis, right hand
M86.242	Subacute osteomyelitis, left hand
M86.249	Subacute osteomyelitis, unspecified hand

M86.251	Subacute osteomyelitis, right femur
M86.252	Subacute osteomyelitis, left femur
M86.259	Subacute osteomyelitis, unspecified femur
M86.261	Subacute osteomyelitis, right tibia and fibula
M86.262	Subacute osteomyelitis, left tibia and fibula
M86.269	Subacute osteomyelitis, unspecified tibia and fibula
M86.271	Subacute osteomyelitis, right ankle and foot
M86.272	Subacute osteomyelitis, unspecified ankle and foot
M86.279	Subacute osteomyelitis, other site
M86.28	Subacute osteomyelitis, multiple sites
M86.29	Chronic multifocal osteomyelitis, unspecified site
M86.30	Chronic multifocal osteomyelitis, unspecified site
M86.311	Chronic multifocal osteomyelitis, right shoulder
M86.312	Chronic multifocal osteomyelitis, left shoulder
M86.319	Chronic multifocal osteomyelitis, unspecified shoulder
M86.321	Chronic multifocal osteomyelitis, right humerus
M86.322	Chronic multifocal osteomyelitis, left humerus
M86.329	Chronic multifocal osteomyelitis, unspecified humerus
M86.331	Chronic multifocal osteomyelitis, right radius & ulna
M86.332	Chronic multifocal osteomyelitis, left radius & ulna
M86.339	Chronic multifocal osteomyelitis, unspecified radius & ulna
M86.341	Chronic multifocal osteomyelitis, right hand
M86.342	Chronic multifocal osteomyelitis, left hand
M86.349	Chronic multifocal osteomyelitis, unspecified hand
M86.351	Chronic multifocal osteomyelitis, right femur
M86.352	Chronic multifocal osteomyelitis, left femur
M86.359	Chronic multifocal osteomyelitis, unspecified femur
M86.361	Chronic multifocal osteomyelitis, right tibia and fibula
M86.362	Chronic multifocal osteomyelitis, left tibia and fibula
M86.369	Chronic multifocal osteomyelitis, unspecified tibia and fibula
M86.371	Chronic multifocal osteomyelitis, right ankle and foot
M86.372	Chronic multifocal osteomyelitis, left ankle and foot
M86.379	Chronic multifocal osteomyelitis, unspecified ankle and foot
M86.38	Chronic multifocal osteomyelitis, other site
M86.39	Chronic multifocal osteomyelitis, multiple sites
M86.40	Chronic osteomyelitis with draining sinus, unspecified site
M86.411	Chronic osteomyelitis with draining sinus, right shoulder
M86.412	Chronic osteomyelitis with draining sinus, left shoulder
M86.419	Chronic osteomyelitis with draining sinus, unspecified shoulder
M86.421	Chronic osteomyelitis with draining sinus, right humerus
M86.422	Chronic osteomyelitis with draining sinus, left humerus
M86.429	Chronic osteomyelitis with draining sinus, unspecified humerus
M86.431	Chronic osteomyelitis with draining sinus, right radius and ulna
M86.432	Chronic osteomyelitis with draining sinus, left radius and ulna
M86.439	Chronic osteomyelitis with draining sinus, unspecified radius and ulna
M86.441	Chronic osteomyelitis with draining sinus, right hand
M86.442	Chronic osteomyelitis with draining sinus, left hand
M86.449	Chronic osteomyelitis with draining sinus, unspecified hand
M86.451	Chronic osteomyelitis with draining sinus, right femur
M86.452	Chronic osteomyelitis with draining sinus, left femur
M86.459	Chronic osteomyelitis with draining sinus, unspecified femur

M86.461	Chronic osteomyelitis with draining sinus, right tibia and fibula
M86.462	Chronic osteomyelitis with draining sinus, left tibia and fibula
M86.469	Chronic osteomyelitis with draining sinus, unspecified tibia and fibula
M86.471	Chronic osteomyelitis with draining sinus, right ankle and foot
M86.472	Chronic osteomyelitis with draining sinus, left ankle and foot
M86.479	Chronic osteomyelitis with draining sinus, unspecified ankle and foot
M86.49	Chronic osteomyelitis with draining sinus, multiple sites
M86.511	Other chronic hematogenous osteomyelitis, right shoulder
M86.512	Other chronic hematogenous osteomyelitis, left shoulder
M86.519	Other chronic hematogenous osteomyelitis, unspecified shoulder
M86.521	Other chronic hematogenous osteomyelitis, right humerus
M86.522	Other chronic hematogenous osteomyelitis, left humerus
M86.529	Other chronic hematogenous osteomyelitis, unspecified humerus
M86.531	Other chronic hematogenous osteomyelitis, right radius and ulna
M86.532	Other chronic hematogenous osteomyelitis, left radius and ulna
M86.539	Other chronic hematogenous osteomyelitis, unspecified radius and ulna
M86.541	Other chronic hematogenous osteomyelitis, right hand
M86.542	Other chronic hematogenous osteomyelitis, left hand
M86.549	Other chronic hematogenous osteomyelitis, unspecified hand
M86.551	Other chronic hematogenous osteomyelitis, right femur
M86.552	Other chronic hematogenous osteomyelitis, left femur
M86.559	Other chronic hematogenous osteomyelitis, unspecified femur
M86.561	Other chronic hematogenous osteomyelitis, right tibia and fibula
M86.562	Other chronic hematogenous osteomyelitis, left tibia and fibula
M86.569	Other chronic hematogenous osteomyelitis, unspecified tibia and fibula
M86.571	Other chronic hematogenous osteomyelitis, right ankle and foot
M86.572	Other chronic hematogenous osteomyelitis, left ankle and foot
M86.579	Other chronic hematogenous osteomyelitis, unspecified ankle and foot
M86.58	Other chronic hematogenous osteomyelitis, other site
M86.59	Other chronic hematogenous osteomyelitis, multiple sites
M86.611	Other chronic osteomyelitis, right shoulder
M86.612	Other chronic osteomyelitis, left shoulder
M86.621	Other chronic osteomyelitis, right humerus
M86.622	Other chronic osteomyelitis, left humerus
M86.629	Other chronic osteomyelitis, unspecified humerus
M86.631	Other chronic osteomyelitis, right radius and ulna
M86.632	Other chronic osteomyelitis, left radius and ulna
M86.639	Other chronic osteomyelitis, unspecified radius and ulna
M86.641	Other chronic osteomyelitis, right hand
M86.642	Other chronic osteomyelitis, left hand
M86.649	Other chronic osteomyelitis, unspecified hand
M86.651	Other chronic osteomyelitis, right thigh
M86.652	Other chronic osteomyelitis, left thigh
M86.659	Other chronic osteomyelitis, unspecified thigh
M86.661	Other chronic osteomyelitis, right tibia and fibula
M86.662	Other chronic osteomyelitis, left tibia and fibula
M86.669	Other chronic osteomyelitis, unspecified tibia and fibula
M86.671	Other chronic osteomyelitis, right ankle and foot
M86.672	Other chronic osteomyelitis, left ankle and foot
M86.679	Other chronic osteomyelitis, unspecified ankle and foot
M86.69	Other chronic osteomyelitis, multiple sites

M86.8X0	Other osteomyelitis, multiple sites
M86.8X1	Other osteomyelitis, shoulder
M86.8X2	Other osteomyelitis, upper arm
M86.8X3	Other osteomyelitis, forearm
M86.8X4	Other osteomyelitis, hand
M86.8X5	Other osteomyelitis, thigh
M86.8X6	Other osteomyelitis, lower leg
M86.8X7	Other osteomyelitis, ankle and foot
M86.8X8	Other osteomyelitis, other site
M86.8X9	Other osteomyelitis, unspecified sites
M87.08	Idiopathic aseptic necrosis of bone, other site, (jaw)
N30.40	Irradiation cystitis without hematuria
N30.41	Irradiation cystitis with hematuria
N30.91	Cystitis, unspecified with hematuria
O88.011	Obstetric air embolism in pregnancy, first trimester
O88.012	Obstetric air embolism in pregnancy, second trimester
O88.013	Obstetric air embolism in pregnancy, third trimester
O88.019	Obstetric air embolism in pregnancy, unspecified trimester
S07.0XXA	Crushing injury to face, Initial encounter
S07.0XXD	Crushing injury to face, Subsequent encounter
S07.0XXS	Crushing injury to face, Sequela
S07.1XXA	Crushing injury to skull, Initial encounter
S07.1XXD	Crushing injury to skull, Subsequent encounter
S07.1XXS	Crushing injury to skull, Sequela
S07.8XXA	Crushing injury to other parts of head, Initial encounter
S07.8XXD	Crushing injury to other parts of head, Subsequent encounter
S07.8XXS	Crushing injury to other parts of head, Sequela
S07.9XXA	Crushing injury to head, part unspecified, Initial encounter
S07.9XXD	Crushing injury to head, part unspecified, Subsequent encounter
S07.9XXS	Crushing injury to head, part unspecified, Sequela
S17.0XXA	Crushing injury of larynx and trachea, Initial encounter
S17.0XXD	Crushing injury of larynx and trachea, Subsequent encounter
S17.0XXS	Crushing injury of larynx and trachea, Sequela
S17.8XXA	Crushing injury of other specified parts of neck, Initial encounter
S17.8XXD	Crushing injury of other specified parts of neck, Subsequent encounter
S17.8XXS	Crushing injury of other specified parts of neck, Sequela
S17.9XXA	Crushing injury of neck, part unspecified, Initial encounter
S17.9XXD	Crushing injury of neck, part unspecified, Subsequent encounter
S17.9XXS	Crushing injury of neck, part unspecified, Sequela
S28.0XXA	Crushed chest, Initial encounter
S28.0XXD	Crushed chest, subsequent encounter
S28.0XXS	Crushed chest, sequela
S35.511A	Injury of right iliac artery, initial encounter
S35.511D	Injury of right iliac artery, subsequent encounter
S35.512A	Injury of left iliac artery, initial encounter
S35.512D	Injury of left iliac artery, subsequent encounter
S35.513A	Injury of unspecified iliac artery, initial encounter
S35.513D	Injury of unspecified iliac artery, subsequent encounter
S38.001A	Crushing injury of unspecified external genital organ, male, Initial encounter
S38.001D	Crushing injury of unspecified external genital organ, male, Subsequent encounter
S38.001S	Crushing injury of unspecified external genital organ, male, Sequela

