



Coding the Digital Workflow

In the diverse field of oral and maxillofacial surgery, digital technology, computer-aided design (CAD) and computer-aided manufacturing (CAM) are critical components that contribute to a wide range of diagnostic and planning activities in the digital workflow. Both traditional methodologies and advanced digital technologies play significant roles in the preparatory stages of the digital workflow, depending on the resources and preferences of the surgical practice. These steps are crucial for ensuring successful outcomes across various surgical interventions, not limited to any single type of procedure.

Coding for the digital workflow reflects the comprehensive nature of this phase, incorporating various procedures and technologies. There is no singular Current Dental Terminology (CDT) or Current Procedural Terminology (CPT) code that captures this technology. Instead, codes are selected based on the specific activities and tools utilized during the planning process. Common components that make up the digital workflow that may be applicable across a spectrum of OMS procedures, may include:

- I. Clinical evaluation**
- II. Diagnostics**
- III. Imaging services**
- IV. Virtual Planning**
- V. 3D printing**
- VI. Supplemental products**
- VII. OMS case examples using the digital workflow**

I. CLINICAL EVALUATION

There are a range of evaluation codes within both the CDT and CPT code sets that may be applicable when reporting an oral evaluation. The Diagnostic Category of CDT offers evaluation codes ranging from D0140-D0160. CPT offers several code families in the Evaluation and Management (E/M) section, depending upon where the service is rendered.

For CPT, E/M services are divided into different levels based on the complexity of the patient's condition and the extent of the medical decision making (MDM) involved. These levels are determined by three key components: history, examination and MDM. The complexity of each component, as well as time spent with the patient, helps determine the appropriate level of E/M service reported. For instance, CPT code 99205 (new patient; office or other outpatient visit) requires a comprehensive history and examination with high complexity MDM and if coding based on time, 60 minutes must be met or exceeded. For additional time spent beyond the typical time associated with a standard E/M service, report the appropriate prolonged service code.

Similarly, code selection under CDT for an oral examination is based on the scope, complexity and extent of the examination rendered. Code selection may be considered based on a variety of components for both code sets including the location, level of service, relationship with the patient (e.g., new or established), nomenclature, descriptor and guideline applicability.

As with both CDT and CPT, the level of service must be documented by the data elements of the evaluation and clinical examination and supported by medical necessity.

Although not an all-inclusive list, common E/M categories that may be reported by an OMS for clinical evaluation include:

CDT code	Description
D0140-D0160	Oral evaluation

CPT code	Description
99202-99215	Office and Other Outpatient Services
99242-99245, 99252-99255	Consultations

Note: Please refer to your CDT coding manual for full nomenclature and descriptors of CDT oral evaluation codes and to your CPT coding manual for complete guidelines for selecting the appropriate level of E/M.

II. DIAGNOSTICS

Treatment planning for a surgical case requires an understanding of a patient's clinical condition. Several codes may be considered to report the individual components of the diagnostic stage for a presurgical work-up. Diagnostic casts and occlusion analysis may be necessary to obtain comprehensive diagnostic information about the patient's oral anatomy, occlusion relationship and bite function. Diagnostic casts or the conventional analog cast may be reported by taking impressions of the maxilla, mandible or both arches. Oral or facial images may be used to describe the present intraoral or extraoral esthetics. Dental or facial 3D surface scans combine the use of photographic or video process to create a 3D image. Surface scan code selection depends on whether the 3D image capture is intraoral or a facial surface or a physical model.

CDT code	Description
D0350	Oral/facial images (photographs)
D0470	Diagnostic casts (study models)
D9950	Occlusion analysis (e.g., tracings, diagnostic wax-up)
D0801	3D intraoral surface scan – direct <i>Intraoral scan of any aspect of the intraoral anatomy</i>
D0802	3D dental surface scan – indirect <i>Scan of diagnostic cast, impression or 3D printed model</i>
D0803	3D facial surface scan – direct <i>Scan of a facial structure</i>
D0804	3D facial surface scan – indirect <i>Scan of a constructed facial feature (e.g., prosthetic ear.)</i>

III. IMAGING SERVICES

Dental imaging provides detailed and accurate images of the teeth, bones and surrounding tissues. Diagnostic imaging also may provide comprehensive dental care by enabling early detection, accurate diagnosis, personalized treatment planning and preventative measures.

