**Supplementary data S3–Case definition of Surgical site infection**

Tableau 1 SSI detection during the joint replacement hospital stay

|  |  |  |  |
| --- | --- | --- | --- |
| **Algorithm** | **Primary diagnosis (ICD 10 code)** | **Secondary diagnosis (ICD 10 code)** | **Procedure (procedure codes)** |
| A | Infection code\* | Specific code of inflammatory complication (T84.5) | - |
| B | Infection code | - | Therapeutic procedure code, out of synovectomy or reoperation\*\* |
| C | Infection code | - | Diagnostic procedure code |
| D | - | Specific code of inflammatory complication (T84.5) | Therapeutic procedure code, out of synovectomy or reoperation |
| E | - | Specific code of inflammatory complication (T84.5) | Diagnostic procedure code |

**\*Annex 1 below**

**\*\*Annex 2 below**

Tableau 2 SSI detection during one readmission, over 90 days following the inclusion arthroplasty stay

|  |  |  |  |
| --- | --- | --- | --- |
| **Algorithm** | **Primary diagnosis (ICD 10 code)** | **Secondary diagnosis (ICD 10 code)** | **Procedure (procedure codes)** |
| F | Infection code (annex1) | Specific code of inflammatory complication (T84.5) | - |
| G | Infection code | - | Therapeutic procedure code, out of synovectomy or reoperation (annex 2) |
| H | Infection code | - | Diagnostic procedure code |
| I | - | Specific code of inflammatory complication (T84.5) + infection code | - |
| J | - | Specific code of inflammatory complication (T84.5) + infection code | Therapeutic procedure code, out of synovectomy or reoperation |
| K |  | Specific code of inflammatory complication (T84.5) + infection code | Diagnostic procedure code |
| L | - | Infection code | Therapeutic procedure code, out of synovectomy or reoperation |
| M | Specific code of inflammatory complication (T84.5) + infection code | Infection code | - |
| N | Specific code of inflammatory complication (T84.5) + infection code | - | Therapeutic procedure code, out of synovectomy or reoperation |
| O | Specific code of inflammatory complication (T84.5) + infection code | - | Diagnostic procedure code |
| P | - | Infection code | Diagnostic procedure code |
| Q | Specific code of inflammatory complication (T84.5) + infection code |  | Therapeutic procedure code of reintervention on TH/KA (annex 3 and 4) |
| R |  | Infection code | Therapeutic procedure code of reintervention on TH/KA |
| S | Infection code |  | Therapeutic procedure code of reintervention on TH/KA |
| T |  | Specific code of inflammatory complication (T84.5) | Therapeutic procedure code of reintervention on TH/KA |

T84.5 Infection and inflammatory reaction due to internal joint prosthesis

Codes CIM-10 de diagnostics d'infection du site opératoire hanche ou genou

Have been included the codes of osteoarticular infections for hip and knee location but also for multiple location or unspecific location ; indeed in the coding procedure it is not mandatory to specify the location of the infected joint. Hence, we used combination of codes (daignosis and procedure) of SSI to identify specificly the hip or knee SSI case.