S38.002A	Crushing injury of unspecified external genital organ, female, Initial encounter
S38.002D	Crushing injury of unspecified external genital organ, female, Subsequent encounter
S38.002S	Crushing injury of unspecified external genital organ, female, Sequela
S38.01XA	Crushing injury of penis, Initial encounter
S38.01XD	Crushing injury of penis, Subsequent encounter
S38.01XS	Crushing injury of penis, Sequela
S38.02XA	Crushing injury of scrotum and testis, Initial encounter
S38.02XD	Crushing injury of scrotum and testis, Subsequent encounter
S38.02XS	Crushing injury of scrotum and testis, Sequela
S38.03XA	Crushing injury of vulva, Initial encounter
S38.03XD	Crushing injury of vulva, Subsequent encounter
S38.03XS	Crushing injury of vulva, Sequela
S38.1XXA	Crushing injury of abdomen, lower back and pelvis, Initial encounter
S38.1XXD	Crushing injury of abdomen, lower back and pelvis, Subsequent encounter
S38.1XXS	Crushing injury of abdomen, lower back and pelvis, Sequela
S45.001A	Unspecified injury of axillary artery, right side, initial encounter
S45.001D	Unspecified injury of axillary artery, right side, subsequent encounter
S45.002A	Unspecified injury of axillary artery, left side, initial encounter
S45.002D	Unspecified injury of axillary artery, left side, subsequent encounter
S45.009A	Unspecified injury of axillary artery, unspecified side, initial encounter
S45.009D	Unspecified injury of axillary artery, unspecified side, subsequent encounter
S45.011A	Laceration of axillary artery, right side, initial encounter
S45.011D	Laceration of axillary artery, right side, subsequent encounter
S45.012A	Laceration of axillary artery, left side, initial encounter
S45.012D	Laceration of axillary artery, left side, subsequent encounter
S45.019A	Laceration of axillary artery, unspecified side, initial encounter
S45.019D	Laceration of axillary artery, unspecified side, subsequent encounter
S45.091A	Other specified injury of axillary artery, right side, initial encounter
S45.091D	Other specified injury of axillary artery, right side, subsequent encounter
S45.092A	Other specified injury of axillary artery, left side, initial encounter
S45.092D	Other specified injury of axillary artery, left side, subsequent encounter
S45.099A	Other specified injury of axillary artery, unspecified side, initial encounter
S45.099D	Other specified injury of axillary artery, unspecified side subsequent encounter
S45.101A	Unspecified injury of brachial artery, right side, initial encounter
S45.101D	Unspecified injury of brachial artery, right side, subsequent encounter
S45.102A	Unspecified injury of brachial artery, left side, initial encounter
S45.102D	Unspecified injury of brachial artery, left side, subsequent encounter
S45.109A	Unspecified injury of brachial artery, unspecified side, initial encounter
S45.109D	Unspecified injury of brachial artery, unspecified side, subsequent encounter
S45.111A	Laceration of brachial artery, right side, initial encounter
S45.111D	Laceration of brachial artery, right side, subsequent encounter
S45.112A	Laceration of brachial artery, left side, initial encounter
S45.112D	Laceration of brachial artery, left side, subsequent encounter
S45.119A	Laceration of brachial artery, unspecified side, initial encounter
S45.119D	Laceration of brachial artery, unspecified side, subsequent encounter
S45.191A	Other specified injury of brachial artery, right side, initial encounter
S45.191D	Other specified injury of brachial artery, right side, subsequent encounter
S45.192A	Other specified injury of brachial artery, left side, initial encounter
S45.192D	Other specified injury of brachial artery, left side, subsequent encounter
S45.199A	Other specified injury of brachial artery, unspecified side, initial encounter
S45.199D	Other specified injury of brachial artery, unspecified side, subsequent encounter

S45.201A	Unspecified injury of axillary or brachial vein, right side, initial encounter
S45.201D	Unspecified injury of axillary or brachial vein, right side, subsequent encounter
S45.202A	Unspecified injury of axillary or brachial vein, left side, initial encounter
S45.202D	Unspecified injury of axillary or brachial vein, left side, subsequent encounter
S45.209A	Unspecified injury of axillary or brachial vein, unspecified side, initial encounter
S45.209D	Unspecified injury of axillary or brachial vein, unspecified side, subsequent encounter
S45.211A	Laceration of axillary or brachial vein, right side, initial encounter
S45.211D	Laceration of axillary or brachial vein, right side, subsequent encounter
S45.212A	Laceration of axillary or brachial vein, left side, initial encounter
S45.212D	Laceration of axillary or brachial vein, left side, subsequent encounter
S45.219A	Laceration of axillary or brachial vein, unspecified side, initial encounter
S45.219D	Laceration of axillary or brachial vein, unspecified side, subsequent encounter
S45.291A	Other specified injury of axillary or brachial vein, right side, initial encounter
S45.291D	Other specified injury of axillary or brachial vein, right side, subsequent encounter
S45.292A	Other specified injury of axillary or brachial vein, left side, initial encounter
S45.292D	Other specified injury of axillary or brachial vein, left side, subsequent encounter
S45.299A	Other specified injury of axillary or brachial vein, unspecified side, initial encounter
S45.299D	Other specified injury of axillary or brachial vein, unspecified side, subsequent encounter
S47.1XXA	Crushing injury of right shoulder and upper arm, Initial encounter
S47.1XXD	Crushing injury of right shoulder and upper arm, Subsequent encounter
S47.1XXS	Crushing injury of right shoulder and upper arm, Sequela
S47.2XXA	Crushing injury of left shoulder and upper arm, Initial encounter
S47.2XXD	Crushing injury of left shoulder and upper arm, Subsequent encounter
S47.2XXS	Crushing injury of left shoulder and upper arm, Sequela
S47.9XXA	Crushing injury of shoulder and upper arm, unspecified arm, Initial encounter
S47.9XXD	Crushing injury of shoulder and upper arm, unspecified arm, Subsequent encounter
S47.9XXS	Crushing injury of shoulder and upper arm, unspecified arm, Sequela
S57.00XA	Crushing injury of unspecified elbow, Initial encounter
S57.00XD	Crushing injury of unspecified elbow, Subsequent encounter
S57.00XS	Crushing injury of unspecified elbow, Sequela
S57.01XA	Crushing injury of right elbow, Initial encounter
S57.01XD	Crushing injury of right elbow, Subsequent encounter
S57.01XS	Crushing injury of right elbow, Sequela
S57.02XA	Crushing injury of left elbow, Initial encounter
S57.02XD	Crushing injury of left elbow, Subsequent encounter
S57.02XS	Crushing injury of left elbow, Sequela
S57.80XA	Crushing injury of unspecified forearm, Initial encounter
S57.80XD	Crushing injury of unspecified forearm, Subsequent encounter
S57.80XS	Crushing injury of unspecified forearm, Sequela
S57.81XA	Crushing injury of right forearm, Initial encounter
S57.81XD	Crushing injury of right forearm, Subsequent encounter
S57.81XS	Crushing injury of right forearm, Sequela
S57.82XA	Crushing injury of left forearm, Initial encounter
S57.82XD	Crushing injury of left forearm, Subsequent encounter
S57.82XS	Crushing injury of left forearm, Sequela
S67.00XA	Crushing injury of unspecified thumb, Initial encounter
S67.00XD	Crushing injury of unspecified thumb, Subsequent encounter
S67.00XS	Crushing injury of unspecified thumb, Sequela
S67.01XA	Crushing injury of right thumb, Initial encounter
S67.01XD	Crushing injury of right thumb, Subsequent encounter
S67.01XS	Crushing injury of right thumb, Sequela

