**Appendix Table 1: Mastectomy Admission Exclusions**

|  |  |  |
| --- | --- | --- |
| **Description** | **ICD-9-CM diagnosis code** | **Antibiotic name** |
| Gunshot wound | E922.0–E922.3, E922.8, E922.9, E928.7, E965.0–E965.4, E970, E979.4, E985.x–E985.4 |  |
| Motor vehicle accident | E810.x-E825.9, E968.5, E988.5 |  |
| Mastectomy surgical site infection (SSI) | 996.69, 998.5x |  |
| Other site SSI | 324.x, 478.21-478.24, 478.29, 536.41, 730.0x–730.2x, 730.8x, 730.9x, 996.60–996.68 |  |
| Cellulitis/skin and soft tissue infections | 681.x, 682.x, 683, 684, 685.0, 686.x, 728.0, 728.86, 958.3, 997.62 |  |
| Pneumonia | 481, 482.xx, 483.x, 485, 486, 510.0, 510.9, 513.0, 997.31, 997.32 |  |
| Urinary tract, pyelonephritis, genitourinary infection | 590.0x, 590.1x, 590.2, 590.80, 590.9, 595.0, 598.0x, 599.0, 616.3, 616.4 |  |
| Gastrointestinal infection | 566, 567.1, 567.2x, 567.3x, 567.9, 569.5, 572.0 |  |
| Septicemia/sepsis/sterile site infection | 038.x, 320.x, 711.0x, 711.9x, 785.52, 790.7, 995.91, 995.92, 999.3x |  |
| Upper respiratory infections | 380.1x, 382.0x, 382.4, 382.9, 383.0x, 383.9, 461.x, 463, 466.0, 475, 491.1, 522.5, 528.3 |  |
| Intravenous discharge antibiotic |  | amikacin, ampicillin, ampicillin-sulbactam, azithromycin, aztreonam, cefazolin, cefepime, cefotaxime, ceftaroline, ceftazidime, ceftazidime-avibactam, ceftolozane-tazobactam, ceftriaxone, cefuroxime, ciprofloxacin, clindamycin, colistin/polymyxin B, dalbavancin, daptomycin, doripenem, doxycycline, ertapenem, gentamicin, imipenem, levofloxacin, linezolid, meropenem, metronidazole, moxifloxacin, nafcillin, oritavancin, oxacillin, penicillin, piperacillin-tazobactam, tedizolid, tigecycline, tobramycin, trimethoprim-sulfamethoxazole, vancomycin |

Abbreviations: ICD-9-CM= International Classification of Diseases, 9th Revision, Clinical Modification.

**Appendix Table 2. Categorization of Post-Discharge Antibiotics by Class or Activity against Specific Organisms**

|  |  |
| --- | --- |
| **Antibiotic group** | **Antibiotic name** |
| Anti-methicillin resistant *Staphylococcus aureus* | clindamycin, doxycycline, linezolid, minocycline, tetracycline, trimethoprim/sulfamethoxazole, |
| Anti-methicillin sensitive *S. aureus* | amoxicillin/clavulanate, cefaclor, cefadroxil, cefdinir, cefixime, cefpodoxime, cefprozil, ceftibuten, cefuroxime, cephalexin, cloxacillin, dicloxacillin |
| Fluoroquinolones | ciprofloxacin, gatifloxacin, gemifloxacin, levofloxacin, moxifloxacin, ofloxacin |
| Other antibiotics | amoxicillin, ampicillin, azithromycin, clarithromycin, erythromycin, metronidazole |

**Appendix Table 3: Factors Considered for Association with Post-Discharge Antibiotics after Mastectomy**

|  |  |  |
| --- | --- | --- |
| **Patient factors** | **Operative/perioperative factors** | **Surgeon factors** |
| Age  ASA class  Comorbidities (e.g., diabetes, connective tissue diseases, chronic renal failure, serious skin disorders)  Hospitalization in 30 days before mastectomy admission  Morbid obesity  Payer  Race  Smoking  *Staphylococcus aureus* infection in 365 days before mastectomy admission | Academic vs. community hospital  Bilateral mastectomy  Breast reconstruction (implant, flap, both)  Concurrent lymph node procedure (axillary dissection, sentinel node)  Dehiscence/tissue necrosis  Hematoma, seroma  Hemorrhage after procedure  Intraoperative antibiotics  Mastectomy admission length of stay  Neoadjuvant chemotherapy in 183 days before mastectomy admission  Study site  Surgical duration  Year of mastectomy | Surgeon volume  Surgical specialty |

Abbreviations: ASA, American Society of Anesthesiologists.

**Appendix Table 4: Identification of Patient and Mastectomy Operative Factors Coded During the Mastectomy Admission**

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **ICD-9-CM diagnosis code** | **ICD-9-CM/CPT-4 procedure code** | **Other** |
| **Patient factors** | | | |
| Chemotherapya | V87.41 |  | Drug names:  carboplatin, cyclophosphamide, docetaxel, doxorubicin, epirubicin, filgrastim, fluorouracil, paclitaxel, pegfilgrastim, vinorelbine |
| **Operative factors** | | | |
| Bilateral mastectomy |  | ICD-9-CM: 85.35, 85.36, 85.42, 85.44, 85.46, 85.48or >1 unilateral code (85.33, 85.34, 85.41, 85.43, 85.45, 85.47) |  |
| Flap breast reconstruction |  | ICD-9-CM: 85.7x |  |
| Implant breast reconstruction |  | ICD-9-CM: 85.33, 85.35, 85.53, 85.54, 85.95 |  |
| Lymph node procedure |  | ICD-9-CM: 40.23, 40.50, 40.51, 85.43–85.48 |  |
| Dehiscence/necrosis | 875.0, 875.1, 879.0, 879.1, 998.32, 998.83 |  |  |
| Hematoma/seroma | 998.12, 998.13 |  |  |
| Hemorrhageb | 998.11 | ICD-9-CM: 39.98 |  |

Abbreviations: CPT-4= Current Procedural Terminology, 4th edition; ICD-9-CM= International Classification of Diseases, 9th Revision, Clinical Modification.

a Chemotherapy procedure and revenue codes were identified in the 183 days before the mastectomy admission. History of chemotherapy diagnosis code was identified during the mastectomy admission.

b Diagnosis and/or procedure code.

**Appendix Table 5: Codes Suggestive of Surgical Site Infection after Mastectomy**

|  |  |  |
| --- | --- | --- |
| **ICD-9-CM diagnosis code** | **CPT-4 code** | **ICD-9-CM procedure code** |
| 041.10, 041.11, 041.12, 041.19, 611.0, 682.2, 682.3, 682.9, 683, 996.69, 998.5x | 10060, 10061, 10140, 10160, 10180, 11000, 11001, 11005, 11008, 11040–11047, 19020, 20000, 20005, 38300, 38305, 97597, 97598, 97602, 97605, 97606, A6550, A6551, E2402, K0538 | 54.0, 54.3, 83.44, 83.45, 83.49, 85.0, 85.91, 86.01, 86.04, 86.09, 86.22, 86.28 |

Abbreviations: CPT-4= Current Procedural Terminology, 4th edition; ICD-9-CM= International Classification of Diseases, 9th Revision, Clinical Modification.