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I have been asked to comment on CPT® coding that accompanies use of the XSONX® Wound Hygiene System.

This review and report were performed by only myself, a Certified Professional Coder, Certified Professional Medical Auditor, Certified Evaluation and Management Coder, and board certified podiatrist. Attending and participating in the American Medical Association (AMA) CPT®[1] Editorial Panel meetings that take place three times a year where CPT codes are created, deleted, and modified, I have a rich knowledge of the CPT code set and its appropriate use. In my role as a staff liaison to the AMA CPT Editorial Panel, I also collaborate with the AMA on the writing and editing of CPT Assistant®[2] articles. I have collaborated with the World Health Organization on ICD-10 coding, and I also regularly attend and participate in the Centers for Medicare and Medicaid Services (CMS) Healthcare Common Procedural Coding System (HCPCS) Panel Meetings. With these experiences, my three coding and auditing certifications, delivering over 800 coding – related invited lectures, authoring or co-authoring over 100 papers, articles, blogs, book chapters, and posters, being in private practice for over 21 years, and over 12 years of experience providing coding, compliance, and documentation consultation services, I was comfortable performing the analysis that was requested.

Wound Debridement

Debridement is indicated for most chronic wounds. Page 3 of the October 2016 AMA CPT Assistant Newsletter[2] defines debridement as "the process of removing dead tissue from wounds." Any necrotic and/or non-viable tissue should typically be removed from the wound bed, and this is normally best accomplished via debridement. Necrotic and/or non-viable tissue can serve as a medium for infection. It is also a barrier to healing, contributes to the formation of matrix metalloproteinases, and increases the bioburden of the wound bed.

There are multiple forms of debridement. Biosurgical debridement refers to maggot or larval therapy. This is a selective form of debridement as the maggot species that are used only feed on nonviable tissue and will not disrupt healthy tissue. Enzymatic debridement refers to the use of exogenous enzyme(s) to cleave the strands of collagen that anchor necrotic tissue to the wound bed. Whereas enzymatic debridement relies on exogenous enzymes, autolytic debridement enlists the body's own endogenous enzymes. This is typically a slower form of debridement as it relies upon natural processes and the proteolytic enzymes produced endogenously. The use of dressings that help to maintain moisture can facilitate autolytic debridement. These include hydrogels, hydrocolloids, and honey. Mechanical debridement most often refers to a wet-to-dry or moist-to-dry dressing. These two types of mechanical debridement are considered substandard and should not be used.[3] Other forms of mechanical debridement include irrigation, pulse lavage, whirlpool, and scrubbing. Low frequency ultrasound-assisted debridement may be employed in the form of noncontact or contact ultrasound. Finally, sharp debridement may be

[1] CPT is copyright by the American Medical Association. All rights reserved. CPT is a registered trademark of the American Medical Association (AMA).
[2] CPT Assistant Online https://ocm.ama-assn.org/OCM/CPTAA/Overview.do
[3] Association for the Advancement of Wound Care 2010 Guideline of Pressure Ulcer Guidelines; p 9

performed with scissors, forceps, lasers, hydrosurgical options, curettes, vibrational-powered scrubbing, scalpels, or other modalities. Sharp debridement is typically intended to remove exudates, devitalized tissue, bacteria, bacterial biofilm, slough, fibrin, and excised or fragmented tissue. The frequency with which sharp debridements are performed should be based on peer-reviewed literature and this is a situation where the standard of care does not always match the gold standard. Peer-reviewed literature[4] suggests that chronic wounds demonstrate better healing with more frequent debridements. This is likely due to the fact that biofilm returns quickly after sharp debridement, beginning to reform within 24 hours[5] and re-establishing itself within three days[6]. Not only should sharp debridement be performed frequently, but there are also multiple studies that suggest ulcer progression is improved when sharp debridement is combined with enzymatic debridement rather than choosing only one or the other.[7,8,9]

XSONX® Wound Hygiene System

The XSONX® Wound Hygiene System is a cordless debridement tool that employs vibrational technology to power microscrubbing and / or microdebriding to clean and debride wounds. The system provides the option to use either a scrubbing head or a debridement head. These heads attach to a handpiece that contains the power source. Either the scrubbing head or the debridement head is powered to result in greater than 500 microscrubs or microdebridements per second. Using vibratory motion is intended to result in patients experiencing less pain when cleaning and debridement is performed. Use of XSONX® is intended to improve wound healing via petechial microbleeding and wound bed stimulation.