S67.02XA	Crushing injury of left thumb, Initial encounter
S67.02XD	Crushing injury of left thumb, Subsequent encounter
S67.02XS	Crushing injury of left thumb, Sequela
S67.10XA	Crushing injury of unspecified finger(s), Initial encounter
S67.10XD	Crushing injury of unspecified finger(s), Subsequent encounter
S67.10XS	Crushing injury of unspecified finger(s), Sequela
S67.190A	Crushing injury of right index finger, Initial encounter
S67.190D	Crushing injury of right index finger, Subsequent encounter
S67.190S	Crushing injury of right index finger, Sequela
S67.191A	Crushing injury of left index finger, Initial encounter
S67.191D	Crushing injury of left index finger, Subsequent encounter
S67.191S	Crushing injury of left index finger, Sequela
S67.192A	Crushing injury of right middle finger, Initial encounter
S67.192D	Crushing injury of right middle finger, Subsequent encounter
S67.192S	Crushing injury of right middle finger, Sequela
S67.193A	Crushing injury of left middle finger, Initial encounter
S67.193D	Crushing injury of left middle finger, Subsequent encounter
S67.193S	Crushing injury of left middle finger, Sequela
S67.194A	Crushing injury of right ring finger, Initial encounter
S67.194D	Crushing injury of right ring finger, Subsequent encounter
S67.194S	Crushing injury of right ring finger, Sequela
S67.195A	Crushing injury of left ring finger, Initial encounter
S67.195D	Crushing injury of left ring finger, Subsequent encounter
S67.195S	Crushing injury of left ring finger, Sequela
S67.196A	Crushing injury of right little finger, Initial encounter
S67.196D	Crushing injury of right little finger, Subsequent encounter
S67.196S	Crushing injury of right little finger, Sequela
S67.197A	Crushing injury of left little finger, Initial encounter
S67.197D	Crushing injury of left little finger, Subsequent encounter
S67.197S	Crushing injury of left little finger, Sequela
S67.198A	Crushing injury of other finger, Initial encounter
S67.198D	Crushing injury of other finger, Subsequent encounter
S67.198S	Crushing injury of other finger, Sequela
S67.20XA	Crushing injury of unspecified hand, Initial encounter
S67.20XD	Crushing injury of unspecified hand, Subsequent encounter
S67.20XS	Crushing injury of unspecified hand, Sequela
S67.21XA	Crushing injury of right hand, Initial encounter
S67.21XD	Crushing injury of right hand, Subsequent encounter
S67.21XS	Crushing injury of right hand, Sequela
S67.22XA	Crushing injury of left hand, Initial encounter
S67.22XD	Crushing injury of left hand, Subsequent encounter
S67.22XS	Crushing injury of left hand, Sequela
S67.30XA	Crushing injury of unspecified wrist, Initial encounter
S67.30XD	Crushing injury of unspecified wrist, Subsequent encounter
S67.30XS	Crushing injury of unspecified wrist, Sequela
S67.31XA	Crushing injury of right wrist, Initial encounter
S67.31XD	Crushing injury of right wrist, Subsequent encounter
S67.31XS	Crushing injury of right wrist, Sequela
S67.32XA	Crushing injury of left wrist, Initial encounter
S67.32XD	Crushing injury of left wrist, Subsequent encounter
S67.32XS	Crushing injury of left wrist, Sequela

S67.40XA	Crushing injury of unspecified wrist and hand, Initial encounter
S67.40XD	Crushing injury of unspecified wrist and hand, Subsequent encounter
S67.40XS	Crushing injury of unspecified wrist and hand, Sequela
S67.41XA	Crushing injury of right wrist and hand, Initial encounter
S67.41XD	Crushing injury of right wrist and hand, Subsequent encounter
S67.41XS	Crushing injury of right wrist and hand, Sequela
S67.42XA	Crushing injury of left wrist and hand, Initial encounter
S67.42XD	Crushing injury of left wrist and hand, Subsequent encounter
S67.42XS	Crushing injury of left wrist and hand, Sequela
S67.90XA	Crushing injury of unspecified part(s) unspecified wrist, hand and fingers, Initial encounter
S67.90XD	Crushing injury of unspecified part(s) unspecified wrist, hand and fingers, Subsequent encounter
S67.90XS	Crushing injury of unspecified part(s) unspecified wrist, hand and fingers, Sequela
S67.91XA	Crushing injury of unspecified part(s) right wrist, hand and fingers, Initial encounter
S67.91XD	Crushing injury of unspecified part(s) right wrist, hand and fingers, Subsequent encounter
S67.91XS	Crushing injury of unspecified part(s) right wrist, hand and fingers, Sequela
S67.92XA	Crushing injury of unspecified part(s) left wrist, hand and fingers, Initial encounter
S67.92XD	Crushing injury of unspecified part(s) left wrist, hand and fingers, Subsequent encounter
S67.92XS	Crushing injury of unspecified part(s) left wrist, hand and fingers, Sequela
S77.00XA	Crushing injury of unspecified hip, Initial encounter
S77.00XD	Crushing injury of unspecified hip, Subsequent encounter
S77.00XS	Crushing injury of unspecified hip, Sequela
S77.01XA	Crushing injury of right hip, Initial encounter
S77.01XD	Crushing injury of right hip, Subsequent encounter
S77.01XS	Crushing injury of right hip, Sequela
S77.02XA	Crushing injury of left hip, Initial encounter
S77.02XD	Crushing injury of left hip, Subsequent encounter
S77.02XS	Crushing injury of left hip, Sequela
S77.10XA	Crushing injury of unspecified thigh, Initial encounter
S77.10XD	Crushing injury of unspecified thigh, Subsequent encounter
S77.10XS	Crushing injury of unspecified thigh, Sequela
S77.11XA	Crushing injury of right thigh, Initial encounter
S77.11XD	Crushing injury of right thigh, Subsequent encounter
S77.11XS	Crushing injury of right thigh, Sequela
S77.12XA	Crushing injury of left thigh, Initial encounter
S77.12XD	Crushing injury of left thigh, Subsequent encounter
S77.12XS	Crushing injury of left thigh, Sequela
S77.20XA	Crushing injury of unspecified hip and thigh, Initial encounter
S77.20XD	Crushing injury of unspecified hip and thigh, Subsequent encounter
S77.20XS	Crushing injury of unspecified hip and thigh, Sequela
S77.21XA	Crushing injury of right hip and thigh, Initial encounter
S77.21XD	Crushing injury of right hip and thigh, Subsequent encounter
S77.21XS	Crushing injury of right hip and thigh, Sequela
S77.22XA	Crushing injury of left hip and thigh, Initial encounter
S77.22XD	Crushing injury of left hip and thigh, Subsequent encounter
S77.22XS	Crushing injury of left hip and thigh, Sequela
S87.00XA	Crushing injury of unspecified knee, Initial encounter
S87.00XD	Crushing injury of unspecified knee, Subsequent encounter
S87.00XS	Crushing injury of unspecified knee, Sequela
S87.01XA	Crushing injury of right knee, Initial encounter
S87.01XD	Crushing injury of right knee, Subsequent encounter
S87.01XS	Crushing injury of right knee, Sequela

S87.02XA	Crushing injury of left knee, Initial encounter
S87.02XD	Crushing injury of left knee, Subsequent encounter
S87.02XS	Crushing injury of left knee, Sequela
S87.80XA	Crushing injury of unspecified lower leg, Initial encounter
S87.80XD	Crushing injury of unspecified lower leg, Subsequent encounter
S87.80XS	Crushing injury of unspecified lower leg, Sequela
S87.81XA	Crushing injury of right lower leg, Initial encounter
S87.81XD	Crushing injury of right lower leg, Subsequent encounter
S87.81XS	Crushing injury of right lower leg, Sequela
S87.82XA	Crushing injury of left lower leg, Initial encounter
S87.82XD	Crushing injury of left lower leg, Subsequent encounter
S87.82XS	Crushing injury of left lower leg, Sequela
S97.00XA	Crushing injury of unspecified ankle, Initial encounter
S97.00XD	Crushing injury of unspecified ankle, Subsequent encounter
S97.00XS	Crushing injury of unspecified ankle, Sequela
S97.01XA	Crushing injury of right ankle, Initial encounter
S97.01XD	Crushing injury of right ankle, Subsequent encounter
S97.01XS	Crushing injury of right ankle, Sequela
S97.02XA	Crushing injury of left ankle, Initial encounter
S97.02XD	Crushing injury of left ankle, Subsequent encounter
S97.02XS	Crushing injury of left ankle, Sequela
S97.101A	Crushing injury of unspecified right toe(s), Initial encounter
S97.101D	Crushing injury of unspecified right toe(s), Subsequent encounter
S97.101S	Crushing injury of unspecified right toe(s), Sequela
S97.102A	Crushing injury of right toe(s), Initial encounter
S97.102D	Crushing injury of right toe(s), Subsequent encounter
S97.102S	Crushing injury of right toe(s), Sequela
S97.109A	Crushing injury of left toe(s), Initial encounter
S97.109D	Crushing injury of left toe(s), Subsequent encounter
S97.109S	Crushing injury of left toe(s), Sequela
S97.111A	Crushing injury of right great toe, Initial encounter
S97.111D	Crushing injury of right great toe, Subsequent encounter
S97.111S	Crushing injury of right great toe, Sequela
S97.112A	Crushing injury of left great toe, Initial encounter
S97.112D	Crushing injury of left great toe, Subsequent encounter
S97.112S	Crushing injury of left great toe, Sequela
S97.119A	Crushing injury of unspecified great toe, Initial encounter
S97.119D	Crushing injury of unspecified great toe, Subsequent encounter
S97.119S	Crushing injury of unspecified great toe, Sequela
S97.80XA	Crushing injury of unspecified foot, Initial encounter
S97.80XD	Crushing injury of unspecified foot, Subsequent encounter
S97.80XS	Crushing injury of unspecified foot, Sequela
S97.81XA	Crushing injury of right foot, Initial encounter
S97.81XD	Crushing injury of right foot, Subsequent encounter
S97.81XS	Crushing injury of right foot, Sequela
S97.82XA	Crushing injury of left foot, Initial encounter
S97.82XD	Crushing injury of left foot, Subsequent encounter
S97.82XS	Crushing injury of left foot, Sequela
S35.511A	Injury of right iliac artery, Initial encounter
S35.511D	Injury of right iliac artery, Subsequent encounter
S35.511S	Injury of right iliac artery, Sequela