In terms of 3D imaging, typically, a wide field of view is required with cone-beam computed tomography (CBCT.) Depending on the type of imaging, the term “computed tomography,” or CT, refers to a computerized X-ray imaging procedure in which a narrow beam of X-rays is processed to generate cross-sectional images, or “slices.”

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CT scans may produce 2D images of a section of the body, but the data can be used to construct 3D images. There are several CDT codes available to report diagnostic imaging services. Code selection depends on the field of view of one or more dental arches and whether the provider rendered both the image capture and interpretation, image capture only or simply the interpretation. Therefore, it is imperative to review code nomenclature and descriptors to ensure code selection represents the appropriate services rendered.

There also are CPT codes available in the Radiology section of CPT to report imaging services depending upon the images rendered (i.e., CBCT, MRI). When reporting radiology services with CPT codes, it may be necessary to append a specific modifier to accurately describe the component(s) rendered. Modifier -26 is the professional component or the professional portion of a service, which may include technician supervision, interpretation of results and a written report. Modifier -TC is the technical component that includes the provision of all equipment, supplies, personnel and costs related to the performance of the procedure. Some radiology services are considered global and include both the professional and technical components as part of a bundled service. In such cases, the procedure code represents the total services, and the components are not billed separately. Therefore, appending modifiers -26 and -TC is not necessary.

Although not an all-inclusive list, common imaging services that may be reported by an OMS include:

CDT code	Description
D0330	Panoramic image
D0340	Cephalometric image
D0364-D0368	Cone-beam CT capture and interpretation <i>Code selection is determined by the field of view.</i>
D0380-D0384	Cone-beam CT image capture only <i>Code selection is determined by the field of view.</i>
D0391	Interpretation and report only



CPT code	Description
70350	Cephalometric image
70355	Panoramic image
70486-70488	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material .</i>

IV. VIRTUAL PLANNING

Virtual planning addresses a preoperative planning method involving the visualization of a surgical procedure that utilizes components of the digital workflow, such as 3D imaging software. Specialized software and digital imaging such as CBCT scans or intraoral scans are used to capture highly detailed 3D images of a patient’s teeth, jaws and surrounding structures and surgical plan by combining different data sets. The combined information offers a comprehensive view of the anatomy and a more accurate diagnosis for virtual treatment and simulation process.

Three-dimensional postprocessing captures the 3D reconstruction or 3D manipulation that takes place after an image has been taken. An OMS can manipulate virtual 3D image volume to perform all manners of dentofacial analysis and appliance construction. For example, surgical planning software that merges digital cast data with a CBCT DICOM file to create a complete 3D model may be used for specific measurements such as determining the type of malocclusion or overjet in an orthognathic workup or for determining the location and angle placement for implants. CDT code D0393 would be the appropriate code to report these services.

In terms of CPT coding, 76376 may be reported when 3D rendering or reconstruction of a digital model is performed by an OMS at the acquisition scanner (computer on which the image is acquired). However, CPT code 76377 is reported when the 3D postprocessing images are reconstructed on an independent workstation. These codes are distinct diagnostic procedures that describe a separate process applied to a CT, MRI, ultrasound or other tomographic modality. A formal note in the patient record must be dictated that describes the surgical plan, all planned movements and fabrication of any hardware, surgical guide(s), splint(s), etc.

CDT code	Description
D0393	virtual treatment simulation using 3D image volume or surface scan <i>Virtual simulation of treatment including, but not limited to, dental implant placement, prosthetic reconstruction, orthognathic surgery, and orthodontic tooth movement.</i>

CPT code	Description
76376	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; not requiring image postprocessing on the independent workstation
76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; requiring image postprocessing on the independent workstation

V. 3D PRINTING

Three-dimensional printing offers several advantages, including customization, rapid prototyping and the ability to create complex geometries not possible with traditional manufacturing methods. CDT code D0396 is reported for 3D printing of a physical model (similar to a tooth cast or jaw model) after a 3D surface scan is obtained. There is no CPT code available to report 3D printing; however, it is appropriate to report the dental code (D0396) on a medical claim form.

