Optum Learning: Detailed Instruction for Appropriate ICD-10-CM Coding

An educational guide to the structure, conventions, and guidelines of ICD-10-CM coding

2016
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Section 4:
ICD-10-CM Code Book Chapters

This section provides a review and analysis of the changes to individual chapters within certain classification blocks or three-character code categories. While not every revision or change has been identified for each chapter, the highlights provided here assist in ensuring that ICD-10-CM coding is performed accurately, in accordance with coding conventions and with the current draft “ICD-10-CM Draft Official Guidelines for Coding and Reporting” available at the time of publication.

With any revision to a classification, changes are made for specific reasons. Overall, conditions classified in ICD-10-CM have been grouped in a way that is most appropriate for general epidemiological purposes and the evaluation of health care.

Specific reasons for changes to the contents of the chapters include the intent to:

• Increase clinical detail about a specific disorder
• Reclassify diseases in accordance with current advances in clinical science and technologies
• Report recently identified diseases, (i.e., since the last revision)
• Accommodate the required detail of a group of diseases
• Make effective use of available space

In general, conditions have been moved as a group within a chapter and individual conditions have been reclassified. For example, certain disorders of the immune mechanism were expanded and the category group was moved to “Diseases of the Blood and Blood-forming Organs.” In ICD-9-CM, these disorders are included with “Endocrine, Nutritional, and Metabolic Diseases.”

CHAPTER 1. CERTAIN INFECTIOUS AND PARASITIC DISEASES
(A00–B99)

This chapter includes diseases due to infective organisms, including communicable diseases and diseases of suspected infectious origin. Additionally, conditions classifiable to this chapter include those that are generally recognized as communicable or transmissible. Although ICD-10-CM includes many infectious disease classifications specific to affected anatomic site, certain other infections are classified to other chapters. These conditions include congenitally acquired infections (chapter 16), influenza (chapter 10), postoperative infections (classified by body system), infections complicating pregnancy and delivery (chapter 15), and traumatic wound infections (chapter 19). Codes classifiable to this chapter are mutually exclusive from the same condition classifiable elsewhere. For example, enterocolitis due to Clostridium difficile is classified to A04.7 instead of K52.9 Noninfective gastroenteritis and colitis, unspecified. The alphabetic index lists a specific code for this condition as identified by causal organism. When confirmed by the tabular list, the text does not prompt the coder to assign an additional code. By contrast, certain infections classified elsewhere require an additional code to specify the causal organism. Instructional notes in the tabular list prompt the coder that an additional code is necessary. In these cases, the appropriate code from B95–B97 Bacterial and viral infectious agents, is assigned. Instructions in this chapter include:
• Single codes used to identify the disease or condition. For example:
  A46  Erysipelas

• Combination codes that identify both the condition and causal organism or causal organism, manifestation, and/or affected anatomic site. For example:
  A08.11  Acute gastroenteropathy due to Norwalk agent

• Multiple coding: Certain conditions require more than one code in order to report in its entirety. These conditions may identify etiology and manifestations classified elsewhere, or single conditions that require more than one code, but are not part of the etiology/manifestation combination. Conventions in the text prompt for the use of additional codes, when needed, or for specific sequencing of codes. “Code first” and “use additional code” notations are used as sequencing rules in the classification for certain codes. Some of these codes are etiology/manifestation pairings that require multiple coding in specific sequence, whereas, other codes may occur independently or be reported alone, as appropriate. For example:

Example 1
Etiology/manifestation coding (multiple coding, in specific sequence):

Diagnosis: Infectious endocarditis in Q fever
A78  Q fever
I39  Endocarditis and heart valve disorders in diseases classified elsewhere

Code first underlying disease, such as:
Q fever (A78)

In example 1, code I39 is identified as a manifestation code by the phrase “in diseases classified elsewhere” in the code title and the instructional note “code first underlying disease.” Manifestation codes can never be reported alone, or as the first-listed diagnosis.

Note that throughout the classification, certain codes may list the instructional notation “code first” (the underlying disease or condition), yet may not be identified as manifestation codes. In these cases, the condition may occur independently and, thus, be reported alone.

