If you are currently in medical education or residency, this is the beginning of a career that could last the next 40 years. In those years, coding and documentation skills are likely to be as much a requirement as your medical skills. We will address the basics of medical coding and documentation with specific focus on documentation principles and their impact on coding, billing, and reimbursement. In this issue, we will address evaluation and management coding, and follow up in the next issue with an in-depth look at surgical coding.

**Evaluation and Management (E/M) coding**
A clear understanding of E/M coding is the best way to ensure optimal compliance and avoidance of inadvertent under- or over-coding. Physician residents who understand the idiosyncratic process of E/M documentation routinely command a higher rate of return on their cognitive labor than their less E/M-savvy counterparts. In other words, a good command and understanding of E/M coding equates to appropriate reimbursement for the services provided to your patients.

E/M coding is the process by which physician-patient encounters are translated into five-digit CPT® codes to facilitate billing and eventual reimbursement by the health insurance plan. CPT stands for “current procedural terminology.” There are five different E/M code levels based on service complexity as well as the location at which the service was provided e.g. office or hospital visit(s).

The key components of E/M documentation
The documentation for E/M services is based on three “key” components:

1. **History**
The history is designed to act as a narrative which provides information about the clinical problems or symptoms being addressed during the encounter. The history is composed of four building blocks:

   - **Chief Complaint (CC):** required for every encounter. This may be a somatic complaint from the patient (e.g. follow-up for acne, skin rash, mole on left arm, etc.) or it may be a statement from the physician which defines the purpose of the visit (e.g. follow-up visit after lesion excision).
• History of Present Illness (HPI): used to describe the status of the symptoms or clinical problems from time of onset or since the previous encounter with the physician. Some form of HPI is required for each level of care for every type of E/M encounter.

The following eight elements may be used to characterize a specific somatic complaint

• Location
• Quality
• Severity
• Duration
• Timing
• Context
• Modifying Factors
• Associated Signs and Symptoms

• Review of System (ROS): an inventory of specific body systems performed by the physician in the process of taking a history from the patient. The ROS is designed to bring out clinical symptoms which the patient may have overlooked or forgotten. In theory, the ROS may illuminate the diagnosis by eliciting information which the patient may not perceive as being important enough to mention to the physician.

There are 14 individual systems recognized by the E/M guidelines:

• Constitutional (e.g., fever, weight loss)
• Eyes
• Ears, Nose, Mouth, Throat
• Cardiovascular
• Respiratory
• Gastrointestinal
• Genitourinary
• Musculoskeletal
• Integumentary (skin and/or breast)
• Neurological
• Psychiatric
• Endocrine
• Hematologic/Lymphatic
• Allergic/Immunologic

• Past Family and Social History (PFSH)

A review of patient past medical history which may include:

• Prior illnesses or injuries
• Prior operations
• Prior hospitalizations
• Current medications
• Allergies
• Age appropriate immunization status
• Age appropriate feeding/dietary status

A review of medical events in the patient’s family which may include information about:

• The health status or cause of death of parents, siblings and children;
• Specific diseases related to problems identified in the Chief Compliant, HPI, or ROS;
• Diseases of family members which may be hereditary or place the patient at risk.

An age appropriate review of past and current activities which include significant information about:

• Marital status and/or living arrangements;
• Current employment;
• Occupational history;
• Use of drugs, alcohol, or tobacco;
• Level of education;
• Sexual history;
• Other relevant social factors.
2. Physical examination
A physical review of several or a single organ system or an extensive examination of a specific organ system or body area. One can use either the 1995 or 1997 Documentation Guidelines to document the appropriate level of examination performed. (Learn more about these guidelines at www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/eval-mgmt-serv-guide-ICN006764.pdf.)

There are four types of examination:
- Problem Focused: A limited examination of the affected body area or organ system;
- Expanded Problem Focused: A limited examination of the affected body area or organ system and any other symptomatic or related body area(s) or organ system(s);
- Detailed: An extended examination of the affected body area(s) or organ system(s) and any other symptomatic or related body area(s) or organ system(s);
- Comprehensive: A general multi-system examination or complete examination of a single organ system (and other symptomatic or related body area(s) or organ system(s) – 1997 documentation guidelines).

3. Medical Decision-Making (MDM): arguably the most important of the three components of E/M because it helps you, the provider, to quantify your cognitive labor. This portion reflects the intensity of the cognitive labor performed by the physician.

There are four types of MDM levels:
- Straightforward;
- Low complexity;
- Moderate complexity;
- High complexity

Why is documentation important?
The Centers for Medicare and Medicaid Services (CMS) states that medical record documentation is required to record pertinent facts, findings, and observations about an individual’s health history including past and present illnesses, examinations, tests, treatments, and outcomes. The medical record chronologically documents the care of the patient and is an important element contributing to high quality care.