|  |  |
| --- | --- |
| **Code** | **Libellé** |
| *A180* | |  | | --- | | Tuberculosis of bones and joints | |
| *A666* | Bone and joint lesions of yaws |
| *B453* | Osseous cryptococcosis |
| *B672* | Echinococcus granulosus infection of bone |
| *M000* | Staphylococcal arthritis and polyarthritis |
| *M0000* | Staphylococcal arthritis, unspecified joint |
| *M0005* | Staphylococcal arthritis, hip |
| *M0006* | Staphylococcal arthritis, knee |
| *M0008* | Staphylococcal arthritis, vertebrae |
| *M0009* | Staphylococcal polyarthritis |
| *M001* | Pneumococcal arthritis and polyarthritis |
| *M0010* | Pneumococcal arthritis, unspecified joint |
| *M0015* | Pneumococcal arthritis, hip |
| *M0016* | Pneumococcal arthritis, knee |
| *M0018* | Pneumococcal arthritis, vertebrae |
| *M0019* | Pneumococcal polyarthritis |
| *M002* | Other streptococcal arthritis and polyarthritis |
| *M0020* | Other streptococcal arthritis, unspecified joint |
| *M0025* | Other streptococcal arthritis, hip |
| *M0026* | Other streptococcal arthritis, knee |
| *M0028* | Other streptococcal arthritis, vertebrae |
| M0029 | Other streptococcal polyarthritis |
| *M008* | Arthritis and polyarthritis due to other bacteria |
| *M0080* | Arthritis due to other bacteria, unspecified joint |
| *M0085* | Arthritis due to other bacteria, hip |
| *M0086* | Arthritis due to other bacteria, knee |
| *M0088* | Arthritis due to other bacteria, vertebrae |
| *M0089* | Polyarthritis due to other bacteria |
| *M009* | Pyogenic arthritis, unspecified |
| *M0090* | Pyogenic arthritis, unspecified |
| *M0095* | Pyogenic arthritis, hip |
| *M0096* | Pyogenic arthritis, knee |
| *M0098* | Pyogenic arthritis,vertebrae |
| *M0099* | Pyogenic arthritis,unspecified |
| *M010* | Other meningococcal infection (A39.8) |
| *M0100* | Other meningococcal infection (A39.8) – unspecified joint |
| *M0105* | Other meningococcal infection (A39.8) - hip |
| *M0106* | Other meningococcal infection (A39.8) - knee |
| *M0108* | Other meningococcal infection (A39.8) – other location |
| *M0109* | Other meningococcal infection (A39.8) – unspecified joint |
| *M011* | Tuberculosis of bones and joints (A18.0) |
| *M0110* | Tuberculosis of bones and joints (A18.0) – unspecified location |
| *M0115* | Tuberculosis of bones and joints (A18.0) – hip |
| *M0116* | Tuberculosis of bones and joints (A18.0) - knee |
| *M0118* | Tuberculosis of bones and joints (A18.0) – other joints |
| *M0119* | Tuberculosis of bones and joints (A18.0) – unspecified joint |
| *M012* | Lyme disease of bones and joints (A69.2) |
| *M0120* | Lyme disease of bones and joints (A69.2) - unspecified joint |
| *M0125* | Lyme disease of bones and joints (A69.2) - hip |
| *M0126* | Lyme disease of bones and joints (A69.2) - knee |
| *M0128* | Lyme disease of bones and joints (A69.2) – other joints |
| *M0129* | Lyme disease of bones and joints (A69.2) - unspecified joint |
| *M013* | Pyogenic arthritis not classified |
| *M0130* | Pyogenic arthritis not classified - unspecified joint |
| *M0135* | Pyogenic arthritis not classified -hip |
| *M0136* | Pyogenic arthritis not classified - knee |
| *M0138* | Pyogenic arthritis not classified - other joints |
| *M0139* | Pyogenic arthritis not classified - other joints |
| *M016* | Fungal arthritis (B35-B49) |
| *M0160* | Fungal arthritis (B35-B49) – multiple joints |
| *M0165* | Fungal arthritis (B35-B49) - hip |
| *M0166* | Fungal arthritis (B35-B49) - knee |
| *M0168* | Fungal arthritis (B35-B49) – other joints |
| *M0169* | Fungal arthritis (B35-B49) – other location |
| *M018* | Other septic arthritis |
| *M0180* | Other septic arthritis –multiple location |
| *M0185* | Other septic arthritis -hip |
| *M0186* | Other septic arthritis -knee |
| *M0188* | Other septic arthritis and parasites |
| *M0189* | Other septic arthritis and parasites –other location |
| *M860* | Acute hematogenous osteomyelitis |
| *M8600* | Acute hematogenous osteomyelitis, unspecified site |
| *M8605* | Acute hematogenous osteomyelitis, femur |
| *M8606* | Acute hematogenous osteomyelitis, tibia and fibula |
| *M8608* | Acute hematogenous osteomyelitis, other sites |
| *M8609* | Acute hematogenous osteomyelitis, multiple sites |
| *M861* | Other acute osteomyelitis |
| *M8610* | Other acute osteomyelitis, unspecified site |
| *M8615* | Other acute osteomyelitis, femur |
| *M8616* | Other acute osteomyelitis, tibia and fibula |
| *M8618* | Other acute osteomyelitis, other site |
| *M8619* | Other acute osteomyelitis, multiple sites |
| *M862* | Subacute osteomyelitis |
| *M8620* | Subacute osteomyelitis, unspecified site |
| *M8625* | Subacute osteomyelitis, femur |
| *M8626* | Subacute osteomyelitis, tibia and fibula |
| *M8628* | Subacute osteomyelitis, other site |
| *M8629* | Subacute osteomyelitis, multiple sites |
| *M863* | Chronic multifocal osteomyelitis |
| *M8630* | Chronic multifocal osteomyelitis, unspecified site |
| *M8635* | Chronic multifocal osteomyelitis, femur |
| *M8636* | Chronic multifocal osteomyelitis, tibia and fibula |
| *M8638* | Chronic multifocal osteomyelitis, other site |
| *M8639* | Chronic multifocal osteomyelitis, multiple sites |
| *M864* | Chronic osteomyelitis with draining sinus |
| *M8640* | Chronic osteomyelitis with draining sinus, unspecified site |
| *M8645* | Chronic osteomyelitis with draining sinus, femur |
| *M8646* | Chronic osteomyelitis with draining sinus, tibia and fibula |
| *M8648* | Chronic osteomyelitis with draining sinus, other site |
| *M8649* | Chronic osteomyelitis with draining sinus, multiple sites |
| *M865* | Other chronic hematogenous osteomyelitis |
| *M8650* | Other chronic hematogenous osteomyelitis, unspecified site |
| *M8655* | Other chronic hematogenous osteomyelitis, femur |
| *M8656* | Other chronic hematogenous osteomyelitis, tibia and fibula |
| *M8658* | Other chronic hematogenous osteomyelitis, other site |
| *M8659* | Other chronic hematogenous osteomyelitis, multiple sites |
| *M866* | Other chronic osteomyelitis |
| *M8660* | Other chronic osteomyelitis, unspecified site |
| *M8665* | Other chronic osteomyelitis, thigh |
| *M8666* | Other chronic osteomyelitis, tibia and fibula |
| *M8668* | Other chronic osteomyelitis, other site |
| *M8669* | Other chronic osteomyelitis, multiple sites |
| *M868* | Other osteomyelitis |
| *M8680* | Other osteomyelitis, multiple sites |
| *M8685* | Other osteomyelitis, thigh |
| *M8686* | Other osteomyelitis, lower leg |
| *M8688* | Other osteomyelitis, other site |
| *M8689* | Other osteomyelitis, unspecified sites |
| *M869* | Osteomyelitis, unspecified |
| *M8690* | Osteomyelitis, unspecified and multiple location |
| *M8695* | Osteomyelitis, unspecified - thigh |
| *M8696* | Osteomyelitis, unspecified - lower leg |
| *M8698* | Osteomyelitis, unspecified - unspecified sites |
| *M8699* | Osteomyelitis, unspecified |
| *M900* | Tuberculosis of bones and joints (A18.0) |
| *M9000* | Tuberculosis of bones and joints (A18.0) - multiple location |
| *M9005* | Tuberculosis of bones and joints (A18.0) - thigh |
| *M9006* | Tuberculosis of bones and joints (A18.0) – lower leg |
| *M9008* | Tuberculosis of bones and joints (A18.0) - other site |
| *M9009* | Tuberculosis of bones and joints (A18.0) - unspecified sites |
| *M9000* | Periostitis in infectious diseases |
| *M9010* | Periostitis in infectious diseases – multiple locations |
| *M9015* | Periostitis in infectious diseases - hip |
| *M9016* | Periostitis in infectious diseases –lower leg |
| *M9018* | Periostitis in infectious diseases – other location |
| *M9019* | Periostitis in infectious diseases - unspecified sites |
| *M902* | Osteopathy in infectious diseases |
| *M9020* | Osteopathy in infectious diseases - multiple locations |
| *M9025* | Osteopathy in infectious diseases - hip |
| *M9026* | Osteopathy in infectious diseases - lower leg |
| *M9028* | Osteopathy in infectious diseases - other location |
| *M9029* | Osteopathy in infectious diseases - multiple locations |