CPT® Coding

Page xiv of the 2026 CPT Professional book states:

> *"Select the CPT code of the procedure or service that accurately identifies the procedure or service performed. Do not select a CPT code that merely approximates the procedure or service provided."*[1]

Therefore, in order to make coding recommendations, an exact description of the procedure performed, without approximation, must be considered.

[4] Wilcox JR, Carter MJ, Covington S. Frequency of debridements and time to heal: a retrospective cohort study of 312 744 wounds. JAMA Dermatol. 2013 Sep;149(9):1050-8. doi: 10.1001/jamadermatol.2013.4960. Erratum in: JAMA Dermatol. 2013 Dec;149(12):1441. PMID: 23884238.

[5] Carpenter S, et al. *WOUNDS* 2016;(28)(6Suppl);S1 – S20

[6] Wolcott RD, Rumbaugh KP, James G, Schultz G, Phillips P, Yang Q, Watters C, Stewart PS, Dowd SE. Biofilm maturity studies indicate sharp debridement opens a time- dependent therapeutic window. J Wound Care. 2010 Aug;19(8):320-8. doi: 10.12968/jowc.2010.19.8.77709. PMID: 20852503.

[7] Motley TA, Lange DL, Dickerson JE Jr, Slade HB. Clinical outcomes associated with serial sharp debridement of diabetic foot ulcers with and without clostridial collagenase ointment. Wounds. 2014 Mar;26(3):57-64. PMID: 25860329.

[8] Jimenez JC, Agnew PS, Mayer P, Clements JR, Caporusso JM, Lange DL, Dickerson JE Jr, Slade HB. Enzymatic Debridement of Chronic Nonischemic Diabetic Foot Ulcers: Results of a Randomized, Controlled Trial. Wounds. 2017 May;29(5):133-139. Epub 2017 Feb 27. PMID: 28267678.

[9] Tallis A, Motley TA, Wunderlich RP, Dickerson JE Jr, Waycaster C, Slade HB; Collagenase Diabetic Foot Ulcer Study Group. Clinical and economic assessment of diabetic foot ulcer debridement with collagenase: results of a randomized controlled study. Clin Ther. 2013 Nov;35(11):1805-20. doi: 10.1016/j.clinthera.2013.09.013. Epub 2013 Oct 18. PMID: 24145042.

XSONX® Wound Hygiene System Procedure
The steps involved to complete the procedure include:

1. Gloves are applied.
2. Two new AAA alkaline batteries are loaded into the handpiece.
3. A single use handpiece sleeve is placed over the handpiece by sliding it over the narrow end of the handpiece so that the sleeve is completely flush to the tip of handpiece with the sleeve fully covering the handpiece and the excess sleeve material hanging off the back of the handpiece.
4. The appropriate scrubbing head or debridement head is inserted over the narrow end of the handpiece.
5. Saline or another approved irrigation fluid is used to premoisten wound bed.
6. The XSONX® handpiece is powered on using the On / Off button.
7. This causes the head to vibrate more than 500 times per second.
8. The wound head is placed on the wound bed, starting in the center of the wound.
9. The wound head is moved in a circular direction outward until the entire wound has been covered.
10. Throughout the procedure, saline or another approved irrigation fluid is used to moisten the wound bed and to help flush out cellular debris and bacteria.

CPT® Coding
As noted above, CPT code selection is based on the procedure or service performed. With that guidance, when the XSONX® Wound Hygiene System is used, CPT code options include CPT 97602, 97597, 97598, 11042, 11045, 11043, 11046, 11044, and 11047. Selecting the correct code from these options depends on what service was performed with the XSONX® Wound Hygiene System.