Example 2
Conditions requiring multiple codes to report in their entirety, yet are not part of the etiology/manifestation convention:

Diagnosis: HIV disease with disseminated histoplasmosis capsulati
B20  Human immunodeficiency virus [HIV] disease
B39.3  Disseminated histoplasmosis capsulati

In example 2, code B39.3 Disseminated histoplasmosis capsulati, is not identified as a manifestation code. It is not a manifestation condition, because it may occur independently, even though it is often associated with other underlying diseases (including AIDS). Manifestation codes in ICD-10-CM may be identified by the phrase “in diseases classified elsewhere” in the code title. These codes cannot be sequenced first or reported alone. A manifestation code may not have “in diseases classified elsewhere” in the title. In such cases, there will be a “use additional code” note at the etiology code and a “code first” note at the manifestation code. Follow the sequencing rules in the text.

Category B39 Histoplasmosis, lists the following instructions, which apply to all codes with the category, including code B39.3:
B39  Histoplasmosis
Code first associated AIDS (B20)
Use additional code for any associated manifestations, such as:
- endocarditis (I39)
- meningitis (G02)
- pericarditis (I32)
- retinitis (H32)

Chapter 1 contains 22 code families represented by the first characters “A” and “B.” The code families classified to chapter 1 are:

- A00–A09  Intestinal infectious diseases
- A15–A19  Tuberculosis
- A20–A28  Certain zoonotic bacterial diseases
- A30–A49  Other bacterial diseases
- A50–A64  Infections with a predominantly sexual mode of transmission
- A65–A69  Other spirochetal diseases
- A70–A74  Other diseases caused by chlamydiae
- A75–A79  Rickettsioses
- A80–A89  Viral and prion infections of the central nervous system
- A90–A99  Arthropod-borne viral fevers and viral hemorrhagic fevers
- B00–B09  Viral infections characterized by skin and mucous membrane lesions
- B10  Other human herpesviruses
- B15–B19  Viral hepatitis
- B20  Human immunodeficiency virus [HIV] disease
- B25–B34  Other viral diseases
- B35–B49  Mycoses
- B50–B64  Protozoal diseases
- B65–B83  Helminthiases
- B85–B89  Pediculosis, acariasis and other infestations
- B90–B94  Sequela of infectious and parasitic diseases
- B95–B97  Bacterial and viral infectious agents
- B99  Other infectious diseases

ICD-10-CM Subchapter Restructuring
After reviewing different disease categories, the developers of ICD-10 restructured some of their groupings to bring together those groups that were related by cause. For example, the ICD-9-CM subchapter, “Syphilis and Other Venereal Diseases,” has been rearranged, and the subchapter “Rickettsioses and other Arthropod-borne Diseases” has been split into two separate subchapters in ICD-10-CM.

ICD-9-CM
- 080–088  Rickettsioses and other arthropod-borne diseases
- 090–099  Syphilis and other venereal diseases
- 100–104  Other spirochetal diseases
ICD-10-CM

A50–A64 Infections with a predominantly sexual mode of transmission
A65–A69 Other spirochetal diseases
A75–A79 Rickettssioses
A90–A99 Arthropod-borne viral fevers and hemorrhagic fevers

Section and Category Title Changes
As the examples above illustrate, a number of category and subchapter titles have been revised in chapter 1. Titles were changed to better reflect the content, which was often necessary when specific types of diseases were given their own block, a new category was created, or an existing category was redefined. For example, the ICD-9-CM classification for “Late Effects” has been retitled in ICD-10-CM to “Sequela.”

Organizational Adjustments
When comparing ICD-9-CM to ICD-10-CM, many codes have been added, deleted, combined, and relocated to other sections. These changes include:

- ICD-9-CM code 034.0 Streptococcal sore throat, has been moved in ICD-10-CM to chapter 10, “Diseases of the Respiratory System.”
- Human immunodeficiency virus disease followed the subchapter, “Other Bacterial Diseases,” in ICD-9-CM, whereas it now follows the subchapter for viral hepatitis in ICD-10-CM.
- ICD-10 code for opportunistic mycoses, B48.7, has been deleted in ICD-10-CM. The conditions that would have been classified to this code have been moved to B48.8. See the following examples from ICD-9-CM, ICD-10, and ICD-10-CM:

ICD-9-CM

118 Opportunistic mycoses

ICD-10

B48.7 Opportunistic mycoses

Opportunistic mycoses are caused by fungi of low virulence that can establish an infection only as a consequence of factors such as the presence of debilitating disease or the administration of immunosuppressive and other therapeutic agents or radiation therapy. Most of the causal fungi are normally saprophytic in soil and decaying vegetation.
**ICD-10-CM**

**Note:** Code B48.7 has been deleted in ICD-10-CM.

**B48.8 Other specified mycoses**

- Adiaspiromycosis
- Infection of tissue and organs by Alternaria
- Infection of tissue and organs by Drechslera
- Infection of tissue and organs by Fusarium
- Infection of tissue and organs by saprophytic fungi NEC

- Fifth-character designations to indicate the method of tuberculosis identification have been eliminated. See the following table for a comparison.

