**Supplementary Document**

Supplementary Table 1. Procedures and the corresponding codes in the study

|  |  |
| --- | --- |
| Type of Procedure | Code |
| Total hip joint replacement | 64164B |
| Total knee replacement | 64162B |
| Periodontal treatment |  |
| Full mouth scaling | 91004C,91104C |
| Subgingival curettage, root planing | 91006C, 91007C,91008C |
|  | 91009C, 91010C |
| Non-surgical extraction | 92013C, 92014C |
| Invasive oral surgery |  |
| Surgical extraction | 92015C,92016C |
| Cyst enucleatation | 92017C,92018B,92019B |
| Oral soft tumor excision | 92020B |
| Apicoectomy | 92030C,92031C,92032C |
| Hemisection or root amputatation | 92033C |
| Alveoloplasty | 92041C,92042C |
| Autotransplantation | 92045A |
| Surgical exposure | 92050C |
| Bone tumor excision | 92056C,92057C,92058C |
| Surgical removal of tooth or foreign body in maxillary sinus | 92059C |
| Surgical removal of deep bony impaction of jaws | 92063C |
| Surgical removal of foreign body in pterygomandibular space, submandibular space, etc | 92064C |

Supplementary Table 2. The codes for the definition of prosthetic infection following joint replacement.

|  |  |  |
| --- | --- | --- |
| ICD-9-CM | exclusion | Intervention |
| 996.66; 996.67; 996.69 infection due to internal device  998.5; 998.51; 998.59  surgical wound infection  730 osteomyelitis  711 Septic arthritis | 730.01~730.04 ; 730.07   730.11~730.14;  730.17  730.21~730.24 ;  730.27  730.31~730.34 ;  730.37  730.7; 730.70~730.79  730.81~730.84;  730.87  730.91~730.94 ;  730.97  711.01~711.04 ; 711.07  711.1; 711.10~711.19  711.2; 711.20~711.29  711.31~711.34 ; 711.37  711.41~711.44 ; 711.47  711.51~711.54 ; 711.57  711.61~711.64 ; 711.67  711.7; 711.70~711.79  711.8; 711.81~711.89  711.91~711.94 ; 711.97 | Hip: 64005B, 64052B, 64054B, 64203B, 64198B, 48004C, 48005C, 48006C  Knee: 64004C, 64005B, 64053B, 64055B,64198B, 48004C, 48005C, 48006C  Exclusion: 64003C, 64056B, 64057B, 64200B, 64199B |

Supplementary Table 3. Risk of prosthetic joint infection according to types of dental procedures between patients with and those without antibiotic prophylaxis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group | Case | Event | OR (95% CI) | *P* | HR (95% CI) | *P* |
| Non-Antibiotic |  |  |  |  |  |  |
| Periodontal treatment | 4718 | 9 | Reference |  | Reference |  |
| Non-surgical tooth extraction | 1759 | 3 | 0.89 (0.24-3.31) | 0.96 | 0.90 (0.24-3.33) | 0.88 |
| Surgical tooth extraction | 24 | 0 | Not applicable |  | Not applicable |  |
| Antibiotic |  |  |  |  |  |  |
| Periodontal treatment | 3144 | 6 | 1.00 (0.36-2.81) | 0.96 | 1.01 (0.36-2.82) | 0.99 |
| Non-surgical tooth extraction | 3257 | 7 | 1.13 (0.42-3.03) | 0.95 | 1.14 (0.42-3.06) | 0.80 |
| Surgical tooth extraction | 99 | 0 | Not applicable |  | Not applicable |  |

Figure 1. Flow diagram of subject identification and event definition.



Figure 2. The forest plot illustrated no association between dental treatment and prosthetic joint infection across subgroups.