S35.512A	Injury of left iliac artery, Initial encounter
S35.512D	Injury of left iliac artery, Subsequent encounter
S35.512S	Injury of left iliac artery, Sequela
S35.513A	Injury of unspecified iliac artery, Initial encounter
S35.513D	Injury of unspecified iliac artery, Subsequent encounter
S35.513S	Injury of unspecified iliac artery, Sequela
S45.001A	Unspecified injury of axillary artery, right side, Initial encounter
S45.001D	Unspecified injury of axillary artery, right side, Subsequent encounter
S45.001S	Unspecified injury of axillary artery, right side, Sequela
S45.002A	Unspecified injury of axillary artery, left side, Initial encounter
S45.002D	Unspecified injury of axillary artery, left side, Subsequent encounter
S45.002S	Unspecified injury of axillary artery, left side, Sequela
S45.009A	Unspecified injury of axillary artery, unspecified side, Initial encounter
S45.009D	Unspecified injury of axillary artery, unspecified side, Subsequent encounter
S45.009S	Unspecified injury of axillary artery, unspecified side, Sequela
S45.011A	Laceration of axillary artery, right side, Initial encounter
S45.011D	Laceration of axillary artery, right side, Subsequent encounter
S45.011S	Laceration of axillary artery, right side, Sequela
S45.012A	Laceration of axillary artery, left side, Initial encounter
S45.012D	Laceration of axillary artery, left side, Subsequent encounter
S45.012S	Laceration of axillary artery, left side, Sequela
S45.019A	Laceration of axillary artery, unspecified side, Initial encounter
S45.019D	Laceration of axillary artery, unspecified side, Subsequent encounter
S45.019S	Laceration of axillary artery, unspecified side, Sequela
S45.091A	Other specified injury of axillary artery, right side, Initial encounter
S45.091D	Other specified injury of axillary artery, right side, Subsequent encounter
S45.091S	Other specified injury of axillary artery, right side, Sequela
S45.092A	Other specified injury of axillary artery, left side, Initial encounter
S45.092D	Other specified injury of axillary artery, left side, Subsequent encounter
S45.092S	Other specified injury of axillary artery, left side, Sequela
S45.099A	Other specified injury of axillary artery, unspecified side, Initial encounter
S45.099D	Other specified injury of axillary artery, unspecified side, Subsequent encounter
S45.099S	Other specified injury of axillary artery, unspecified side, Sequela
S45.101A	Unspecified injury of brachial artery, right side, Initial encounter
S45.101D	Unspecified injury of brachial artery, right side, Subsequent encounter
S45.101S	Unspecified injury of brachial artery, right side, Sequela
S45.102A	Unspecified injury of brachial artery, left side, Initial encounter
S45.102D	Unspecified injury of brachial artery, left side, Subsequent encounter
S45.102S	Unspecified injury of brachial artery, left side, Sequela
S45.109A	Unspecified injury of brachial artery, unspecified side, Initial encounter
S45.109D	Unspecified injury of brachial artery, unspecified side, Subsequent encounter
S45.109S	Unspecified injury of brachial artery, unspecified side, Sequela
S45.111A	Laceration of brachial artery, right side, Initial encounter
S45.111D	Laceration of brachial artery, right side, Subsequent encounter
S45.111S	Laceration of brachial artery, right side, Sequela
S45.112A	Laceration of brachial artery, left side, Initial encounter
S45.112D	Laceration of brachial artery, left side, Subsequent encounter
S45.112S	Laceration of brachial artery, left side, Sequela
S45.119A	Laceration of brachial artery, unspecified side, Initial encounter
S45.119D	Laceration of brachial artery, unspecified side, Subsequent encounter
S45.119S	Laceration of brachial artery, unspecified side, Sequela

S45.191A	Other specified injury of brachial artery, right side, Initial encounter
S45.191D	Other specified injury of brachial artery, right side, Subsequent encounter
S45.191S	Other specified injury of brachial artery, right side, Sequela
S45.192A	Other specified injury of brachial artery, left side, Initial encounter
S45.192D	Other specified injury of brachial artery, left side, Subsequent encounter
S45.192S	Other specified injury of brachial artery, left side, Sequela
S45.199A	Other specified injury of brachial artery, unspecified side, Initial encounter
S45.199D	Other specified injury of brachial artery, unspecified side, Subsequent encounter
S45.199S	Other specified injury of brachial artery, unspecified side, Sequela
S45.201A	Unspecified injury of axillary or brachial vein, right side, Initial encounter
S45.201D	Unspecified injury of axillary or brachial vein, right side, Subsequent encounter
S45.201S	Unspecified injury of axillary or brachial vein, right side, Sequela
S45.202A	Unspecified injury of axillary or brachial vein, left side, Initial encounter
S45.202D	Unspecified injury of axillary or brachial vein, left side, Subsequent encounter
S45.202S	Unspecified injury of axillary or brachial vein, left side, Sequela
S45.209A	Unspecified injury of axillary or brachial vein, unspecified side, Initial encounter
S45.209D	Unspecified injury of axillary or brachial vein, unspecified side, Subsequent encounter
S45.209S	Unspecified injury of axillary or brachial vein, unspecified side, Sequela
S45.211A	Laceration of axillary or brachial vein, right side, Initial encounter
S45.211D	Laceration of axillary or brachial vein, right side, Subsequent encounter
S45.211S	Laceration of axillary or brachial vein, right side, Sequela
S45.212A	Laceration of axillary or brachial vein, left side, Initial encounter
S45.212D	Laceration of axillary or brachial vein, left side, Subsequent encounter
S45.212S	Laceration of axillary or brachial vein, left side, Sequela
S45.219A	Laceration of axillary or brachial vein, unspecified side, Initial encounter
S45.219D	Laceration of axillary or brachial vein, unspecified side, Subsequent encounter
S45.219S	Laceration of axillary or brachial vein, unspecified side, Sequela
S45.291A	Other specified injury of axillary or brachial vein, right side, Initial encounter
S45.291D	Other specified injury of axillary or brachial vein, right side, Subsequent encounter
S45.291S	Other specified injury of axillary or brachial vein, right side, Sequela
S45.292A	Other specified injury of axillary or brachial vein, left side, Initial encounter
S45.292D	Other specified injury of axillary or brachial vein, left side, Subsequent encounter
S45.292S	Other specified injury of axillary or brachial vein, left side, Sequela
S45.299A	Other specified injury of axillary or brachial vein, unspecified side, Initial encounter
S45.299D	Other specified injury of axillary or brachial vein, unspecified side, Subsequent encounter
S45.299S	Other specified injury of axillary or brachial vein, unspecified side, Sequela
S47.1XXA	Crushing injury of right shoulder and upper arm, Initial encounter
S47.1XXD	Crushing injury of right shoulder and upper arm, Subsequent encounter
S47.1XXS	Crushing injury of right shoulder and upper arm, Sequela
S47.9XXA	Crushing injury of shoulder and upper arm, unspecified arm, Initial encounter
S47.9XXD	Crushing injury of shoulder and upper arm, unspecified arm, Subsequent encounter
S47.9XXS	Crushing injury of shoulder and upper arm, unspecified arm, Sequela
S57.00XA	Crushing injury of unspecified elbow, Initial encounter
S57.00XD	Crushing injury of unspecified elbow, Subsequent encounter
S57.00XS	Crushing injury of unspecified elbow, Sequela
S57.01XA	Crushing injury of right elbow, Initial encounter
S57.01XD	Crushing injury of right elbow, Subsequent encounter
S57.01XS	Crushing injury of right elbow, Sequela
S57.02XA	Crushing injury of left elbow, Initial encounter
S57.02XD	Crushing injury of left elbow, Subsequent encounter
S57.02XS	Crushing injury of left elbow, Sequela

S57.80XA	Crushing injury of unspecified forearm, Initial encounter
S57.80XD	Crushing injury of unspecified forearm, Subsequent encounter
S57.80XS	Crushing injury of unspecified forearm, Sequela
S57.81XA	Crushing injury of right forearm, Initial encounter
S57.81XD	Crushing injury of right forearm, Subsequent encounter
S57.81XS	Crushing injury of right forearm, Sequela
S57.82XA	Crushing injury of left forearm, Initial encounter
S57.82XD	Crushing injury of left forearm, Subsequent encounter
S57.82XS	Crushing injury of left forearm, Sequela
S67.00XA	Crushing injury of unspecified thumb, Initial encounter
S67.00XD	Crushing injury of unspecified thumb, Subsequent encounter
S67.00XS	Crushing injury of unspecified thumb, Sequela
S67.01XA	Crushing injury of right thumb, Initial encounter
S67.01XD	Crushing injury of right thumb, Subsequent encounter
S67.01XS	Crushing injury of right thumb, Sequela
S67.02XA	Crushing injury of left thumb, Initial encounter
S67.02XD	Crushing injury of left thumb, Subsequent encounter
S67.02XS	Crushing injury of left thumb, Sequela
S67.10XA	Crushing injury of unspecified finger(s), Initial encounter
S67.10XD	Crushing injury of unspecified finger(s), Subsequent encounter
S67.10XS	Crushing injury of unspecified finger(s), Sequela
S67.20XA	Crushing injury of unspecified hand, Initial encounter
S67.20XD	Crushing injury of unspecified hand, Subsequent encounter
S67.20XS	Crushing injury of unspecified hand, Sequela
S67.21XA	Crushing injury of right hand, Initial encounter
S67.21XD	Crushing injury of right hand, Subsequent encounter
S67.21XS	Crushing injury of right hand, Sequela
S67.22XA	Crushing injury of left hand, Initial encounter
S67.22XD	Crushing injury of left hand, Subsequent encounter
S67.22XS	Crushing injury of left hand, Sequela
S67.30XA	Crushing injury of unspecified wrist, Initial encounter
S67.30XD	Crushing injury of unspecified wrist, Subsequent encounter
S67.30XS	Crushing injury of unspecified wrist, Sequela
S67.31XA	Crushing injury of right wrist, initial encounter
S67.31XD	Crushing injury of right wrist, Subsequent encounter
S67.31XS	Crushing injury of right wrist, Sequela
S67.32XA	Crushing injury of left wrist, Initial encounter
S67.32XD	Crushing injury of left wrist, Subsequent encounter
S67.32XS	Crushing injury of left wrist, Sequela
S67.40XA	Crushing injury of unspecified wrist and hand, Initial encounter
S67.40XD	Crushing injury of unspecified wrist and hand, Subsequent encounter
S67.40XS	Crushing injury of unspecified wrist and hand, Sequela
S67.41XA	Crushing injury of right wrist and hand, Initial encounter
S67.41XD	Crushing injury of right wrist and hand, Subsequent encounter
S67.41XS	Crushing injury of right wrist and hand, Sequela
S67.42XA	Crushing injury of left wrist and hand, initial encounter
S67.42XD	Crushing injury of left wrist and hand, Subsequent encounter
S67.42XS	Crushing injury of left wrist and hand, Sequela
S67.90XA	Crushing injury of unspecified part(s) of unspecified wrist, hand and fingers, initial encounter
S67.90XD	Crushing injury of unspecified part(s) of unspecified wrist, hand and fingers, Subsequent encounter
S67.90XS	Crushing injury of unspecified part(s) of unspecified wrist, hand and fingers, Sequela