Accurate and appropriate medical record documentation can reduce many of the hassles associated with claims processing and may serve as a legal document to verify the care provided, if necessary.

Because payers have a contractual obligation to their enrollees, they may require reasonable documentation to review and ascertain that services are consistent with the insurance coverage provided. They may request information to validate the site of service, medical necessity and appropriateness of the diagnostic and/or therapeutic services provided, as well as that the services provided have been accurately reported.

To help dermatology residents become experts in E/M documentation and billing, the Academy has developed web-based E/M coding resources which provide you a detailed understanding of dermatology specific coding and documentation examples.

Find practical tips, tools, quizzes, and videos about common dermatologic coding issues at the Academy’s new Coding Resource Center at www.aad.org/coding-resource-center.

In the next issue of Directions we will review, examine, and explain the surgical and procedural coding guidelines. DR
Non-syndromic ichthyoses
by Parin Pearl Rimtepathip, MD, Janna Mieko Vassantachart, MD, and Maria A. McGowan, MD

## Inheritance Pattern

<table>
<thead>
<tr>
<th>Disease Group</th>
<th>Gene</th>
<th>Unique Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autosomal Semi-dominant</td>
<td>KRT1, KRT10</td>
<td>- Spares flexures - Hyperlinearity of palms/soles - Keratosis pilaris/Atopic diathesis - Fine adherent scale on extremities and trunk</td>
</tr>
<tr>
<td>Autosomal Dominant Keratinopathic</td>
<td>KRT 1, 10</td>
<td>- If continuous gene deletion of STS occurs = Kallman syndrome - &quot;Dirty&quot; brown scale - Spares flexures - Comma-shaped corneas (only finding found in female carriers) - Prolonged labor secondary to placental sulfatase deficiency - Decreased serum estriol in pregnancy - Increased risk of testicular cancer - cryptorchidism</td>
</tr>
<tr>
<td>Autosomal Recessive</td>
<td>ABCA 12, ALOXE3, ALOXB12, TGM1</td>
<td>- Erythoderma + superficial blistering at birth - Mauserung phenomenon – German for molting; superficial shedding of skin with palms/soles spared</td>
</tr>
<tr>
<td>XLR</td>
<td></td>
<td>- After resolution, skin appears normal</td>
</tr>
</tbody>
</table>

## Skin Layer

- Subepidermis
- Suprabasal Layers

## Resolving?

- Resolving
- Non-resolving

## Disease

1. Ichthyosis vulgaris
   - Gene: FLG
   - Onset: Infancy or childhood
   - Spares flexures
   - Hyperlinearity of palms/soles
   - Keratosis pilaris/Atopic diathesis
   - Fine adherent scale on extremities and trunk

2. Steroid sulfatase deficiency
   - Gene: STS or arylsulfatase C deficiency
   - Onset: Infancy
   - If continuous gene deletion of STS occurs = Kallman syndrome
   - "Dirty" brown scale
   - Spares flexures
   - Comma-shaped corneas (only finding found in female carriers)
   - Prolonged labor secondary to placental sulfatase deficiency
   - Decreased serum estriol in pregnancy
   - Increased risk of testicular cancer
   - cryptorchidism

3. Superficial epidermolytic ichthyosis
   - AKA Ichthyosis bullosa of Siemens
   - Gene: KRT2E
   - Onset: Birth
   - Erythoderma + superficial blistering at birth
   - Mauserung phenomenon – German for molting; superficial shedding of skin with palms/soles spared

4. Congenital self-healing collodion baby
   - Gene: TGM1, ALOXE3, ALOXB12
   - Onset: Birth
   - After resolution, skin appears normal

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Parin Pearl Rimtepathip, MD, is a 3rd year dermatology resident at Loma Linda University

Maria A. McGowan, MD, is a 2nd year dermatology resident at Loma Linda University
Non-syndromic ichthyoses (continued)

by Parin Pearl Rimtepathip, MD, Janna Mieko Vassantachart, MD, and Maria A. McGowan, MD