CDT code	Description
D0396	3D printing of a 3D dental surface scan

VI. SUPPLEMENTAL PRODUCTS

Several dental oral devices are available to aid in oral and maxillofacial procedures as a result of advancements in digital technology. Some oral devices resulting from this digital technology include, cutting guides, surgical splints, custom-made titanium plates and guided implant placement.

Surgical splint

OMSs commonly use surgical splints in various procedures, including orthognathic surgery. These custom-made devices may be designed based on components of the digital workflow such as intraoral scanning and 3D printing to digitally design and fabricate the surgical splint. In such cases, it would be appropriate to report 21085 to capture the work fabricating the prosthesis. The coding and ability to report a surgical splint depends on who is fabricating the prosthesis. CPT code 21085 may only be reported when the physician or other qualified healthcare professional designs and prepares the prosthesis (e.g., not prepared by an outside laboratory). Depending on the payer, CPT code 99070 may be reported along with a copy of the lab invoice to account for supplies and materials if the device is not fabricated by the OMS. Another option may be to report CPT code 21085 and append modifier -52 (Reduced Services) to recognize the fabrication services were performed elsewhere. Reporting and reimbursement guidelines may vary by payer; therefore, it is best practice to confirm with the insurance carrier how such services should be reported. Any imaging services, as well as image manipulation and/or postprocessing, 3D printing of 3D surface scan are separately reportable, as applicable to the patient encounter. If reporting a surgical splint to a dental carrier, CDT code D5988 is an appropriate crosswalk.

There may be instances when a patient may require two separate splints on the maxilla and mandible on the same date of service such as when they are undergoing maxillomandibular advancement for treatment of sleep apnea or in orthognathic/reconstructive surgery when two splints – an intermediate and final – are required for proper positioning of both jaws on the same day. CPT code 21085 is assigned a Medically Unlikely Edit (MUE) of 2 and a Medicare Administrative Indicator (MAI) of 3.

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This permits reporting of both an intermediate and final splint on the same date of service when documentation supports the need for both surgical splints.

Additionally keep in mind, because CPT code 21085 carries a 10-day global period, an OMS may consider rendering and reporting 21085, 11 days or more prior to the surgical procedure to avoid the procedure being denied within the global period of the surgical service.

CDT code	Description
D5988	Surgical splint

CPT code	Description
21085	Impression and custom preparation; oral surgical splint

Surgical implant guide

With the increased use of digital technologies available for implant placement, guidance also is available for coding the different aspects of surgical guide fabrication via computer-aided design. CDT code D6190 may be reported for an appliance designed to relate osteotomy of fixture position to existing anatomic structures and may be utilized during radiographic exposure for treatment planning and/or during osteotomy creation for fixture installation. This code relates more to a conventional or static guide such as where the implant osteotomy is performed through the guide. Given the variation between the different types of guides that can be utilized (digital vs. non-digital, fully or partially guided, single or multiple units), the code nomenclature indicates “by report” and requires a narrative when submitting the claim to explain the service or type of appliance provided. It is important to include a detailed description of the guide when submitting the code to third-party payers.



CDT code	Description
D6190	radiographic/surgical implant index, by report <i>An appliance, designed to relate osteotomy or fixture position to existing anatomic structures, to be utilized during radiographic exposure for treatment planning and/or during osteotomy creation for fixture installation.</i>

Computerized robotic navigation systems, such as the Yomi Robot, assist surgeons during preoperative and intraoperative phases of dental implant surgery. The implant placement is virtually guided by the robotic system and enhances the precision, accuracy and safety of dental implant surgeries by providing real-time navigation and guidance to the surgeon.

CDT code D7939 is available to report indexing for osteotomy using dynamic robotic-assisted or dynamic navigation and allow the virtual guidance of the implant osteotomy using a prefabricated guide that is attached to teeth or bone.

Coding tip: Neither surgical guide codes (D6190 or D7939) include placement of the implant body; therefore, implant codes (i.e., D6010) may be reported separately.