CPT 97602

> *CPT® 97602 – Removal of devitalized tissue from wound(s), non-selective debridement, without anesthesia (eg, wet-to-moist dressings, enzymatic, abrasion, larval therapy), including topical application(s), wound assessment, and instruction(s) for ongoing care, per session*[1]

CPT 97602 may only be submitted by a facility, such as a hospital outpatient department wound healing center. CPT 97602 may not be submitted by practitioners. CPT 97602 may be submitted when a practitioner sees a patient in a facility for evaluation of a wound and does not perform any procedure to the wound, only submits an evaluation and management service CPT code for the encounter, and orders non-selective debridement be performed by facility staff. If the facility staff, then uses XSONX® to perform the service described by CPT 97602, the facility may then submit CPT 97602.

CPT 97597 / 97598 and 11042 – 11047

CPT® 97597 – Debridement (eg, high pressure waterjet with/without suction, sharp selective debridement with scissors, scalpel and forceps), open wound (eg, fibrin, devitalized epidermis and/or dermis, exudate, debris, biofilm), including topical application(s), wound assessment, use of whirlpool, when performed and instruction(s) for ongoing care, per session; total wound(s) surface area; first 20 sq cm or less[1]

CPT® 97598 - Debridement (eg, high pressure waterjet with/without suction, sharp selective debridement with scissors, scalpel and forceps), open wound (eg, fibrin, devitalized epidermis and/or dermis, exudate, debris, biofilm), including topical application(s), wound assessment, use of whirlpool, when performed and instruction(s) for ongoing care, per session; total wound(s) surface area; each additional 20 sq cm, or part thereof (List separately in addition to code for primary procedure) [1]

CPT® 11042 – Debridement, subcutaneous tissue (includes epidermis and dermis, if performed); first 20 sq cm or less[1]

CPT® 11045 - Debridement, subcutaneous tissue (includes epidermis and dermis, if performed); each additional 20 sq cm, or part thereof (List separately in addition to code for primary procedure) [1]

CPT® 11043 – Debridement, muscle and/or fascia (includes epidermis, dermis, and subcutaneous tissue, if performed); first 20 sq cm or less[1]

CPT® 11046 - Debridement, muscle and/or fascia (includes epidermis, dermis, and subcutaneous tissue, if performed); each additional 20 sq cm, or part thereof (List separately in addition to code for primary procedure) [1]

CPT® 11044 - Debridement, bone (includes epidermis, dermis, subcutaneous tissue, muscle and/or fascia, if performed); first 20 sq cm or less[1]

CPT® 11047 - Debridement, bone (includes epidermis, dermis, subcutaneous tissue, muscle and/or fascia, if performed); each additional 20 sq cm, or part thereof (List separately in addition to code for primary procedure) [1]

When a practitioner uses XSONX® to debride a wound bed, there are four base CPT code options, CPT 97597 and 11042 – 11044. Selection among these four options is based on the deepest depth of tissue removed from the wound bed. Examples of modalities employed to accomplish the services described by CPT 97597 and 11042 – 11044 are provided by AMA CPT, but these are only examples and there is no restriction on which modalities may be employed to accomplish the services described by these codes. AMA CPT guidance states CPT code selection is based on the procedure or service performed. Therefore, if the service

described by any of these code descriptors is performed, the code representing that service may be submitted, regardless of the modality used to accomplish the service.

If only fibrin, devitalized epidermis, devitalized dermis, exudate, debris, and / or biofilm is removed with XSONX®, the base code is CPT 97597.

If tissue deeper than dermis is removed with XSONX®, code selection depends on the deepest depth of tissue removed. Page 83 of the 2026 CPT Professional Edition book[1] states:

> *"Wound debridements (11042-11047) are reported by depth of tissue that is removed and by surface area of the wound."*

Page 83 of the 2026 CPT Professional Edition book[1] also states:

> *"When performing debridement of a single wound, report depth using the deepest level of tissue removed."*

Therefore, if the deepest depth of tissue removed is subcutaneous tissue, the base code is CPT 11042. If the deepest depth of tissue removed is muscle and / or fascia, the base code is CPT 11043. If the deepest depth of tissue removed is bone, the base code is CPT 11044.