<table>
<thead>
<tr>
<th>Disease</th>
<th>Gene/Onset</th>
<th>Unique Qualities</th>
</tr>
</thead>
</table>
| 5. Ichthyosis hystrix of Curth Macklin  
Aka Ichthyosis hystrix | Gene: KRT1  
Onset: Early childhood | - Diffuse or striate PPK  
- “porcupine quill”-like verrucous yellow-brown scaling, esp on hand and feet  
- Digital constriction/pseudoainhum PPK |
| 6. Ichthyosis en confetti  
Aka Congenital reticular ichthyosiform erythroderma or Ichthyosis variegata | Gene: KRT10  
Onset: Birth | - At birth, erythroderma  
- After birth, confetti-like areas of scaling  
- Joint contractures  
- Hypoplasia of mammillae  
- Dorsal acral hypertrichosis |
| 7. Epidermolytic ichthyosis  
Aka Bullous congenital ichthyosiform erythroderma | Gene: KRT1, KRT10  
Onset: Birth | - Erythroderma with blisters and erosions at birth  
- After birth, hyperkeratosis + cobblestone appearance with predominance over joints  
- Retinol exacerbates skin fragility  
- Malodorous with frequent skin infections  
- Gait and posture abnormalities  
- Somatic mosaicism [extensive epidermal nevus aka ichthyosis hystrix] vs gonadal mosaicism [offspring with full expression of disease] |
| 8. Harlequin ichthyosis | Gene: ABCA12  
Onset: Birth | - Extreme eclabium and ectropion  
- Early initiation of systemic retinoids reduces mortality  
- Death is secondary to sepsis and respiratory insufficiency  
- Ear deformities |
Onset: Birth | - After collodion membrane resolves, develop white fine scale in generalized distribution [Flexures involved] - like “snow flakes”  
- Erythroderma as background [hence not bullous]  
- +/- palm/soles  
- Heat intolerance and hypohydrosis  
- +/- scarring alopecia and ectropion |
| 10. Lamellar ichthyosis | Gene: TGM1  
Onset: Birth | - Thick plate-like brown scale with significant flexure involvement  
- Ectropion/eclabium  
- Heat intolerance  
- Scarring alopecia |

References:
Clinical Pearls

Clinical Pearls help prepare residents for the future by providing them with top tips from experts about what they should know about a specific subject area by the time they complete their residency.

Starting out in dermatopathology

By Ata Moshiri, MD, MPH

Pearl #1: Develop a systematic approach to evaluating slides that you go through the same way for every case. Dr. Atul Gawande, a surgeon, writer, and public health researcher, emphasizes the importance of routines in avoiding mistakes for airline pilots and surgeons in The Checklist Manifesto. Similarly, dermatopathologists have little room for error, since making even a single misdiagnosis can lead to real harm. I recommend utilizing a “top-down” approach, starting from the stratum corneum and working systematically to the base of the tissue. This may seem tedious and unnecessary as you become more proficient but building good habits early in your practice is critical to long term success, whether you are a dermatologist occasionally reviewing your own biopsies or a dermatopathologist signing out thousands of cases per year.

Pearl #2: Don’t forget to look at all of the tissue on the slides! “BCC — next case.” Wrong! You’d be amazed at the number of times the key to the diagnosis is a relatively subtle finding seen only on one section of one cut on one slide. Sometimes, you’ll discover multiple diagnoses where the clinician may have been looking for only one. Taking care to look at all the tissue, you’ll find yourself making important finds such as a Merkel cell carcinoma lurking amidst islands of that nodular basal cell you were ready to send to Mohs, or a lentigo maligna hiding at the edges of that nodular basal cell you were ready to send to Mohs, or shave, punch or excision? Where is the action thereof? Is it a rash or a tumor? If it’s a tumor, is it benign or malignant? All of these questions should be answered at low power, a differential diagnosis formed, and only then should higher power views modify that differential accordingly. Going to high power too quickly is a recipe for losing the forest for the trees.

Pearl #3: Low power is for high power minds (and vice versa)! There is a huge temptation for beginners to jump to high power very quickly as they struggle to identify cell types and other features that might be hard to appreciate at scanning magnification, which often gets glossed over. This is a mistake! Do not underestimate the tremendous amount of information that can be gleaned from “bomber view,” as a mentor of mine likes to call it. What type of specimen is it — shave, punch or excision? Where is the action — epidermis, dermis, subcutis, or some combination thereof? Is it a rash or a tumor? If it’s a tumor, is it benign or malignant? All of these questions should be answered at low power, a differential diagnosis formed,

Pearl #4: Use mnemonics. I’m not normally a “mnemons kind of guy” — however as with clinical dermatology, some rashes and tumors can look pretty similar under the microscope and you’ll need some way to remember all the things you should be thinking about. Have a malignant spindle cell tumor SLAMming against the epidermis? It could be a Squamous cell carcinoma, Leiomyosarcoma (now known as atypical smooth muscle neoplasm, but then we’d lose our L and that would be inconvenient), Atypical fibroxanthoma, or Melanoma. Don’t see much going on in the specimen? Do you know I VACUUM DOG PUS? A disgusting visual to be sure, but it gets the point across that you need to consider Ichthyosis, Vitiligo, Argyria, Candida, Urticaria (or Urticaria pigmentosa), Macular amyloid, Dermatophytes, Onchocerciasis, Gold (chryiasis), Psoriasis (the guttate variant), Ulerythema ophryogenes, and Sclerema. These examples and many others are summarized in the latest edition of Dr. Dirk Elston’s excellent review book Dermatopathology or can be found online via Google searches.