### Annex 1 : ICD-10 codes for SSI detection

| ICD-10 code | Label |
| --- | --- |
| A18.0 | Tuberculosis of bones and joints |
| A21.8 | Others forms of tularaemia |
| A23.x | Brucellosis |
| A27.x | Leptospirosis |
| A28.x | Other zoonotic bacterial diseases, not elsewhere classified |
| A31.8 | Other mycobacterial infections |
| A31.9 | Mycobacterial infections, unspecified |
| A39.2 | Acute meningococcaemia |
| A39.3 | Chronic meningococcaemia |
| A39.4 | Meningococcaemia, unspecified |
| A39.8 | Other meningococcal infections |
| A39.9 | Meningococcal infection, unspecified |
| A40.x | Streptococcal sepsis |
| A41.x | Other sepsis |
| A42.7 | Actinomycosis sepsis |
| A42.8 | Other forms of actinomycosis |
| A42.9 | Actinomycosis, unspecified |
| A43.8 | Other forms of nocardiosis |
| A43.9 | Nocardiosis, unspecified |
| A44.8 | Other forms of bartonellosis |
| A44.9 | Bartonellosis, unspecified |
| A48.8 | Other specified bacterial diseases |
| A49.x | Bacterial infection of unspecified site |
| A53.9 | Syphilis, unspecified |
| A54.4 | Gonococcal infection of musculoskeletal system |
| A74.9 | Chlamydial infection, unspecified |
| B37.7 | Candidal sepsis |
| B37.8 | Candidiasis of other sites |
| B37.9 | Candidiasis, unspecified |
| B49.x | Unspecified mycosis |
| B95.x | Streptococcus and staphylococcus as the cause of diseases classified to other chapters |
| B96.x | Other specified bacterial agents as the cause of diseases classified to other chapters |
| B99.x | Other and unspecified infectious diseases |
| L02.2 | Cutaneous abscess, furuncle and carbuncle of trunk |
| L02.4 | Cutaneous abscess, furuncle and carbuncle of limb |
| L98.0 | Other disorders of skin and subcutaneous tissue, not elsewhere classified |
| M00.x | Pyogenic arthritis |
| M01.0 | Meningococcal arthritis (A39.8) |
| M01.1 | Tuberculous arthritis (A18.0) |
| M01.2 | Arthritis in Lyme disease (A69.2) |
| M01.3 | Arthritis in other bacterial diseases classified elsewhere |
| M01.6 | Arthritis in mycoses (B35-B49) |
| M01.8 | Arthritis in other infections and parasitic diseases classified elsewhere |
| M13.0 | Polyarthritis, unspecified |
| M13.15 | *Monoarthritis, not elsewhere classified, hip* |
| M13.16 | *Monoarthritis, not elsewhere classified, knee* |
| M13.8 | *Other specified arthritis* |
| M13.95 | *Arthritis, unspecified - hip* |
| M13.96 | *Arthritis, unspecified - knee* |
| M25.15 | *Fistula - hip* |
| M25.16 | *Fistula - knee* |
| M86.x | Osteomyelitis |
| M90.0 | Tuberculosis of bone (A18.0) |
| M90.2 | Osteopathy in other infectious diseases classified elsewhere |
| R650 | Systemic Inflammatory Response Syndrome of infectious origin without organ failure |
| R651 | Systemic Inflammatory Response Syndrome of infectious origin with organ failure |