S67.91XA	Crushing injury of unspecified part(s) of right wrist, hand and finger, Initial encounter
S67.91XD	Crushing injury of unspecified part(s) of right wrist, hand and finger, Subsequent encounter
S67.91XS	Crushing injury of unspecified part(s) of right wrist, hand and finger, Sequela
S67.92XA	Crushing injury of unspecified part(s) of left wrist, hand and fingers, Initial encounter
S67.92XD	Crushing injury of unspecified part(s) of left wrist, hand and fingers, Subsequent encounter
S67.92XS	Crushing injury of unspecified part(s) of left wrist, hand and fingers, Sequela
S67.190A	Crushing injury of right index finger, Initial encounter
S67.190D	Crushing injury of right index finger, Subsequent encounter
S67.190S	Crushing injury of right index finger, Sequela
S67.191A	Crushing injury of left index finger, Initial encounter
S67.191D	Crushing injury of left index finger, Subsequent encounter
S67.191S	Crushing injury of left index finger, Sequela
S67.192A	Crushing injury of right middle finger, Initial encounter
S67.192D	Crushing injury of right middle finger, Subsequent encounter
S67.192S	Crushing injury of right middle finger, Sequela
S67.193A	Crushing injury of left middle finger, Initial encounter
S67.193D	Crushing injury of left middle finger, Subsequent encounter
S67.193S	Crushing injury of left middle finger, Sequela
S67.194A	Crushing injury of right ring finger, Initial encounter
S67.194D	Crushing injury of right ring finger, Subsequent encounter
S67.194S	Crushing injury of right ring finger, Sequela
S67.195A	Crushing injury of left ring finger, Initial encounter
S67.195D	Crushing injury of left ring finger, Subsequent encounter
S67.195S	Crushing injury of left ring finger, Sequela
S67.196A	Crushing injury of right little finger, Initial encounter
S67.196D	Crushing injury of right little finger, Subsequent encounter
S67.196S	Crushing injury of right little finger, Sequela
S67.197A	Crushing injury of left little finger, Initial encounter
S67.197D	Crushing injury of left little finger, Subsequent encounter
S67.197S	Crushing injury of left little finger, Sequela
S67.198A	Crushing injury of other finger, Initial encounter
S67.198D	Crushing injury of other finger, Subsequent encounter
S67.198S	Crushing injury of other finger, Sequela
S75.001A	Unspecified injury of femoral artery, right leg, Initial encounter
S75.001D	Unspecified injury of femoral artery, right leg, Subsequent encounter
S75.001S	Unspecified injury of femoral artery, right leg, Sequela
S75.002A	Unspecified injury of femoral artery, left leg, Initial encounter
S75.002D	Unspecified injury of femoral artery, left leg, Subsequent encounter
S75.002S	Unspecified injury of femoral artery, left leg, Sequela
S75.009A	Unspecified injury of femoral artery, unspecified leg, Initial encounter
S75.009D	Unspecified injury of femoral artery, unspecified leg, Subsequent encounter
S75.009S	Unspecified injury of femoral artery, unspecified leg, Sequela
S75.011A	Minor laceration of femoral artery, left leg, Initial encounter
S75.011D	Minor laceration of femoral artery, left leg, Subsequent encounter
S75.011S	Minor laceration of femoral artery, left leg, Sequela
S75.012A	Minor laceration of femoral artery, left leg, Initial encounter
S75.012D	Minor laceration of femoral artery, left leg, Subsequent encounter
S75.012S	Minor laceration of femoral artery, left leg, Sequela
S75.019A	Minor laceration of femoral artery, unspecified leg, Initial encounter
S75.019D	Minor laceration of femoral artery, unspecified leg, Subsequent encounter
S75.019S	Minor laceration of femoral artery, unspecified leg, Sequela

S75.021A	Major laceration of femoral artery, right leg, Initial encounter
S75.021D	Major laceration of femoral artery, right leg, Subsequent encounter
S75.021S	Major laceration of femoral artery, right leg, Sequela
S75.022A	Major laceration of femoral artery, left leg, Initial encounter
S75.022D	Major laceration of femoral artery, left leg, Subsequent encounter
S75.022S	Major laceration of femoral artery, left leg, Sequela
S75.029A	Major laceration of femoral artery, unspecified leg, Initial encounter
S75.029D	Major laceration of femoral artery, unspecified leg, Subsequent encounter
S75.029S	Major laceration of femoral artery, unspecified leg, Sequela
S75.091A	Other specified injury of the femoral artery, right leg, Initial encounter
S75.091D	Other specified injury of the femoral artery, right leg, Subsequent encounter
S75.091S	Other specified injury of the femoral artery, right leg, Sequela
S75.092A	Other specified injury of femoral artery, left leg, Initial encounter
S75.092D	Other specified injury of femoral artery, left leg, Subsequent encounter
S75.092S	Other specified injury of femoral artery, left leg, Sequela
S75.099A	Other specified injury of femoral artery, unspecified leg, Initial encounter
S75.099D	Other specified injury of femoral artery, unspecified leg, Subsequent encounter
S75.099S	Other specified injury of femoral artery, unspecified leg, Sequela
S77.00XA	Crushing injury of unspecified hip, Initial encounter
S77.00XD	Crushing injury of unspecified hip, Subsequent encounter
S77.00XS	Crushing injury of unspecified hip, Sequela
S77.01XA	Crushing injury of right hip, Initial encounter
S77.01XD	Crushing injury of right hip, Subsequent encounter
S77.01XS	Crushing injury of right hip, Sequela
S77.02XA	Crushing injury of left hip, Initial encounter
S77.02XD	Crushing injury of left hip, Subsequent encounter
S77.02XS	Crushing injury of left hip, Sequela
S77.10XA	Crushing injury of unspecified thigh, Initial encounter
S77.10XD	Crushing injury of unspecified thigh, Subsequent encounter
S77.10XS	Crushing injury of unspecified thigh, Sequela
S77.11XA	Crushing injury of right thigh, Initial encounter
S77.11XD	Crushing injury of right thigh, Subsequent encounter
S77.11XS	Crushing injury of right thigh, Sequela
S77.12XA	Crushing injury of left thigh, Initial encounter
S77.12XD	Crushing injury of left thigh, Subsequent encounter
S77.12XS	Crushing injury of left thigh, Sequela
S77.20XA	Crushing injury of unspecified hip with thigh, Initial encounter
S77.20XD	Crushing injury of unspecified hip with thigh, Subsequent encounter
S77.20XS	Crushing injury of unspecified hip with thigh, Sequela
S77.21XA	Crushing injury of right hip with thigh, Initial encounter
S77.21XD	Crushing injury of right hip with thigh, Subsequent encounter
S77.21XS	Crushing injury of right hip with thigh, Sequela
S77.22XA	Crushing injury of left hip and thigh, Initial encounter
S77.22XD	Crushing injury of left hip and thigh, Subsequent encounter
S77.22XS	Crushing injury of left hip and thigh, Sequela
S85.001A	Unspecified injury of popliteal artery, right leg, Initial encounter
S85.001D	Unspecified injury of popliteal artery, right leg, Subsequent encounter
S85.001S	Unspecified injury of popliteal artery, right leg, Sequela
S85.002A	Unspecified injury of popliteal artery, left leg, initial encounter
S85.002D	Unspecified injury of popliteal artery, left leg,
S85.002S	Unspecified injury of popliteal artery, left leg,