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
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<tr>
<td>011.40</td>
<td>A15.0 Tuberculosis of lung</td>
</tr>
<tr>
<td>011.41</td>
<td>A15.0 Tuberculosis of lung</td>
</tr>
<tr>
<td>011.42</td>
<td>A15.0 Tuberculosis of lung</td>
</tr>
<tr>
<td>011.43</td>
<td>A15.0 Tuberculosis of lung</td>
</tr>
</tbody>
</table>

- New codes have been created where needs have been identified for unique codes to facilitate reporting. ICD-9-CM did not provide a separate code for septicemia due to *Enterococcus*. As such, a code has been added to ICD-10-CM to classify this disorder. See comparison below:

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
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<td>038.8 Other specified septicemias</td>
<td>A41.81 Sepsis due to Enterococcus</td>
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- ICD-10-CM requires etiology/manifestation code assignment for certain infectious diseases and associated manifestations formerly reported by a single code in ICD-9-CM. These conditions include complications of ornithosis (*Chlamydia psittaci*) and histoplasmosis infections. See example below:

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
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<tr>
<td>115.01 Histoplasma capsulatum meningitis</td>
<td>B39.4 Histoplasmosis capsulati, unspecified</td>
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<td></td>
<td>G02 Meningitis in other infx &amp; parasitic dz classified elsewhere</td>
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**Chapter 1 Coding Guidance**

**Human Immunodeficiency Virus**

Code B20 Human immunodeficiency virus [HIV] disease, includes acquired immune deficiency syndrome (AIDS), AIDS-related complex (ARC) and HIV infection, symptomatic. This code is assigned for all subsequent encounters once a patient has developed an HIV-related illness or associated symptoms. Report code B20, as the first-listed diagnosis for patient encounters for HIV-related conditions. Assign additional codes to identify all manifestations of HIV infection, as documented. For example:

**Diagnosis:** Multiple cutaneous Kaposi’s sarcoma lesions in HIV disease

**B20 Human immunodeficiency virus [HIV] disease**

Use additional code(s) to identify all manifestations of HIV infection

**C46.0 Kaposi’s sarcoma of skin**

Code first any human immunodeficiency virus [HIV] disease (B20)
Patient encounters for conditions unrelated to HIV disease are coded and sequenced with the unrelated condition (e.g., illness or injury) as the first-listed diagnosis, followed by code B20 and other reportable secondary diagnoses. For example:

**Diagnosis:** Patient with symptomatic HIV disease admitted for surgical treatment of acute cholecystitis with cholelithiasis

- **K80.00** Calculus of gallbladder with acute cholecystitis without obstruction
- **B20** Human immunodeficiency virus [HIV] disease

Code B20 excludes:

- Asymptomatic human immunodeficiency virus [HIV] infection status (Z21): assign when the patient is without HIV or AIDS symptoms, but has been determined HIV positive.
- HIV disease complicating pregnancy, childbirth and the puerperium (O98.7-): chapter 15 codes take sequencing priority. Assign the appropriate O98.7 code, followed by the appropriate code for the HIV disease or status.
- Exposure to HIV virus (Z20.6): assign to report contact with, or exposure to the HIV virus in the absence of positive evidence of transmission.
- Inconclusive serologic evidence of HIV (R75): assign for patients with inconclusive HIV serology, but no definitive diagnosis or manifestations of the illness.