### Annex 2: specific therapeutic acts FCCMA codes

| procedure code | Label |
| --- | --- |
| NEJA001 | Cleaning of the coxofemoral joint, by arthrotomy |
| NEJA002 | Collection evacuation of the coxofemoral joint, by arthrotomy |
| NEJA003 | Collection evacuation or synovectomy of the sacroiliac joint, by arthrotomy |
| NEJA004 | Periprosthetic collection evacuation of the coxofemoral joint, by arthrotomy |
| NEJC001 | Cleaning of the coxofemoral joint, by arthroscopy |
| NEJB001 | Collection evacuation of the coxofemoral joint, transcutaneously |
| NEQC001 | Exploration of the coxofemoral joint, by arthroscopy |
| NEFC001 | Coxofemoral synovectomy, by arthroscopy |
| NEFA003 | Coxofemoral synovectomy, by arthrotomy by two approaches including a posterior approach |
| NEFA004 | Coxofemoral synovectomy, by arthrotomy by one approach |
| NAHB001 | Coxal bone unicortical biopsy, transcutaneously |
| NAHA001 | Coxal bone internal cortical biopsy, by direct approach |
| NAHA002 | Coxal bone external cortical biopsy, by direct approach |
| NEHA001 | Biopsy of one of pelvic belt joints, by direct approach |
| NEHA002 | Coxofemoral joint biopsy, by direct approach |
| NFJA001 | Cleaning of the knee joint, by arthrotomy |
| NFJA002 | Collection evacuation of the knee joint, by arthrotomy |
| NFJC001 | Cleaning of the knee joint, by arthroscopy |
| NFJC002 | Collection evacuation of the knee joint, by arthroscopy |
| NFFC001 | Knee synovectomy, by anterior arthroscopy and by posterior arthroscopy |
| NFFC002 | Knee anterior synovectomy, by arthroscopy |
| NFFA004 | Knee anterior synovectomy, by arthrotomy |
| NFFA005 | Knee anterior synovectomy, by arthroscopy with posterior synovectomy by arthrotomy without changing patient position |
| NFFA006 | Knee synovectomy, by anterior arthrotomy and by posterior arthrotomy with patient position change |
| NFQC001 | Exploration of the knee joint, by arthroscopy |
| NZHA001 | Biopsy of a bone and/or a joint of the lower limb, by direct approach |
| NZHB001 | Biopsy of a bone and/or a joint of the lower limb, transcutaneously without guidance |
| NZHB002 | Aspiration or fine needle aspiration of a lower limb joint, transcutaneously without guidance |
| NZHH001 | Aspiration or fine needle aspiration of a lower limb joint, transcutaneously with guidance |
| NZHH002 | Biopsy of a bone and/or a joint of the lower limb, transcutaneously with scan guidance |
| NZHH003 | Biopsy of a bone and/or a joint of the lower limb, transcutaneously with radiological guidance |
| NZHH004 | Aspiration or fine needle aspiration of a lower limb joint, transcutaneously with radiological guidance |
| NZJB001 | Collection evacuation of a lower limb joint, transcutaneously without guidance |