S85.009A	Unspecified injury of popliteal artery, unspecified leg, initial encounter
S85.009D	Unspecified injury of popliteal artery, unspecified leg,
S85.009S	Unspecified injury of popliteal artery, unspecified leg,
S85.011A	Laceration of popliteal artery, right leg, Initial encounter
S85.011D	Laceration of popliteal artery, right leg, Subsequent encounter
S85.011S	Laceration of popliteal artery, right leg, Sequela
S85.012A	Laceration of popliteal artery, left leg, Initial encounter
S85.012D	Laceration of popliteal artery, left leg, Subsequent encounter
S85.012S	Laceration of popliteal artery, left leg, Sequela
S85.019A	Laceration of popliteal artery, unspecified leg, Initial encounter
S85.019D	Laceration of popliteal artery, unspecified leg, Subsequent encounter
S85.019S	Laceration of popliteal artery, unspecified leg, Sequela
S85.091A	Other specified injury of popliteal artery, right leg, Initial encounter
S85.091D	Other specified injury of popliteal artery, right leg, Subsequent encounter
S85.091S	Other specified injury of popliteal artery, right leg, Sequela
S85.092A	Other specified injury of popliteal artery, left leg, Initial encounter
S85.092D	Other specified injury of popliteal artery, left leg, Subsequent encounter
S85.092S	Other specified injury of popliteal artery, left leg, Sequela
S85.099A	Other specified injury of popliteal artery, unspecified leg, Initial encounter
S85.099D	Other specified injury of popliteal artery, unspecified leg, Subsequent encounter
S85.099S	Other specified injury of popliteal artery, unspecified leg, Sequela
S85.501A	Unspecified injury of popliteal vein, right leg, Initial encounter
S85.501D	Unspecified injury of popliteal vein, right leg, Subsequent encounter
S85.501S	Unspecified injury of popliteal vein, right leg, Sequela
S85.502A	Unspecified injury of popliteal vein, left leg, Initial encounter
S85.502D	Unspecified injury of popliteal vein, left leg, Subsequent encounter
S85.502S	Unspecified injury of popliteal vein, left leg, Sequela
S85.509A	Unspecified injury popliteal vein, unspecified leg, Initial encounter
S85.509D	Unspecified injury popliteal vein, unspecified leg, Subsequent encounter
S85.509S	Unspecified injury popliteal vein, unspecified leg, Sequela
S85.511A	Laceration of popliteal vein, right leg, Initial encounter
S85.511D	Laceration of popliteal vein, right leg, Subsequent encounter
S85.511S	Laceration of popliteal vein, right leg, Sequela
S85.512A	Laceration of popliteal vein, left leg, Initial encounter
S85.512D	Laceration of popliteal vein, left leg, Subsequent encounter
S85.512S	Laceration of popliteal vein, left leg, Sequela
S85.519A	Laceration of popliteal vein, unspecified leg, Initial encounter
S85.519D	Laceration of popliteal vein, unspecified leg, Subsequent encounter
S85.519S	Laceration of popliteal vein, unspecified leg, Sequela
S85.591A	Other specified injury of popliteal vein, right leg, Initial encounter
S85.591D	Other specified injury of popliteal vein, right leg, Subsequent encounter
S85.591S	Other specified injury of popliteal vein, right leg, Sequela
S85.592A	Other specified injury of popliteal vein, left leg, Initial encounter
S85.592D	Other specified injury of popliteal vein, left leg, Subsequent encounter
S85.592S	Other specified injury of popliteal vein, left leg, Sequela
S85.599A	Other specified injury of popliteal vein, unspecified leg, Initial encounter
S85.599D	Other specified injury of popliteal vein, unspecified leg, Subsequent encounter
S85.599S	Other specified injury of popliteal vein, unspecified leg, Sequela
S87.00XA	Crushing injury of unspecified knee, Initial encounter
S87.00XD	Crushing injury of unspecified knee, Subsequent encounter
S87.00XS	Crushing injury of unspecified knee, Sequela

S87.01XA	Crushing injury right knee, Initial encounter
S87.01XD	Crushing injury right knee, Subsequent encounter
S87.01XS	Crushing injury right knee, Sequela
S87.02XA	Crushing injury of left knee, Initial encounter
S87.02XD	Crushing injury of left knee, Subsequent encounter
S87.02XS	Crushing injury of left knee, Sequela
S87.80XA	Crushing injury of unspecified lower leg, Initial encounter
S87.80XD	Crushing injury of unspecified lower leg, Subsequent encounter
S87.80XS	Crushing injury of unspecified lower leg, Sequela
S87.81XA	Crushing injury of right lower leg, Initial encounter
S87.81XD	Crushing injury of right lower leg, Subsequent encounter
S87.81XS	Crushing injury of right lower leg, Sequela
S87.82XA	Crushing injury of left lower leg, Initial encounter
S87.82XD	Crushing injury of left lower leg, Subsequent encounter
S87.82XS	Crushing injury of left lower leg, Sequela
S97.00XA	Crushing injury of unspecified ankle, Initial encounter
S97.00XD	Crushing injury of unspecified ankle, Subsequent encounter
S97.00XS	Crushing injury of unspecified ankle, Sequela
S97.01XA	Crushing injury of right ankle, Initial encounter
S97.01XD	Crushing injury of right ankle, Subsequent encounter
S97.01XS	Crushing injury of right ankle, Sequela
S97.02XA	Crushing injury of left ankle, Initial encounter
S97.02XD	Crushing injury of left ankle, Subsequent encounter
S97.02XS	Crushing injury of left ankle, Sequela
S97.80XA	Crushing injury of unspecified foot, Initial encounter
S97.80XD	Crushing injury of unspecified foot, Subsequent encounter
S97.80XS	Crushing injury of unspecified foot, Sequela
S97.81XA	Crushing injury of right foot, Initial encounter
S97.81XD	Crushing injury of right foot, Subsequent encounter
S97.81XS	Crushing injury of right foot, Sequela
S97.82XA	Crushing injury of left foot, Initial encounter
S97.82XD	Crushing injury of left foot, Subsequent encounter
S97.82XS	Crushing injury of left foot, Sequela
S97.101A	Crushing injury of unspecified right toes(s), Initial encounter
S97.101D	Crushing injury of unspecified right toes(s), Subsequent encounter
S97.101S	Crushing injury of unspecified right toes(s), Sequela
S97.102A	Crushing injury of unspecified left toe(s), Initial encounter
S97.102D	Crushing injury of unspecified left toe(s), Subsequent encounter
S97.102S	Crushing injury of unspecified left toe(s), Sequela
S97.109A	Crushing injury of unspecified toe(s), Initial encounter
S97.109D	Crushing injury of unspecified toe(s), Subsequent encounter
S97.109S	Crushing injury of unspecified toe(s), Sequela
S97.111A	Crushing injury of right great toe, Initial encounter
S97.111D	Crushing injury of right great toe, Subsequent encounter
S97.111S	Crushing injury of right great toe, Sequela
S97.112A	Crushing injury of right lesser toe(s), Initial encounter
S97.112D	Crushing injury of right lesser toe(s), Subsequent encounter
S97.112S	Crushing injury of right lesser toe(s), Sequela
S97.119A	Crushing injury of left great toe, Initial encounter
S97.119D	Crushing injury of left great toe, Subsequent encounter
S97.119S	Crushing injury of left great toe, Sequela

S97.121A	Crushing injury of unspecified great toe, Initial encounter
S97.121D	Crushing injury of unspecified great toe, Subsequent encounter
S97.121S	Crushing injury of unspecified great toe, Sequela
S97.122A	Crushing injury of left lesser toe(s), Initial encounter
S97.122D	Crushing injury of left lesser toe(s), Subsequent encounter
S97.122S	Crushing injury of left lesser toe(s), Sequela
S97.129A	Crushing injury of unspecified lesser toe(s), Initial encounter
S97.129D	Crushing injury of unspecified lesser toe(s), Subsequent encounter
S97.129S	Crushing injury of unspecified lesser toe(s), Sequela
T07	Unspecified multiple injuries
T14.8	Other injury of unspecified body region
T57.3X1A	Toxic effect of hydrogen cyanide, accidental (unintentional), initial encounter
T57.3X1D	Toxic effect of hydrogen cyanide, accidental (unintentional), Subsequent encounter
T57.3X1S	Toxic effect of hydrogen cyanide, accidental (unintentional), Sequela
T57.3X2A	Toxic effect of hydrogen cyanide, intentional self-harm, initial encounter
T57.3X2D	Toxic effect of hydrogen cyanide, intentional self-harm, Subsequent encounter
T57.3X2S	Toxic effect of hydrogen cyanide, intentional self-harm, Sequela
T57.3X3A	Toxic effect of hydrogen cyanide, assault, Initial encounter
T57.3X3D	Toxic effect of hydrogen cyanide, assault, Subsequent encounter
T57.3X3S	Toxic effect of hydrogen cyanide, assault, Sequela
T57.3X4A	Toxic effect of hydrogen cyanide, undetermined, Initial encounter
T57.3X4D	Toxic effect of hydrogen cyanide, undetermined, Subsequent encounter
T57.3X4S	Toxic effect of hydrogen cyanide, undetermined, Sequela
T58.2X1A	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, accidental (unintentional), Initial encounter
T58.2X1D	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, accidental (unintentional), Subsequent encounter
T58.2X1S	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, accidental (unintentional), Sequela
T58.2X2A	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, intentional self-harm, initial encounter
T58.2X2D	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, intentional self-harm, Subsequent encounter
T58.2X2S	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, intentional self-harm, Sequela
T58.2X3A	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, assault, Initial encounter
T58.2X3D	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, assault, Subsequent encounter
T58.2X3S	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, assault, Sequela
T58.2X4A	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, undetermined, Initial encounter
T58.2X4D	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, undetermined, Subsequent encounter
T58.2X4S	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, undetermined, Sequela
T58.8X1A	Toxic effect of carbon monoxide from other source, accidental (unintentional), Initial encounter
T58.8X1D	Toxic effect of carbon monoxide from other source, accidental (unintentional), Subsequent encounter
T58.8X1S	Toxic effect of carbon monoxide from other source, accidental (unintentional), Sequela
T58.8X2A	Toxic effect of carbon monoxide from other source, intentional self-harm, Initial encounter