CDT code	Description
D7939	indexing for osteotomy using dynamic robotic assisted or dynamic navigation <i>A guide is stabilized to the teeth and/or the bone to allow for virtual guidance of osteotomy.</i>

Cutting guides, osteogenesis paralleling guides and custom-made titanium plates

Custom-made devices and specialized hardware such as cutting guides, osteogenesis paralleling guides and titanium plates are essential components to the digital workflow. These supplemental products are based on patient-specific anatomical data obtained and designed using digital technologies (CAD/CAM) and preoperative digital imaging data, such as CT scans or intraoral scans.

Cutting guides and/or osteogenesis paralleling guides are used to precisely guide the OMSs instrument and designed to assist in accurately placing implants or placing the osteotomy cuts and the distraction device during an

osteotomy procedure. This guidance helps to improve efficiency and enhance patient safety. Titanium plates are commonly used to stabilize fractured bones or to provide structural support following surgical procedures. Titanium is preferred due to its biocompatibility, strength and ability to integrate with bone tissue promoting optimal stability and faster healing.

Coding and reimbursement for these supplemental products may be dependent upon the place of service, the nature of the surgical procedure or inclusive to the postprocessing component, therefore not separately payable.

In many cases a facility (hospital) would bill for supplemental products, as these costs are associated with the use of the facility, including the cost of equipment and supplies. In cases when the provider incurs the costs of these supplies, a supply code (99070) or unlisted code with narrative may be reported. However, if reporting a postprocessing code such as 76376 and 76377, these codes include diagnostic imaging and surgical planning with 3D images, scientific modeling and simulations and other work involving volumetric data. As such, cutting guides, custom plates, specialized hardware, etc. would be integral to the postprocessing procedure and not separately reportable. Some payers also may consider hardware or a customized device inherent to the surgical service (e.g., 21453, closed treatment of mandibular fracture with interdental fixation); therefore, considered to be unbundling if the hardware (customized plate) is reported separately.

Coding tip: The CMS-1500 medical claim form supports codes from both the CDT and CPT code set, as CDT codes fall under the HCPCS Level II code set and are recognized under HIPAA Administrative Simplification provisions as an adopted standard for coding healthcare services and procedures. In fact, some medical payers may direct an OMS to use CDT codes to report their services, under certain circumstances. However, it is important to note that HIPAA regulations do not govern individual payer policies for reporting, claims adjudication or reimbursement for certain services or codes.

VII. OMS CASE EXAMPLES USING THE DIGITAL WORKFLOW

Orthognathic Surgery:

A 17-year-old patient presents with a skeletal dentofacial deformity completed two years of presurgical orthodontics. The patient is referred to the OMS's office for presurgical evaluation. During evaluation of the patient, a Panorex, CBCT, photographs and digital models are obtained, and hard- and soft-tissue analysis is completed. The CBCT DICOM file of the skeletal structure of the maxilla and mandible along with STL file/digital models of the maxillary and mandibular arches with photographs are sent to the company of choice for a virtual planning session. After processing the CBCT DICOM file / STL images/stone models, a virtual planning session is confirmed with the surgeon. The surgeon then joins the engineer for a virtual planning session during which the surgeon will dictate to the engineer the planned surgical

movements based on presurgical evaluation to optimize the patient's occlusion and maxillomandibular skeletal relationship in all dimensions. The maxillary osteotomies are planned with desired movements. If mandibular surgery is indicated, the type of surgery and mandibular movements are planned. Sequencing of the operation then is devised based on a multitude of factors. The surgeon and the engineer will design intermediate and final surgical splints to be used intraoperatively as indicated. The surgeon also may opt to have custom-designed and fabricated rigid internal fixation plates used to secure the maxilla and/or mandible and its desired position based on virtually planned surgical movements.

Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.

See section **I. Clinical evaluation** for range of codes that may be applicable to the type of evaluation performed.