Pearl #5: Get comfortable with both glass and digital slides. Not only is the dermatology board examination moving towards using an exclusively digital slide format, but with the advent of artificial intelligence and machine learning algorithms in clinical diagnostics, pathology labs are pushing to digitize slides to take advantage of these powerful tools in their workflow. As such, now more than ever, trainees need to become comfortable interpreting digital slides in addition to old-fashioned glass. One of my favorite tools for this purpose is PathPresenter (www.pathpresenter.net), a free digital slide repository with a nice interface similar to that used on the board exam, great examples of both common and rare diagnoses, as well as the ability to upload your own cases for teaching.
### The E/M codes

Each E/M encounter may be viewed as a unique service which requires specific documentation to indicate that the encounter goes above and beyond other services provided during the same encounter.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Code Descriptor</th>
<th>CPT Code</th>
<th>Code Descriptor</th>
<th>Place of Service (POS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>99201 - 99205</td>
<td>Office or other outpatient visit for the evaluation and management of a new patient</td>
<td>99202 - 99205</td>
<td>Office or other outpatient visit for the evaluation and management of an established patient</td>
<td>Office (POS 11)</td>
</tr>
<tr>
<td>99231 - 99233</td>
<td>Initial hospital care, per day, for the evaluation and management of a patient</td>
<td>99234 - 99236</td>
<td>Subsequent hospital care, per day, for the evaluation and management of a patient</td>
<td>Hospital Inpatient (POS 21)</td>
</tr>
<tr>
<td>99281 - 99285</td>
<td>Emergency department visit for the evaluation and management of a patient</td>
<td></td>
<td></td>
<td>Hospital Emergency Room (POS 23)</td>
</tr>
</tbody>
</table>

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### Resident life: Embracing change

By Alexandra Zeitany, MD

Residency can feel like a one-size-fits-all path. Customizing your learning experience often feels difficult, if not impossible. Meanwhile, in stark contrast, we are taught to avoid a one-size-fits-all mentality with our patients, instead seeking patient centered, individualized care. This same approach should apply to medical education. We should be able to personalize our clinical experiences to best fit our individual professional and personal goals. Here’s how that can happen in a seemingly rigid system.

First, set aside time for self-reflection to identify your goals. Is your training experience is helping you meet those goals? Find like-minded mentors to support you on your individual path. Most importantly, don’t be afraid to question the status quo! Change in medicine is slow; just because something has always been done a certain way doesn’t mean that has to be the cut-and-dried way for you.

My own self-reflection taught me that, professionally, I wanted to expand my exposure to cosmetic dermatology. To make it happen, I changed my elective experience by writing training product grants and bringing in outside faculty for hands-on training sessions. Personally, I wanted to have a child during residency, but knew six weeks of FMLA was too short for me. So, I worked with my mentor and program director to forge a creative, custom path. By working extra, extending my residency by a few weeks, and taking some unpaid time off, ultimately I was able to spend 10 weeks at home with my son. Personalizing your residency can feel cumbersome, but it’s worth it both personally and professionally. With a lot of emails, a few meetings, and a dash of creativity, you can enjoy your unique residency experience too. **DR**

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Alexandra Zeitany, MD, is a senior dermatology resident (PGY4) at the University of North Carolina at Chapel Hill.

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**How do you manage resident life?**

Send your photos and pearls of wisdom to Dean Monti at dmonti@aad.org.
As dermatology residents we luckily do not have to deal with the life and death version of coding a patient. However, we do still have to deal with the nearly-as-terrifying coding of patient encounters and procedures. Dealing with medical billing can sometimes feel like trying to solve a puzzle where the pieces keep changing. To start with, very few residency programs provide resident education when it comes to billing. Secondly, just when you think you’ve figured how to bill, the codes and/or modifiers will inevitably change. One important thing for residents to realize about billing is that a good chunk of what you learn now will probably be outdated by the time you are in practice. What you need to know are the basics, and where to get the new, updated information.

This issue’s cover story gives residents the basics — what they should know about coding as they complete their residency. Learning about coding starts now and will continue after your residency. Your best course of action will always be to keep up to date and keep learning. This issue will address E/M coding. Next issue we’ll take a look at surgery coding.

Another excellent resource is the “Cracking the Code” monthly article in Dermatology World by Dr. Alexander Miller. Each month, Dr. Miller’s column addresses a specific dermatology-related billing issue and includes a quiz so you can test your knowledge. The AAD also has a coding resource center with sections on E/M codes, surgical procedures, modifiers, and more. It might seem daunting, but hey, you can remember the 10,000 different geneo-derms, so you’ve got this!