**Supplementary Appendix Table 1:** Individual code performance for surgical site infection surveillance following colon surgery

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ICD-9 Code (Description)** | **N** | **Superficial SSI** | **Deep or Organ/Space SSI** | **Cellulitis** | **Alternative Infection** | **No Infection** |
| *Diagnosis Codes* |  |  |  |  |  |  |
| 567.21 (Peritonitis) | 23 | 0 (0%) | 4 (17%) | 0 (0%) | 18 (78%) | 1 (4%) |
| 567.22 (Peritoneal abscess) | 91 | 3 (3%) | 42 (46%) | 1 (1%) | 40 (44%) | 5 (5%) |
| 567.29 (Peritonitis) | 24 | 0 (0%) | 6 (25%) | 0 (0%) | 15 (63%) | 3 (13%) |
| 567.38 (Other retroperitoneal abscess) | 7 | 0 (0%) | 2 (29%) | 0 (0%) | 5 (71%) | 0 (0%) |
| 569.5 (Abscess of intestine) | 79 | 4 (5%) | 7 (9%) | 0 (0%) | 62 (78%) | 6 (8%) |
| 596.61 (Infection of colostomy or enterostomy) | 6 | 1 (17%) | 2 (33%) | 1 (17%) | 2 (33%) | 0 (0%) |
| 596.81 (Fistula of intestine, excluding rectum  and anus) | 43 | 1 (2%) | 7 (16%) | 0 (0%) | 22 (51%) | 13 (30%) |
| 682.2 (Other cellulitis or abscess of trunk) | 36 | 10 (28%) | 8 (22%) | 2 (6%) | 12 (33%) | 4 (11%) |
| 879.9 (Open wound, complicated) | 1 | 0 (0%) | 0 (0%) | 0 (0%) | 1 (100%) | 0 (0%) |
| 998.31 (Disruption of internal surgical wound) | 11 | 0 (0%) | 7 (64%) | 0 (0%) | 3 (27%) | 1 (9%) |
| 998.32 (Disruption of external surgical wound) | 24 | 4 (17%) | 12 (50%) | 0 (0%) | 4 (17%) | 4 (17%) |
| 998.51 (Infected post-operative seroma) | 2 | 2 (100%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| 998.59 (Other post-operative infection) | 116 | 35 (30%) | 55 (47%) | 1 (<1%) | 16 (14%) | 9 (8%) |
| 998.6 (Persistent post-operative fistula) | 18 | 1 (6%) | 7 (39%) | 0 (0%) | 4 (22%) | 6 (33%) |
| *Procedure Codes* |  |  |  |  |  |  |
| 54.0 (Incision of abdominal wall) | 0 | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| 54.11 (Exploratory laparotomy) | 2 | 0 (0%) | 1 (50%) | 0 (0%) | 0 (0%) | 1 (50%) |
| 54.19 (Other laparotomy) | 9 | 1 (11%) | 6 (67%) | 0 (0%) | 1 (11%) | 1 (11/%) |
| 86.04 (Other incision with drainage of skin and  subcutaneous tissue) | 4 | 1 (25%) | 2 (50%) | 0 (0%) | 0 (0%) | 1 (25%) |
| 86.22 (Excisional debridement of wound,  infection, or burn) | 7 | 3 (43%) | 2 (29%) | 0 (0%) | 1 (14%) | 1 (14%) |
| 86.28 (Non-excisional debridement of wound,  infection, or burn) | 10 | 3 (30%) | 4 (40%) | 0 (0%) | 0 (0%) | 3 (30%) |

**Supplementary Appendix Table 2:** Individual code performance for surgical site infection surveillance following abdominal hysterectomy

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ICD-9 Code (Description)** | **N** | **Superficial SSI** | **Deep or Organ/Space SSI** | **Cellulitis** | **Alternative Infection** | **No Infection** |
| *Diagnosis Codes* |  |  |  |  |  |  |
| 567.22 (Peritoneal abscess) | 26 | 1 (4%) | 15 (58%) | 0 (0%) | 8 (31%) | 2 (8%) |
| 682.2 (Other cellulitis or abscess of trunk) | 56 | 17 (30%) | 11 (20%) | 22 (39%) | 5 (9%) | 1 (2%) |
| 998.31 (Disruption of internal surgical wound) | 20 | 2 (10%) | 11 (55%) | 0 (0%) | 0 (0%) | 7 (35%) |
| 998.32 (Disruption of external surgical wound) | 34 | 14 (41%) | 6 (18%) | 0 (0%) | 4 (12%) | 10 (29%) |
| 998.51 (Infected post-operative seroma) | 7 | 6 (86%) | 1 (14%) | 0 (0%) | 0 (0%) | 0 (0%) |
| 998.59 (Other post-operative infection) | 113 | 38 (34%) | 48 (42%) | 19 (17%) | 3 (3%) | 5 (4%) |

**Supplementary Appendix Table 3: ICD-9 to ICD-10 Crosswalk for Recommended SSI Validation Codes**

|  |  |  |
| --- | --- | --- |
| **ICD-9 Validation Codes** | **ICD-9 Description** | **Corresponding ICD-10 Codes** |
| *Colon Surgery* | | |
| 567.21 / 567.29 | Peritonitis | K650 |
| 567.22 | Peritoneal abscess | K651 |
| 567.38 | Other retroperitoneal abscess | K6819 |
| 569.5 | Abscess of intestine | K630 |
| 569.61 | Infection of colostomy or enterostomy | K9402/K9412 |
| 569.81 | Fistula of intestine, excluding rectum and anus | K632 |
| 682.2 | Other cellulitis or abscess of trunk | L03319 / L03329 |
| 998.31 | Disruption of internal surgical wound | T8132XA |
| 998.32 | Disruption of external surgical wound | T8131XA |
| 998.51 /998.59 | Post-operative infection | T814XXA |
| 998.6 | Persistent post-operative fistula | T8183XA |
| *Abdominal Hysterectomy* | | |
| 567.21 / 567.29 | Peritonitis | K650 |
| 567.22 | Peritoneal abscess | K651 |
| 682.2 | Other cellulitis or abscess of trunk | L03319 / L03329 |
| 998.31 | Disruption of internal surgical wound | T8132XA |
| 998.32 | Disruption of external surgical wound | T8131XA |
| 998.51 /998.59 | Post-operative infection | T814XXA |