The four base debridement CPT codes listed above (CPT 97597 and 11042-11044) only account for the first 20 sq cm of tissue removed. If more than 20 sq cm of tissue is removed at a particular depth, an add-on CPT code must be listed in addition to the base CPT code. For each of the four depths of debridement, the add-on CPT codes are CPT 97598 and 11045 – 11047. These are each considered "add-on" CPT codes and, as such, no 59, 51, or X[ESPU] Modifier is needed when submitting these CPT codes in addition to their corresponding base code.

If more than 20 sq cm of tissue is removed at a particular depth, one unit of the base code should be listed and, on a second line of the claim form, the appropriate add-on code should also be listed with the number of units of that add-on code representing how many additional increments of 20 sq cm of tissue were removed at that depth beyond the first 20 sq cm.

For example, if 36 sq cm of subcutaneous tissue is removed, the appropriate CPT coding is:
CPT 11042 – 1 unit
CPT 11045 – 1 unit

If 86 sq cm of subcutaneous tissue is removed, the appropriate CPT coding is:
CPT 11042 – 1 unit
CPT 11045 – 4 units

If multiple ulcers are debrided at the same depth, the total amount of tissue removed from all of them should be totaled to determine the appropriate CPT code(s). If multiple ulcers are debrided to different depths, then the different CPT codes representing the different depths of debridement must be submitted.

Page 83 of the 2026 CPT Professional Edition book[1] states:

> *In multiple wounds, sum the surface area of those wounds that are at the same depth, but do not combine sums from different depths.*

If 4 sq cm of subcutaneous tissue is debrided from one ulcer and 6 sq cm of subcutaneous tissue is debrided from another ulcer, the total sq cm of subcutaneous tissue removed is 10 sq cm and one unit of CPT 11042 should be submitted. Because multiple ulcers were debrided to the same depth, the total amount of tissue removed from all of them is totaled to determine the appropriate CPT code.

If 4 sq cm of subcutaneous tissue is debrided from one ulcer and 6 sq cm of muscle is debrided from another ulcer, one unit of CPT 11042 and one unit of CPT 11043 should be submitted. Because multiple ulcers were debrided to different depths, the appropriate, different CPT codes representing the different depths of debridement are submitted.

Burn Treatment

The XSONX® Wound Hygiene System can be used to accomplish debridement of a partial-thickness burn. If XSONX® is used to debride a partial-thickness burn, CPT code considerations include:

> *CPT® 16020 - Dressings and/or debridement of partial-thickness burns, initial or subsequent; small (less than 5% total body surface area)* [1]
>
> *CPT® 16025 - Dressings and/or debridement of partial-thickness burns, initial or subsequent; medium (eg, whole face or whole extremity, or 5% to 10% total body surface area)* [1]
>
> *CPT® 16030 - Dressings and/or debridement of partial-thickness burns, initial or subsequent; large (eg, more than 1 extremity, or greater than 10% total body surface area)* [1]

In reference to the use of CPT 16020 – 16030, page 3 of the October 2012 CPT Assistant Newsletter states:

> *"Wound healing is optimized when wound surfaces are clean with minimal microbial colonization and necrotic debris present. Debridement cleans the wound and allows it to heal more rapidly with reduced risk of infection. In general, debridement is performed on shallow burns that are expected to heal without the need for skin grafting."* [2]

The XSONX® Wound Hygiene System can be used to accomplish this debridement of partial-thickness burns.

Extensive Eczematous or Infected Skin

Separate from wound or burn debridement, there are different CPT code options if debridement of extensive eczematous or infected skin is performed. If the XSONX® Wound Hygiene System

is used to debride extensive eczematous or infected skin, the following CPT codes may be considered:

CPT® 11000 - Debridement of extensive eczematous or infected skin; up to 10% of body surface[1]

CPT® 11001 - Debridement of extensive eczematous or infected skin; each additional 10% of the body surface, or part thereof (List separately in addition to code for primary procedure) [1]

Necrotizing Soft Tissue Infection
Separate from wound or burn debridement, there are different CPT code options if debridement is performed specifically for a necrotizing soft tissue infection. If the XSONX® Wound Hygiene System is used to accomplish debridement to treat necrotizing soft tissue infection, the following CPT codes may be considered:

CPT® 11004 - Debridement of skin, subcutaneous tissue, muscle and fascia for necrotizing soft tissue infection; external genitalia and perineum[1]

CPT® 11005 - Debridement of skin, subcutaneous tissue, muscle and fascia for necrotizing soft tissue infection; abdominal wall, with or without fascial closure[1]

CPT® 11006 - Debridement of skin, subcutaneous tissue, muscle and fascia for necrotizing soft tissue infection; external genitalia, perineum and abdominal wall, with or without fascial closure[1]

Reimbursement
Medicare national averages associated with CPT codes discussed herein are listed below. Non-Medicare national averages may differ.

