

Real-World Data (RWD) may provide complimentary evidence for relative effectiveness assessments (REA's) and cost-effectiveness assessments (CEA's) of treatments. This study explores to which extent RWD is incorporated in REA's and CEA's of drugs used to treat metastatic melanoma (MM) by five Health Technology Assessment (HTA) agencies.

## **METHODS:**

Dossiers for MM drugs published between 1 January 2011 and 31 December 2016 were retrieved for HTA agencies in five countries: the United Kingdom (NICE), Scotland (SMC), France (HAS), Germany (IQWiG) and the Netherlands (ZIN). A standardized data-extraction form was used to extract data on RWD mentioned in the assessment and its impact on appraisal (for example, positive, negative, neutral or unknown) for both REA and CEA.

## **RESULTS:**

In total, forty-nine dossiers were retrieved: NICE = 10, SMC = 13, IQWiG = 16, HAS = 8 and ZIN = 2. Nine dossiers (18.4 percent) included RWD in REA's for several parameters: to describe effectiveness (n = 5) and/or the safety (n = 2) of the drug, and/or the prevalence of MM (n = 4). CEA's were included in 25/49 dossiers (IQWiG and HAS did not perform CEA's). Of the twenty-five CEA's, twenty (80 percent) included RWD to extrapolate long-term effectiveness (n = 19), and/or identify costs associated with treatments (n = 7). When RWD was included in REA's (n = 9), its impact on the appraisal was negative (n = 4), neutral (n = 2), unknown (n = 1) or was not discussed in the appraisal (n = 2). When RWD was included in CEA's (n = 11), its impact on the appraisal varied between positive (n = 2), negative (n = 5) and unknown (n = 4).

## **CONCLUSIONS:**

Generally, RWD is more often included in CEA's than REA's (80 percent versus 18.4 percent, respectively). When included, RWD was mostly used to describe the effectiveness of the drug (REA) or to predict long-term effectiveness (CEA). The impact of RWD on the appraisal varied greatly within both REA's and CEA's.

# **VP09 Arthroplasty Registers As A Tool For Health Technology Assessment**

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## **INTRODUCTION:**

Our purpose is to present the potential for health technology assessment that arthroplasty registers may offer.

## **METHODS:**

A revision of the health assessment uses and information collected by arthroplasty registers was made. The information provided from international networks like NORE, ISAR and ICOR was also considered. Arthroplasty registers collect data of patients undergoing joint replacement surgery (mainly hip and knee) along with implant information. They provide longitudinal information useful to assess implant survival (expressed as revision rate and calculated from the primary surgery to implant revision). They also data from the surgical procedure and, more recently, a number of registries incorporate patient reported outcomes (PROMs) information.

## **RESULTS:**

Arthroplasty registers provide information from multiple perspectives:

- (i) Decision-makers and healthcare providers/authorities: the comparison of revision rates by using funnel plots is a useful methodology to benchmark implants and to identify outliers, or models with significantly different revision rate in comparison to their peers. Besides, data available in registers has proven to be useful to define sets of indicators related to safety, effectiveness, efficiency, patient-centered healthcare and perceived health outcomes.

- (ii) Surgeons: Some ongoing initiatives, like ODEP, aiming at providing a benchmark rating for implant survivorship, are gaining interest by professionals promoting an evidence-based clinical practice.
- (iii) Industry: the large amount of data recorded so far may allow obtaining robust information of prosthesis behavior.
- (iv) Patients: there is an increasing number of registers that incorporate PROMs. Moreover, a growing interest to promote patient engagement in arthroplasty decision making has been observed.

**CONCLUSIONS:**

Long-standing arthroplasty registries have untapped potential. Beyond the assessment of implant survival, they have been consolidated as a useful tool for decision-makers, professionals, and patients. Next steps will be to promote joint analysis of national/regional registries to explore uncommon practices or new medical devices, and also to adapt to future regulations on implant traceability.

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## VP13 Relation Between Magnetic Resonance Imaging Use And Hip Or Knee Replacements In The Organisation For Economic Co-operation And Development

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**INTRODUCTION:**

A high degree of geographic variation in the use of medical interventions is usually considered as a sign for inappropriate use. However, the plain geographic variation has the disadvantage that the variation might also be appropriate due to differences in the regions. Hence, we conducted a more comprehensive analysis on Magnetic Resonance Imaging (MRI) use and the

relationship to hip or knee replacements. We evaluated whether there is evidence that guideline recommendations regarding hip replacements and total knee replacements are being followed. Additionally, we tried to assess whether the use of MRI is related to subsequent interventions.

**METHODS:**

We extracted recommendations of the American College of Radiology (ACR) on the use of MRI relevant to hip replacements and total knee replacements. Subsequently, we created three hypotheses on MRI for hip or total knee replacements on what to expect from the data when these recommendations are being followed.

For each hypothesis we calculated a multiple linear regression to analyze Organisation for Economic Co-operation and Development (OECD) data. This was necessary to control for other important variables that might have had an influence on the number of interventions despite the MRI use (for example, healthcare spending, or Computed Tomography (CT) use).

**RESULTS:**

The initial results on (primary) hip replacement and secondary hip replacement were heavily influenced by outliers. After the exclusion of the outliers (Turkey and Belgium), (primary) hip replacements were related to MRI use but not secondary hip replacements. The results on MRI and (primary) hip replacement suggest that the relationship between MRI and hip replacement in Turkey is lower than in the other OECD nations.

Regarding knee replacements, we detected a relationship between the MRI use and total knee replacement. An increase of 10 MRI examinations per 1,000 population would, according to our model, result in 9.8 additional total knee replacements per 100,000 population.

**CONCLUSIONS:**

The relationship of MRI and (primary) hip replacement hints to inappropriate use of MRI in Turkey since the data shows a substantial deviation in the relationship