T58.8X2D	Toxic effect of carbon monoxide from other source, intentional self-harm, Subsequent encounter
T58.8X2S	Toxic effect of carbon monoxide from other source, intentional self-harm, Sequela
T58.8X3A	Toxic effect of carbon monoxide from other source, assault, Initial encounter
T58.8X3D	Toxic effect of carbon monoxide from other source, assault, Subsequent encounter
T58.8X3S	Toxic effect of carbon monoxide from other source, assault, Sequela
T58.8X4A	Toxic effect of carbon monoxide from other source, undetermined, Initial encounter
T58.8X4D	Toxic effect of carbon monoxide from other source, undetermined, Subsequent encounter
T58.8X4S	Toxic effect of carbon monoxide from other source, undetermined, Sequela
T58.01XA	Toxic effect of carbon monoxide from motor vehicle exhaust, accidental (unintentional), initial encounter
T58.01XD	Toxic effect of carbon monoxide from motor vehicle exhaust, accidental (unintentional), Subsequent encounter
T58.01XS	Toxic effect of carbon monoxide from motor vehicle exhaust, accidental (unintentional), Sequela
T58.02XA	Toxic effect of carbon monoxide from motor vehicle exhaust, intentional self-harm, initial encounter
T58.02XD	Toxic effect of carbon monoxide from motor vehicle exhaust, intentional self-harm, Subsequent encounter
T58.02XS	Toxic effect of carbon monoxide from motor vehicle exhaust, intentional self-harm, Sequela
T58.03XA	Toxic effect of carbon monoxide from motor vehicle exhaust, assault, Initial encounter
T58.03XD	Toxic effect of carbon monoxide from motor vehicle exhaust, assault, Subsequent encounter
T58.03XS	Toxic effect of carbon monoxide from motor vehicle exhaust, assault, Sequela
T58.04XA	Toxic effect of carbon monoxide from motor vehicle exhaust, undetermined, initial encounter
T58.04XD	Toxic effect of carbon monoxide from motor vehicle exhaust, undetermined, Subsequent encounter
T58.04XS	Toxic effect of carbon monoxide from motor vehicle exhaust, undetermined,
T58.11XA	Toxic effect of carbon monoxide from utility gas, accidental (unintentional), Initial encounter
T58.11XD	Toxic effect of carbon monoxide from utility gas, accidental (unintentional), Subsequent encounter
T58.11XS	Toxic effect of carbon monoxide from utility gas, accidental (unintentional), Sequela
T58.12XA	Toxic effect of carbon monoxide from utility gas, intentional self-harm, Initial encounter
T58.12XD	Toxic effect of carbon monoxide from utility gas, intentional self-harm, Subsequent encounter
T58.12XS	Toxic effect of carbon monoxide from utility gas, intentional self-harm, Initial encounter
T58.13XA	Toxic effect of carbon monoxide from utility gas, assault, Initial encounter
T58.13XD	Toxic effect of carbon monoxide from utility gas, assault, Subsequent encounter
T58.13XS	Toxic effect of carbon monoxide from utility gas, assault, Sequela
T58.14XA	Toxic effect of carbon monoxide from utility gas, undetermined, Initial encounter
T58.14XD	Toxic effect of carbon monoxide from utility gas, undetermined, Subsequent encounter
T58.14XS	Toxic effect of carbon monoxide from utility gas, undetermined, Sequela
T58.91XA	Toxic effect of carbon monoxide from unspecified source, accidental (unintentional), Initial encounter
T58.91XD	Toxic effect of carbon monoxide from unspecified source, accidental (unintentional), Subsequent encounter
T58.91XS	Toxic effect of carbon monoxide from unspecified source, accidental (unintentional), Sequela
T58.92XA	Toxic effect of carbon monoxide from unspecified source, intentional self-harm, Initial encounter
T58.92XD	Toxic effect of carbon monoxide from unspecified source, accidental (unintentional), Subsequent encounter
T58.92XS	Toxic effect of carbon monoxide from unspecified source, accidental (unintentional), Sequela
T58.93XA	Toxic effect of carbon monoxide from unspecified source, assault, Initial encounter
T58.93XD	Toxic effect of carbon monoxide from unspecified source, assault, Subsequent encounter
T58.93XS	Toxic effect of carbon monoxide from unspecified source, assault, Sequela
T58.94XA	Toxic effect of carbon monoxide from unspecified source, undetermined, Initial encounter
T58.94XD	Toxic effect of carbon monoxide from unspecified source, undetermined, Subsequent encounter

T58.94XS	Toxic effect of carbon monoxide from unspecified source, undetermined, Sequela
T65.0X1A	Toxic effect of cyanides, accidental (unintentional), Initial encounter
T65.0X1D	Toxic effect of cyanides, accidental (unintentional), Subsequent encounter
T65.0X1S	Toxic effect of cyanides, accidental (unintentional), Sequela
T65.0X2A	Toxic effect of cyanides, intentional self-harm, Initial encounter
T65.0X2D	Toxic effect of cyanides, intentional self-harm, Subsequent encounter
T65.0X2S	Toxic effect of cyanides, intentional self-harm, Sequela
T65.0X3A	Toxic effect of cyanides, undetermined, Initial encounter
T65.0X3D	Toxic effect of cyanides, undetermined, Subsequent encounter
T65.0X3S	Toxic effect of cyanides, undetermined, Sequela
T66.XXXA	Radiation sickness, unspecified, initial encounter
T66.XXXD	Radiation sickness, unspecified, Subsequent encounter
T66.XXXS	Radiation sickness, unspecified, Sequela
T70.3XXA	Caisson Disease – Decompression sickness, Initial encounter
T70.3XXD	Caisson Disease – Decompression sickness, Subsequent encounter
T70.3XXS	Caisson Disease – Decompression sickness, Sequela
T70.20XA	Unspecified effects of high altitude, Initial encounter
T70.20XD	Unspecified effects of high altitude, Subsequent encounter
T70.20XS	Unspecified effects of high altitude, Sequela
T70.29XA	Other effects of high altitude, Initial encounter
T70.29XD	Other effects of high altitude, Subsequent encounter
T70.29XS	Other effects of high altitude, Sequela
T79.0XXA	Air embolism (traumatic), Initial encounter
T79.0XXD	Air embolism (traumatic), Subsequent encounter
T79.0XXS	Air embolism (traumatic), Sequela
T80.0XXA	Air embolism following infusion, transfusion and therapeutic injection, Initial encounter
T80.0XXD	Air embolism following infusion, transfusion and therapeutic injection, Subsequent encounter
T80.0XXS	Air embolism following infusion, transfusion and therapeutic injection, Sequela
T85.693A	Other mechanical complication of artificial skin graft and decellularized allodermis (compromised skin grafts and flaps), Initial encounter
T85.693D	Other mechanical complication of artificial skin graft and decellularized allodermis (compromised skin grafts and flaps), Subsequent encounter
T85.693S	Other mechanical complication of artificial skin graft and decellularized allodermis (compromised skin grafts and flaps), Sequela
T86.820	Skin graft (allograft) rejection
T86.821	Skin graft (allograft) failure
T86.822	Skin graft (allograft) (autograft) infection
T86.828	Skin graft (allograft) (autograft) infection
T86.829	Unspecified complication of skin graft (allograft) (autograft)
T87.0X1	Complications of reattached (part of) right upper extremity
T87.0X2	Complications of reattached (part of) left upper extremity
T87.0X9	Complications of reattached (part of) unspecified upper extremity
T87.1X1	Complications of reattached (part of) right lower extremity
T87.1X2	Complications of reattached (part of) left lower extremity
T87.1X9	Complications of reattached (part of) unspecified lower extremity
T87.2	Complications of other reattached body part

REIMBURSEMENT

Participating facilities will be reimbursed per their Highmark Health Options contract.

SUMMARY OF LITERATURE

There are two methods of administering HBO therapy:

- Systemic HBOT
This form of therapy enables patients to breathe 100% oxygen intermittently while inside a treatment chamber with the pressure higher than sea level. The treatment chamber can be either a monoplace or multi-place chamber. The monoplace chamber only accommodates one patient at a time, and the entire chamber is pressurized with an estimation of 100% oxygen. The patient directly breathes in the ambient chamber oxygen. The multi-place chamber can hold two or more people, and the chamber is pressurized with compressed air. The patient breathes nearly 100% oxygen via masks, head hoods, or endotracheal tubes.
- Topical oxygen therapy
This type of HBO therapy delivers 100% oxygen directly to an open, moist wound at a pressure slightly higher than ambient pressure. It has been proposed that the high concentrations of oxygen diffuse directly into the wound to increase the local cellular oxygen tension, which in turn promotes healing. According to the Undersea and Hyperbaric Medical Society (UHMS), topical oxygen should not be termed hyperbaric oxygen since doing so suggests topical oxygen treatment is equivalent or identical to hyperbaric oxygen. UHMS does not recommend the application of topical oxygen outside the structure of a clinical trial because its use in wound healing has yet to be adequately supported by scientific data.

A number of technology assessments, societies, and organizations have systematically reviewed the evidence supporting the use of hyperbaric oxygen (HBO) for each of the indications for which it has been used. These include but are not limited to Blue Cross Blue Shield Technology Evaluation Center (TEC) assessments, the Cochrane Collaboration, the Agency for Healthcare Research and Quality (AHRQ), the Undersea and Hyperbaric Medical Society Committee (UHMSC) guidelines, the American College of Hyperbaric Medicine (ACHM), and the Alberta Heritage Foundation for Medical Research (AHFMR).

The Undersea and Hyperbaric Medical Society (UHMS) published new guidelines in 2003. The UHMS's Hyperbaric Oxygen Therapy Committee continues to consider HBO to be appropriate for these conditions:

- Air or gas embolism
- Carbon monoxide poisoning and carbon monoxide complicated by cyanide poisoning
- Clostridal myositis and myonecrosis (gas gangrene)
- Crush injury, compartment syndrome and other acute traumatic ischemias
- Decompression sickness
- Enhancement of healing in selected problem wounds
- Exceptional blood loss (anemia)
- Intracranial abscess
- Necrotizing soft tissue infections
- Osteomyelitis (refractory)
- Delayed radiation injury (soft tissue and bony necrosis)
- Skin grafts and flaps (compromised)
- Thermal burns

In contrast to the Undersea and Hyperbaric Medical Society guidelines, the Blue Cross Blue Shield Association (BCBSA) TEC Assessments concluded that there was inadequate literature to validate the effectiveness of systemic hyperbaric oxygen for the following conditions:

- Compromised skin grafts
- Acute thermal burns
- Chronic refractory osteomyelitis
- Necrotizing soft tissue infections
- Brown recluse spider bites

The American College of Hyperbaric Medicine (2012) supports the use of hyperbaric oxygen for treatment for the following conditions (approved indications):

- Air or Gas Embolism
- Carbon Monoxide Poisoning
- Clostridial Myositis and Myonecrosis (Gas Gangrene)
- Crush Injury, Compartment Syndrome or other Acute Traumatic Ischemias
- Decompression Sickness
- Enhancement of Healing in Select Problem Wounds
- Extreme Anemia
- Intracranial Abscess
- Necrotizing Soft Tissue Infections
- Osteomyelitis (Refractory)
- Delayed Radiation Injury (Soft Tissue and Bony Necrosis)
- Skin Flaps and Grafts (Compromised)
- Thermal Burns
- Idiopathic Sudden Sensorineural Hearing Loss
- Central Retinal Artery Occlusion

The American College of Hyperbaric Medicine supports the treatment of patients with non-approved indications only in a research setting under the guidelines of formal protocol which has had the approval of an institutional Investigational Review Board. The ACHM supports the continued performance of well-designed clinical trials in these areas, especially those that are prospective, randomized, and controlled. If sufficient convincing data demonstrate that HBOT treatment is associated with favorable risk-benefit and cost-benefit ratios for an indication which is not currently on the above approved list, the ACHM will endorse application of hyperbaric therapy for the specific supported indication. ACHM does not support the treatment of non-approved conditions for financial gain without investigational treatment protocols. The ACHM classifies unethical situations as a patient being treated for financial gain when a practitioner intentionally falsifies or misleads the patient or family into believing the proposed treatment is an approved indication, or that significant literature exists to support the treatment.