CPT® code	Medicare 2026 national average to practitioner when performed in a facility setting *	Medicare 2026 national average to practitioner when performed in a non-facility setting **	Medicare 2025 national average payment to ASC	Medicare 2025 national average payment to hospital outpatient department	Payment to hospital for inpatient ***
97602	Not payable to practitioner	Not payable to practitioner	Not payable when performed in ASC	$198.70	Not payable

* Facility setting examples = Hospital inpatient and hospital outpatient department wound healing center
** Non – Facility setting example = Private office

*** Falls under the Inpatient Prospective Payment System Severity Diagnosis Related Group (MS-DRG)

CPT® code	Medicare 2026 national average to practitioner when performed in a facility setting *	Medicare 2026 national average to practitioner when performed in a non-facility setting **	Medicare 2025 national average payment to ASC	Medicare 2025 national average payment to hospital outpatient department	Payment to hospital for inpatient ***
97597	$31.06	$101.54	Not payable when performed in ASC	$198.70	Not payable
97598	$21.71	$47.76	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
11042	$55.78	$132.60	$214.39	$399.53	Not payable
11043	$138.28	$239.48	$328.29	$612.13	Not payable
11044	$201.07	$320.65	$708.28	$1,620.24	Not payable
11045	$22.04	$41.75	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
11046	$47.76	$76.49	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
11047	$85.17	$128.59	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
16020	$54.44	$92.85	Not payable when performed in ASC	$198.70	Not payable

* Facility setting examples = Hospital inpatient and hospital outpatient department wound healing center

** Non – Facility setting example = Private office

*** Falls under the Inpatient Prospective Payment System Severity Diagnosis Related Group (MS-DRG)

CPT® code	Medicare 2026 national average to practitioner when performed in a facility setting *	Medicare 2026 national average to practitioner when performed in a non-facility setting **	Medicare 2025 national average payment to ASC	Medicare 2025 national average payment to hospital outpatient department	Payment to hospital for inpatient ***
16025	$101.87	$165.67	$106.77	$198.70	Not payable
16030	$122.92	$213.77	$214.39	$399.53	Not payable
11000	$24.38	$59.12	$36.23	$612.13	Not payable
11001	$12.69	$27.05	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
11004	$504.69	Not payable to practitioner when performed in non-facility setting	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
11005	$692.73	Not payable to practitioner when performed in non-facility setting	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable
11006	$623.93	Not payable to practitioner when performed in non-facility setting	Not payable when performed in ASC	Not payable when performed in HOPD	Not payable

* Facility setting examples = Hospital inpatient and hospital outpatient department wound healing center
** Non – Facility setting example = Private office
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Conclusion

Based on the guidance of the AMA CPT Editorial Panel and their publications, when the XSONX® Wound Hygiene System is used on the surface of a wound, CPT 97602, 97597, 97598, and 11042 – 11047 may be used if the service detailed in the code descriptor is performed. If the XSONX® Wound Hygiene System is used to debride a partial-thickness burn, CPT 16020 – 16030 may be submitted. If the XSONX® Wound Hygiene System is used to debride extensive eczematous or infected skin, CPT 11000 – 11001 may be submitted. If the XSONX® Wound Hygiene System is used to accomplish debridement to treat necrotizing soft tissue infection, CPT 11004 – 11006 may be submitted.

As a Board Certified Foot and Ankle Surgeon, Board Certified Professional Coder, Board Certified Evaluation and Management Coder, and Board Certified Professional Medical Auditor, these recommendations are made with a reasonable degree of certainty.

Humbly submitted,

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