70355; or D0330	Panorex
D0350	oral/facial images (photographs)
D0801	3D intraoral surface scan – direct
70486- 70488; or D0367	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material</i> CBCT capture and interpretation with field of view of both jaws
76376 or 76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision <i>Code selection is determined by whether image postprocessing was or was not required on an independent workstation.</i>
D0393	virtual treatment simulation using 3D image volume or surface scan
21085; or 99070	Impression and custom preparation; oral surgical splint Supplies and materials <i>Code selection depends on who is fabricating the splint since CPT code 21085 can only be reported when the physician designs and prepares the prosthesis (e.g., not prepared by an outside laboratory).</i> <i>If a lab designs and prepares the surgical splint, CPT code 99070 may be reported along with a copy of the lab invoice to account for supplies and materials or report CPT code 21085 and append modifier -52 (Reduced Services) to recognize the fabrication services were performed elsewhere.</i>
D5988	surgical splint

Coding tips: Some payers may not cover Panorex/ceph images when obtained during the same encounter as a CBCT.

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Implants:

A 30-year-old patient presents for oral examination to discuss treatment of an implant and extraction of Tooth #8 with the possibility of immediate implant placement. After the exam, a CBCT of the maxilla (capture and interpretation) and an intraoral scan of dentition are performed. Using digital planning software, the CBCT and 3D direct surface scan are merged. The surgeon digitally plans the implant position, and a surgical guide is fabricated. The surgeon determines that grafting is required, and a 3D model is printed to allow for the customization of a titanium mesh before the surgery.

Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.	
See section I. Clinical evaluation for range of codes that may be applicable to the type of evaluation performed.	
70486-70488	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material</i>
D0366	CBCT of maxilla capture and interpretation
D0801	3D intraoral surface scan – direct <i>Intraoral scan of any aspect of the intraoral anatomy.</i>
76376 or 76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision <i>Code selection is determined by whether image postprocessing was or was not required on an independent workstation.</i>
D0393	virtual treatment simulation using 3D image volume or surface scan
D6190	radiographic/surgical implant index, by report
D0396	3D printing of a 3D dental surface scan

TMJ Surgery:

A 45-year-old new patient presents with a long history of temporal mandibular dysfunction. Clinical and radiographic evaluation are significant for severe degenerative arthritis of the left condylar head and glenoid fossa with heterotopic bone formation. Maximum interincisal opening is 20mm with a hard stop and limited lateral excursion to the right. Patient reports difficulty chewing and preauricular pain in addition to a progressive worsening open bite/apertognathia and mandibular asymmetry with midline shift to the left. Clinical and radiographic examination are consistent with left TMJ ankylosis. Time spent explaining the diagnosis and reviewing diagnostics and treatment options with the patient on the date of the encounter was 62 minutes.

Medical grade CT with TMJ concepts scanning protocol was taken and the DICOM file was forwarded to the software vendor for planning and fabrication of a custom total joint prosthesis. The surgeon analyzes the CT scan and completes a comprehensive clinical evaluation in preparation for the virtual planning session and formulates a surgical plan. During the virtual planning session, the engineer and the surgeon design the prosthesis,

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determine the optimal location of the gap-arthroplasty and address correction of the acquired malocclusion and ramus osteotomy on the right side, if indicated. Upon completion of the manufacture of the prosthesis, a surgical guide is shipped along with the instrument kit to arrive days prior to the planned operation. In broad strokes, the operation involves a combined preauricular and submandibular percutaneous approach. A gap arthroplasty is completed, and heterotopic bone is excised. A ramus osteotomy may be necessary on the unaffected side and or maxillary osteotomy to establish optimal occlusion and maxillomandibular skeletal relationship. The patient is placed in intermaxillary fixation (IMF) with the desired occlusion and secured in the position with a surgical splint fabricated by the OMS. The fossa component of the prosthesis is secured into position followed by the condylar prosthesis. The patient is released from IMF to confirm planned occlusion.

Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.

See section **I. Clinical evaluation** for range of codes that may be applicable to the type of evaluation performed.