The UHMS Committee Report states that even though there are no randomized clinical trials available, the overwhelming majority of published animal data, human case series, and prospective trials support HBOT as a safe and effective adjunct to the management of refractory osteomyelitis. Appropriate indications have been reviewed and assessed by groups such as the Agency for Healthcare Research and Quality, Undersea and Hyperbaric Medical Society, American College of Hyperbaric Medicine, and the Alberta Heritage Foundation for Medical Research. Collective literature notes that HBOT should not be a replacement for other standard successful therapies.

Per the FDA (2013), the safety and effectiveness of HBOT has not been established for the following conditions:

- AIDS/HIV
- Alzheimer's Disease
- Asthma
- Bell's Palsy
- Brain Injury
- Cerebral Palsy
- Depression
- Heart Disease
- Hepatitis
- Migraine
- Multiple Sclerosis and other demyelinating diseases
- Parkinson's Disease
- Spinal Cord injury
- Sport's injury
- Stroke

The UHMS issued the following policy statement on topical oxygen, often referred to as “topical hyperbaric oxygen therapy” (Feldmeier et al., 2005):

- 1) Topical oxygen should not be termed hyperbaric oxygen since doing so either intentionally or unintentionally suggests that topical oxygen treatment is equivalent or even identical to hyperbaric oxygen. Published documents reporting experience with topical oxygen should clearly state that topical oxygen, not hyperbaric oxygen, is being employed.
- 2) Mechanisms of action or clinical study results for hyperbaric oxygen cannot and should not be co-opted to support topical oxygen since hyperbaric oxygen therapy and topical oxygen have different routes and probable efficiencies of entry into the wound, and their physiology and biochemistry are necessarily different.
- 3) The application of topical oxygen cannot be recommended outside of a clinical trial at this time based on the volume and quality of scientific supporting evidence available, nor does the Society recommend third-party payer reimbursement.
- 4) Before topical oxygen can be recommended as therapy for non-healing wounds, its application should be subjected to the same intense scientific scrutiny to which systemic hyperbaric oxygen has been held.

Topical HBOT administered to the open wound in small limb-encasing devices is not systemic HBOT, and its efficacy has not been established due to the lack of controlled clinical trials. The available in vitro evidence suggests that topical HBOT does not increase tissue oxygen tension beyond the superficial dermis. Some examples of topical HBOT devices include the TOPOX portable hyperbaric oxygen extremity and sacral chambers (Jersey City, NJ), Oxyboot and Oxyhealer from GWR Medical, L.L.P. (Chadds Ford, PA).

HBOT has been shown to be an effective method for treating diabetic foot wounds in select cases of lower extremity lesions. The results of multiple retrospective studies involving a significant number of patients have consistently indicated a high success rate in patients who had been refractory to other modes of therapy. Such evidence is lacking, however, for superficial diabetic wounds and non-diabetic cutaneous, decubitus, and venous stasis ulcers.

Central Retinal Artery Occlusion (CRAO)

In CRAO, there is a sudden and painless loss of vision as the result of obstruction of the central retinal artery. The obstruction can cause permanent vision loss which is apparent in several small studies (Hertzog, 2014 and Beiran, 2008). The use of HBOT for treatment of CRAO has been approved by the Undersea and Hyperbaric Medicine Society (2014).

Migraine

In 2012, the American Academy of Neurology and the American Headache Society released guidelines regarding the use of complementary treatments for episodic migraine prevention in adults (Holland, 2012). These guidelines concluded that there is conflicting or inadequate data to support or refute hyperbaric oxygen for migraine prevention.

Acute Peripheral Arterial Insufficiency

No clinical trials were identified that provide evidence of HBOT for this condition despite a long-term positive coverage determination by Medicare.

Bell’s palsy, Traumatic Brain Injury, Inflammatory Bowel Disease, Autism

There is insufficient evidence that HBOT improves health outcomes in patients with these conditions.

Idiopathic Sudden Sensorineural Hearing Loss (ISSNHL)

In 2012, the American Academy of Otolaryngology–Head and Neck Surgery published a clinical guideline on treatment of sudden hearing loss. The guideline includes a statement that HBOT may be considered a treatment option for patients who present within 3 months of a diagnosis of ISSNHL. The document states, “Although HBOT is not widely available in the United States and is not recognized by many U.S. clinicians as an intervention for ISSNHL, the panel felt that the level of evidence for hearing improvement, albeit modest and imprecise, was sufficient to promote greater awareness of HBOT as an intervention for ISSNHL.”

Thermal Burns

Hayes (2013) reported that there is insufficient evidence, primarily due to mixed results or an overall paucity of studies, to determine if HBOT is effective for the treatment of thermal burns.

Update 2017

Diabetes-related Foot Ulcers

In October 2017, Hayes published a review of hyperbaric oxygen therapy for diabetes related foot ulcers as an adjunct to standard wound care in adults. The review detailed evidence based studies from September 1, 2015 to August 7, 2017 with specific outcomes related to amputation, ulcer healing, quality of life, and safety. A total of five random controlled trials were analyzed. It was determined that the overall quality of evidence was low for amputation, ulcer healing and complications, and very low for quality of life, compared to sham therapy or adjunct therapy. The review documented the coverage position of several private insurers and CMS. All provide coverage of HBOT in the treatment of specific diabetic wounds in lower extremities that have failed to heal. A Hayes rating of ‘C’ was assigned.

Topical Oxygen Therapy for the Treatment of Chronic Wounds

In a separate report, an evaluation of the topical oxygen therapy in the treatment of chronic wounds was assessed by Hayes (September 2017). Chronic wounds were defined as diabetic foot ulcers, arterial ulcers, venous stasis ulcers, decubiti ulcers, and necrotic or gangrenous lesions. The review stated that a search for clinical studies yielded a small body of published literature. Ten abstracts were assessed leading to the conclusion that there is sufficient published evidence to evaluate the technology despite conflicting findings presented in the abstracts. It was recommended that a comprehensive Health Technology Assessment be conducted. Until that assessment is completed, no conclusions can be made.

Burn Classifications

Thermal Burn

The depth of the burn injury is related to contact temperature, duration of contact of the external heat source, and the thickness of the skin. Because the thermal conductivity of skin is low, most thermal burns involve the epidermis and part of the dermis. The most common thermal burns are associated with flames, hot liquid, hot solid objects, and steam. The depth of the burn largely determines the healing potential and the need for surgical grafting.

Classification

The traditional classification of burns as first, second, and third degree was replaced by a system reflecting the need for surgical intervention. The term fourth degree is still used to describe the most severe burns. The current designations of burn depth are classified as the following:

- Superficial or epidermal (first degree): these burns involve only the epidermal layer of skin.
- Partial thickness (second degree): these burns involve the epidermis and portions of the dermis. They are characterized as either superficial or deep.

- Superficial: These burns characteristically form blisters within 24 hours between the epidermis and dermis.
- Deep: These burns extend into the deeper dermis and are characteristically different from superficial partial thickness burns. Deep burns damage hair follicles and glandular tissue.
- Full thickness (third degree): these burns extend through and destroy all layers of the dermis and often injure the underlying subcutaneous tissues.
- Fourth degree: deep and potentially life threatening burn injuries that extend through the skin into underlying tissues such as the fascia, muscle, and/or bone.

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Policy History

Date	Activity
06/07/2016	QI/UM Committee approval
12/01/2016	Provider effective date
02/08/2017	Revisions: General formatting changes; Page 1- Correct effective date entered; Page 4-added item 9K; Page 5-added 'Policy History' box and under Summary of Literature, first sentence was removed; Page 8- revised verbiage under Central Retinal Artery Occlusion; Page 9-Coding changes: Under ICD 10 codes added E09.59; Page 10-added non-covered HCPCS codes to be in alignment with coverage position; Highmark Health Options disclaimer update on external document
03/14/2017	QI/UM Committee Review Approval
08/09/2017	Added Disclaimer Statement in opening of medical policy. EHS Revisions: Added Issue Date to opening policy box; added 'Covered' and 'Non-covered' Procedure and Diagnosis Codes in Tables B & C; Added 'Informational' to Tables D & E and operational guidelines. Updated Operational Guidelines-All diagnosis codes are considered eligible for procedure codes 99183 & G0277. Procedure Codes A4575 and E0446 are to deny as not medically necessary.
10/21/2017	Annual clinical review. 2018 ICD 10 code additions; 63 codes added related non-pressure chronic ulcers. Updated Literature Summary and Reference sections.
03/13/2018	QI/UM Committee Review Approval
05/15/2018	New Provider effective date
12/11/2018	Annual review: Revised covered conditions; added multiple covered ICD-10 diagnosis codes to align with coverage criteria; the word 'Covered' was removed from Attachments B & C; in the Reference section removed hyperlinks from all sources
12/11/2018	QI/UM Committee Review Approval
02/18/2019	Provider effective date