**Infectious Agent**

Categories B95–B97 identify the infectious agents in conditions classified elsewhere. Certain infections are classified to other chapters, but do not identify the causal infectious agent (organism). In these cases, it is necessary to use an additional code from chapter 1 to identify the organism. An instructional note is found at the infection code to prompt that an additional code should be assigned. For example:

**Diagnosis:** Urinary tract infection due to *Escherichia coli*

- **N39.0** Urinary tract infection, site not specified
  - Use additional code (B95–B97), to identify infectious agent
- **B96.2** *Escherichia coli* [E. coli] as the cause of diseases classified elsewhere

**Resistant infections**

It is important to code and report all infections documented as antibiotic resistant. An instructional note has been added to the beginning of chapter 1, which instructs the coder to assign the appropriate category Z16 Infection with drug resistant microorganisms code, following the appropriate infection code all such cases. For example:

**Diagnosis:** Antimycobacterial-resistant primary pulmonary tuberculosis

- **A15.0** Tuberculosis of lung
- **Z16.341** Resistance to single antimycobacterial drug

**Note:** Code Z16.341 includes resistance to antimycobacterial drug “NOS”; if multiple drug resistance is not specified, classification defaults to the single drug resistance code.

Instructions for reporting Methicillin resistant *Staphylococcus aureus* (MRSA) infections contain the following main points:

- Do not assign separate codes for the type of infection (B95.62) and resistance to antibiotics (Z16.11) if a combination diagnosis code includes both the causal organism and drug resistance. For example:

**Diagnosis:** Pneumonia due to Methicillin resistant *Staphylococcus aureus*
In this example, the code description includes both the causal organism \textit{(Staphylococcus aureus)} and drug resistance status (Methicillin-resistance)

- MRSA infections that are not classified with combination codes require separate reporting of the current infection and the causal organism. For example:

\begin{itemize}
  \item \textbf{T81.4 Infection following a procedure}
  \item \textbf{B95.62 Methicillin resistant Staphylococcus aureus infection as the cause of diseases classified elsewhere}
\end{itemize}

In this example, subcategory T81.4 does not specify either the organism or the drug resistance status. Separate codes are required to report the diagnosis in entirety.

- Assign code Z22.322 Carrier or suspected carrier of MRSA, to report MRSA colonization status.
- Assign code Z22.321 Carrier or suspected carrier of MSSA, for patients documented as Methicillin susceptible \textit{Staphylococcus aureus} \textit{(MSSA)} colonization.
- Simultaneous MRSA colonization and active, documented MRSA infection requires two codes. Code the nature or manifestation of the active MRSA infection as described in the documentation. Assign code Z22.322 to specify carrier status.

\textbf{Sepsis and Septicemia}

Sepsis may be caused by the invasion of toxins, which may include bacteria, fungi, viruses, and other organisms, into the blood stream. As such, classification may vary depending on the nature of the organism. For example, when consulting the alphabetic index under the main term “Sepsis,” note the following:

- \textbf{Sepsis} \textit{(generalized)} \textit{(unspecified organism)} A41.9
  - \textbf{Bacillus anthracis} A22.7
  - \textbf{Brucella (see also Brucellosis)} A23.9
  - \textbf{candidal} B37.7
  - \textbf{Erysipelothrix (rhusiopathiae) (erysipeloid)} A26.7
  - \textbf{extraintestinal yersiniosis} A28.2
  - \textbf{herpesviral} B00.7

Code category A41 Other sepsis, lists multiple exclusions for specific systemic (septic) infections more appropriately classified elsewhere. Similarly, site-specific or organ-specific sepsis should not be coded as a systemic sepsis. Instructional notes at the beginning of category A41 direct the coder to sequence first sepsis due to other circumstances, such as postprocedural sepsis (T81.4) and sepsis occurring during labor (O75.3).

Coding instructions for sepsis, severe sepsis, and septic shock provide guidance for accurate reporting of the severity, nature, cause, and conditions associated with systemic infection. The number and sequence of codes required vary according to the circumstances of the condition and encounter. These key concepts include:

- Assign the appropriate code for the underlying systemic infection.
- Sepsis of unknown type or causal organism is reported with A41.9 Sepsis, unspecified.
- Report a code from subcategory R65.2 only when the diagnosis of severe sepsis or associated acute organ dysfunction has been documented.
- Severe sepsis requires a minimum of two codes: one for the underlying systemic infection first, followed by an appropriate code from subcategory R65.2 Severe sepsis.
- Assign additional codes for any associated acute organ dysfunction (e.g., renal failure, respiratory failure) when coding severe sepsis.
• Septic shock indicates the presence of severe sepsis. For all cases of septic shock, report the code for the underlying systemic infection first, followed by R65.21 Severe sepsis with septic shock or code T81.12 Postprocedural septic shock. For example:

**Diagnosis:** Severe gram-negative sepsis with septic shock and acute respiratory failure

A41.50 Gram-negative sepsis, unspecified
R65.21 Severe sepsis with septic shock
J96.00 Acute respiratory failure

• Postprocedural sepsis requires provider documentation (linkage) of the relationship between the surgery or procedure and the infection. Do not assume a causal relationship in absence of supportive documentation.