70486-70488	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material</i>
D0368	CBCT TMJ series capture and interpretation
76376 or 76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision <i>Code selection is determined by whether image postprocessing was or was not required on an independent workstation</i>
D0393	virtual treatment simulation using 3D image volume or surface scan
21085 or	Impression and custom preparation; oral surgical splint
D5988	surgical splint

Coding tip: Only the coding applicable for the digital workflow is provided in this scenario. For guidance on coding for TMJ procedures refer to the [AAOMS Coding for Temporomandibular Surgery Paper](#). As a reminder, CPT 21085 carries a 10-day global period therefore some payers may not reimburse for an E/M if rendered on the same day or 24 hours prior to the splint. Also, as noted earlier in this document, because of the 10-day global period, some payers may not reimburse for any additional surgeries or procedures rendered within 10 days of the splint, therefore the related surgery could potentially be denied.



Trauma:

A 30-year-old patient presents post-motor vehicle collision with polytrauma and with panfacial fractures. Upon admission they obtained a medical-grade fine-cut CT with 1 mm slices of the head and neck region with 3D reconstruction. After the patient’s other injuries were addressed, the scan was sent to the provider’s company of choice for the virtual planning session. The surgeon then joins the virtual planning session to set the fractured segments in a normal anatomical position. Custom plates with predictive holes for the surgical guide also are designed. Since the patient’s occlusion could not be verified prior to the surgery, the surgeon may request surgical occlusal splints.

Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.	
See section I. Clinical evaluation for range of codes that may be applicable to the type of evaluation performed.	
70486-70488	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material. Append modifier -26 to specify interpretation and report by a practitioner not associated with image capture.</i>
D0391	interpretation of diagnostic image by a practitioner not associated with capture of the image, including report
76376 or 76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; <i>Code selection is determined by whether image postprocessing was or was not required on an independent workstation</i>
D0393	virtual treatment simulation using 3D image volume or surface scan

Coding tip: Only the coding applicable to the digital workflow is provided for the scenario above. Documentation provided implies the imaging services were rendered in the inpatient setting. If so, the hospital would bill for the image capture and the provider would only bill for the interpretation.

Resection and reconstruction of pathologic defects:

A 35-year-old patient presents with biopsy confirmed diagnosis of an ameloblastoma of the right posterior mandible. The lesion extends from the angle of the mandible to the mental foramen. A medical-grade CT is obtained, and the DICOM file is sent to the company of choice for virtual planning, manufacture of custom-designed reconstruction plate and cutting guides. After processing the DICOM images, a virtual planning session is confirmed with the surgeon. The surgeon directs the engineer to the surgical plan and margins based on the biologic behavior of the tumor. Cutting guides are designed for accurate resection margins proximal and distal to the tumor. A reconstruction plate is designed based on surgeon preference, which may include a reconstruction plate with a crib for non-vascularized bone graft, or if the surgical plan is a vascularized osteomyocutaneous flap. Cutting guides are made to kerf the tibia, and custom plates are designed to insert the tibia and secure it to the proximal and distal margins of the unaffected native bone.



Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.

See section **I. Clinical evaluation** for range of codes that may be applicable to the type of evaluation performed.

70486-70488

CT maxillofacial area

Code selection is determined by use or lack of contrast material

D0365

cone-beam CT of mandible capture and interpretation

76376 or 76377

3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision

Code selection is determined by whether image postprocessing was or was not required on an independent workstation

D0393

virtual treatment simulation using 3D image volume or surface scan

Coding tip: Cutting guides and reconstruction plate are inherent to the post-processing code and are not separately reportable.



Distraction osteogenesis:

Neonatal Distraction: Neonate presents with Pierre Robin sequence or severe mandibular hypoplasia resulting in respiratory compromise. A CT scan is obtained, and the DICOM file is forwarded to the medical modeling company. The medical model is fabricated from the DICOM file and shipped to the surgeon. Prior to the planned surgical procedure, the surgeon will modify and adapt stock internal mandibular distractors to accommodate the contours of the neonatal mandible.

Alternatively, via a virtual planning session, cutting guides and/or custom distractors are designed and manufactured. Cutting guides are useful in this instance to optimally place the osteotomy between dental follicles, at the thickest part of the mandible and to demarcate the position of the inferior alveolar nerve. Distractor preparation as described above can significantly reduce operative time, if done in advance, and minimize the incidence of postoperative complications.

Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.

See section **I. Clinical evaluation** for range of codes that may be applicable to the type of evaluation performed.

70486-70488	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material</i>
D0365	cone-beam CT of mandible capture and interpretation
76376 or 76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision <i>Code selection is determined by whether image postprocessing was or was not required on an independent workstation</i>
D0393	virtual treatment simulation using 3D image volume or surface scan

Coding tip: Cutting guides and custom distractors are inherent to the post-processing code and are not separately reportable.



Maxillary Distraction for unilateral or Bilateral

naso-alveolar cleft: A 16-year-old patient presents with a bilateral cleft lip and palate. The previous alveolar bone graft was successful in restoring anatomic contours from piriform rim to alveolar crest to the cleft region. During the presurgical evaluation of the patient at the OMS office, a Panorex, CBCT, photographs and stone study models are obtained, and hard- and soft-tissue analysis is completed. The anterior posterior (AP) discrepancy between maxillary and mandibular incisors is 10 mm. The mandibular position is ideal for the patient. However, the AP discrepancy and in consideration of mucosal scarring from previous surgical procedures precludes the ability to advance the maxilla the desired amount via traditional LeFort advancement. Distraction osteogenesis is indicated to correct the skeletal deformity. The gathering of records and virtual planning sessions are similar at this point to traditional orthognathic surgery. Where the two deviate is as follows.

Option one: In concert with a virtual planning session, a medical model is generated, and stock maxillary distractors can be modified and adapted to the contours

of the maxillary buttress prior to the scheduled procedure. The maxillary buttress can be contoured to allow better adaptation of the distraction devices and to ensure clearance from the coronoid process of the mandible during active distraction. Custom paralleling guides are manufactured to assure intraoperative parallelism of the distraction devices to prevent a convergent or divergent distraction path during active distraction.

Option two: During the virtual planning session with an engineer, custom maxillary distractors can be designed and fabricated with custom paralleling guides. The use of both methods will significantly reduce operative time and assure parallelism of the distraction devices, which can prevent postoperative complications during postoperative active distraction of the maxilla.

Code selection and/or level of a clinical evaluation and management service may be determined based on a medically appropriate history and/or physical examination along with adequate documentation to support the medical necessity of the service.	
See section I. Clinical evaluation for range of codes that may be applicable to the type of evaluation performed.	
70355 D0330	Panorex
D0350	Oral/facial images (photographs)
D0470	Diagnostic casts (study models)
70486-70488 D0367	CT maxillofacial area <i>Code selection is determined by use or lack of contrast material.</i> CBCT capture and interpretation with field of view of both jaws
76376 or 76377 D0393	3D rendering with interpretation and reporting of computed tomography, magnetic resonance image, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision <i>Code selection is determined by whether image postprocessing was or was not required on an independent workstation.</i> virtual treatment simulation using 3D image volume or surface scan

Note: The list of CDT and CPT codes in this coding paper is not all-inclusive. AAOMS recommends reporting codes applicable to the service(s)

rendered and the patient's specific clinical condition as determined by the provider.

This paper should not be used as the sole reference in coding. Both diagnosis and treatment codes change frequently, and insurance carriers may differ in their interpretations of the codes.

Coding and billing decisions are personal choices to be made by individual oral and maxillofacial surgeons exercising their own professional judgment in each situation. The information provided in this paper is intended for educational purposes only. In no event shall AAOMS be liable for any decision made or action taken or not taken by anyone in reliance on the information contained in this article. For practice, financial, accounting, legal or other professional advice, professional advisers should be consulted.

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This is one in a series of AAOMS papers designed to provide information on coding claims for oral and maxillofacial surgery (OMS). This paper discusses procedural coding guidelines utilizing CPT, HCPCS and CDT. When indicated, reference the appropriate area of the coding books where the principles of coding illustrated in this paper may be applied.

Proper coding provides a uniform language to describe medical, surgical and dental services. Diagnostic and procedure codes are regularly updated or revised. The AAOMS Committee on Healthcare Policy, Coding and Reimbursement has developed these coding guidelines to assist the membership in using the coding systems effectively and efficiently.

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