Operative procedure codes (OPCS 4.8) that we used to identify knee revision in the Hospital Episode Statistics (HES) registry.

Procedure type 1: W40.0, "Conversion from previous cemented total prosthetic replacement of knee joint"; W40.2, "Conversion to total prosthetic replacement of knee joint using cement"; W40.3, "Revision of total prosthetic replacement of knee joint using cement"; W40.4, "Revision of one component of total prosthetic replacement of knee joint using cement"; W41.0, "Conversion from previous uncemented total prosthetic replacement of knee joint"; W41.2, "Conversion to total prosthetic replacement of knee joint not using cement"; W41.3, "Revision of total prosthetic replacement of knee joint not using cement"; W41.4, "Revision of one component of total prosthetic replacement of knee joint not using cement"; W42.0, "Conversion from previous total prosthetic replacement of knee joint NEC"; W42.2, "Conversion to total prosthetic replacement of knee joint NEC"; W42.3, "Revision of total prosthetic replacement of knee joint NEC"; W42.4, "Attention to total prosthetic replacement of knee joint NEC"; W42.5, "Revision of one component of total prosthetic replacement of knee joint NEC"; W42.6, "Arthrolysis of total prosthetic replacement of knee joint"; W58.0, "Conversion from previous resurfacing arthroplasty of joint"; O18.0, "Conversion from previous hybrid prosthetic replacement of knee joint using cement"; O18.2, "Conversion to hybrid prosthetic replacement of knee joint using cement"; O18.3, "Revision of hybrid prosthetic replacement of knee joint using cement"; O18.4, "Attention to hybrid prosthetic replacement of knee joint using cement".

<u>Procedure type 2</u>: W52.0, "Conversion from previous cemented prosthetic replacement of articulation of bone NEC"; W52.2, "Conversion to prosthetic replacement of articulation of bone using cement NEC"; W52.3, "Revision of prosthetic replacement of articulation of bone

using cement NEC"; W53.0, "Conversion from previous uncemented prosthetic replacement of articulation of bone NEC"; W53.2, "Conversion to prosthetic replacement of articulation of bone not using cement NEC"; W53.3, "Revision of prosthetic replacement of articulation of bone not using cement NEC"; W54.0, "Conversion from previous prosthetic replacement of articulation of bone NEC"; W54.2, "Conversion to prosthetic replacement of articulation of bone NEC"; W54.3, "Revision of prosthetic replacement of articulation of bone NEC"; W54.3, "Revision of prosthetic replacement of articulation of bone NEC"; W54.4, "Attention to prosthetic replacement of articulation of bone NEC"; W55.3, "Conversion to prosthetic interposition arthroplasty of joint"; W56.4, "Conversion to interposition arthroplasty of joint NEC"; W57.4, "Conversion to excision arthroplasty of joint"; W60.3, "Conversion to arthrodesis and extra-articular bone graft NEC"; W61.3, "Conversion to arthrodesis and articular bone graft NEC"; W64.1, "Conversion to arthrodesis and internal fixation NEC"; W64.2, "Conversion to arthrodesis and external fixation NEC".

<u>Site for revision</u>: Z76.5, "Lower end of femur NEC"; Z77.4, "Upper end of tibia NEC"; Z78.7, "Patella"; Z84.4, "Patellofemoral joint"; Z84.5, "Tibiofemoral joint"; Z84.6, "Knee joint".

<u>Procedure type 3</u>: W40.1, "Primary total prosthetic replacement of knee joint using cement"; W40.8, "Other specified total prosthetic replacement of knee joint using cement"; W40.9, "Unspecified total prosthetic replacement of knee joint using cement"; W41.1, "Primary total prosthetic replacement of knee joint not using cement"; W41.8, "Other specified total prosthetic replacement of knee joint not using cement"; W41.9, "Unspecified total prosthetic replacement of knee joint not using cement"; W41.9, "Unspecified total prosthetic replacement of knee joint not using cement"; W42.1, "Primary total prosthetic replacement of knee joint NEC"; W42.8, "Other specified other total prosthetic replacement of knee joint"; W42.9, "Unspecified other total prosthetic replacement of knee joint"; W42.9, "Unspecified other total prosthetic replacement of knee joint"; O18.1, "Primary

hybrid prosthetic replacement of knee joint using cement"; O18.8, "Other specified hybrid prosthetic replacement of knee joint using cement"; O18.9, "Unspecified hybrid prosthetic replacement of knee joint using cement".

<u>Algorithm</u>: One code from procedure type 1 or a combination of one code from procedure type 2 and site for revision were used to identify knee revision. Combination of codes from procedures type 3 and type 1 or procedure type 3, type 2 and site of surgery identified knee revision after a primary knee unicompartmental replacement (UKR).