• Septic shock cannot be assigned as a first-listed or principal diagnosis. Instead, sequence first the systemic infection or precipitating complication.

Refer to the “ICD-10-CM Draft Official Guidelines for Coding and Reporting” in appendix A of this book for additional information.

**Level of Detail in Coding**

As in ICD-9-CM, diagnosis codes are to be used and reported to the highest level of specificity available. ICD-10-CM provides, in the majority of cases, an exponentially increased level of specificity than ICD-9-CM. In chapter 1, this code expansion is intended to facilitate identification of specific types of causal organisms, or other indicators of severity. For example:

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>036.2</td>
<td>Meningococcemia</td>
</tr>
<tr>
<td></td>
<td>A39.2 Acute meningococcemia</td>
</tr>
<tr>
<td></td>
<td>A39.3 Chronic meningococcemia</td>
</tr>
<tr>
<td></td>
<td>A39.4 Meningococcemia unspecified</td>
</tr>
<tr>
<td>038.0</td>
<td>Streptococcal septicemia</td>
</tr>
<tr>
<td></td>
<td>A40.0 Sepsis due to Streptococcus Group A</td>
</tr>
<tr>
<td></td>
<td>A40.1 Sepsis due to Streptococcus Group B</td>
</tr>
<tr>
<td></td>
<td>A40.3 Sepsis due to Streptococcus pneumoniae</td>
</tr>
<tr>
<td></td>
<td>A40.8 Other streptococcal sepsis</td>
</tr>
<tr>
<td></td>
<td>A40.9 Streptococcal sepsis unspecified</td>
</tr>
</tbody>
</table>

**Combination Codes**

Certain infectious disease classifications have been expanded in ICD-10-CM to facilitate identification of secondary disease processes, specific manifestations, or associated complications. As such, code to the highest level of specificity as documented in the record. Consult the instructions in the text to determine whether additional codes are necessary to report the associated conditions or manifestations. For example:

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>002.0</td>
<td>Typhoid fever</td>
</tr>
<tr>
<td></td>
<td>A01.00 Typhoid fever unspecified</td>
</tr>
<tr>
<td></td>
<td>A01.01 Typhoid meningitis</td>
</tr>
<tr>
<td></td>
<td>A01.02 Typhoid fever with heart involvement</td>
</tr>
<tr>
<td></td>
<td>A01.03 Typhoid pneumonia</td>
</tr>
<tr>
<td></td>
<td>A01.04 Typhoid arthritis</td>
</tr>
<tr>
<td></td>
<td>A01.05 Typhoid osteomyelitis</td>
</tr>
<tr>
<td></td>
<td>A01.09 Typhoid fever with other complications</td>
</tr>
</tbody>
</table>

**Sequela codes are NOT used to report chronic infections.**

An additional code from category B95–B97 Bacterial and viral infectious agents, is not necessary when the causal organism is specified in the code title (description).
Diagnosis: Acute typhoid cholecystitis

A01.09 Typhoid fever with other complications

In this example, the alphabetic index directs the coder to assign one code. The index lists "Typhoid, cholecystitis (current)" as A01.09. Similarly, "Cholecystitis, typhoidal" is listed as A01.09. There are no further instructions in the tabular list to assign additional codes.

Late Effects (Sequelae)

ICD-10-CM classifies late effect conditions or "sequelae" to categories B90–B94. These codes identify that a residual condition remains or is due to a previous illness or injury after the acute phase has resolved. There is no time limit restricting the reporting of late effect codes. Residual conditions may occur months or years following the causal condition. Two codes, sequenced in the following order, are often required: the condition resulting from the sequela is sequenced first, followed by the appropriate late effect code.

There are two sequencing exceptions: 1) a Tabular List instruction note that indicates the sequela code is first, followed by the manifestation(s) code(s); or 2) the sequela code has a fourth, fifth, or sixth character that includes the manifestation(s).

Chapter 1 Coding Exercises

Assign the appropriate ICD-10-CM diagnosis codes for all reportable diagnoses, excluding external causes of morbidity (V00–Y99):

Answers to coding exercises are listed in the back of the book.

1. Acute E. coli cystitis
2. Coxsackie enteritis
3. Bell's palsy as late effect of Lyme disease
4. Sequela of poliomyelitis, secondary kyphoscoliosis of thoracic spine
5. AIDS-related encephalopathy
6. HIV infection status
7. Septicemia due to systemic progression of Pseudomonas aeruginosa urinary tract infection
8. Severe pneumococcal septicemia due to pneumococcal pneumonia, with SIRS and acute kidney failure
9. Methicillin-resistant S. aureus septicemia

CODING AXIOM

Human Immunodeficiency Virus (HIV) Infections

Review the coding guidelines I.C.1.a and notes at the category levels of the ICD-10-CM text.
Chapter 1 Coding Scenarios
Assign the appropriate ICD-10-CM diagnosis codes for all reportable diagnoses, excluding external causes of morbidity (V00–Y99).

Answers to coding exercises are listed in the back of the book.

1. An otherwise healthy 26-year-old female presents to the emergency department with fever, an erythematous, pruritic rash on her face, trunk and limbs, painful bilateral joint pain and swelling of the hands, wrists, and knees. Past medical history is noncontributory. The patient stated that her 5-year-old child had a similar mild rash two weeks ago, but did not appear ill or complain of joint pain. A blood test was obtained to rule out the presence of suspected parvovirus antibodies. Test results were positive for immunoglobulin M (IgM) antibody to parvovirus B19, confirming a suspected clinical diagnosis consistent with recent parvovirus infection. The patient was placed on rest, hydrated, and given ibuprofen (800mg) with resolution of fever. She was advised that the joint pain should resolve in a couple weeks. The patient was also advised to rest, restrict activities, and follow up with her physician if symptoms worsen.

**Diagnosis:** Arthritis due to Parvovirus B19 infection

2. A 42-year-old patient with a two-year history of AIDS was admitted with fever, nonproductive cough, pleuritic chest pain, and shortness of breath. He stated a history of progressive weight loss and fatigue throughout the 30 days preceding admission. Diagnostic imaging was positive for pulmonary infiltrates. Sputum was positive for *Pneumocystis jiroveci*. The patient was placed on supplemental oxygen therapy, prednisone, and pentamidine isethionate. The patient showed marked improvement within 48 hours of admission and was discharged home with instructions and a prescription to continue oral pentamidine isethionate for 14 days.

**Diagnosis:** Pneumocystis jiroveci pneumonia
3. A 53-year-old diabetic male sustained a deep laceration to the left proximal thumb with a chef’s knife while deboning poultry in the kitchen of a local restaurant. He placed a dishtowel over the cut to stop the bleeding, and then wrapped the finger in a gauze bandage. Approximately 48 hours after the initial injury, he replaced the bandage. A couple of days later, when he removed the bandage, the cut had become red and swollen. Upon seeking care for the wound, his physician cleaned the wound and prescribed a broad-spectrum antibiotic. However, the patient failed to complete the dosage when the wound began to improve. Approximately five days after stopping the antibiotic, he developed fatigue, malaise, and tachycardia. Within 24 hours from the onset of symptoms, he presented to the emergency department at his local hospital with progressively worsening fever, chills, tachycardia, lethargy, and confusion. Upon admission, his fever was 104 degrees, blood pressure 88/60 mm Hg, respiratory rate 22, and pulse 110. The patient was determined to be in shock, likely of septic origin based on the evaluation of the infected wound with cellulitis present on examination and recent history. Blood chemistry revealed a BUN of 54 g/dl and creatinine of 1.8 mg/dl. Blood cultures grew gram-negative rods identified as E. coli. The patient was admitted to ICU, placed on intravenous ciprofloxacin at 400 mg IV q12h and mechanical ventilation for the associated acute respiratory failure. The patient responded well to treatment and was discharged in improved condition with favorable prognosis.

**Diagnosis:** E. coli sepsis due to systemic progression of left proximal thumb wound cellulitis.