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Accuracy of hospital discharge data in reporting knee arthroplasty procedures: A study of the Italian Arthroplasty Registry

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Introduction

The Italian Arthroplasty Registry (RIAP) data collection flow uses Hospital Discharge Data (HDD) integrated by an additional Minimum Data Set (MDS) including information referring to the procedure and the implanted devices. HDD are mandatory and routinely collected for all the admissions performed by public and private structures. Extending our previous validity study of HDD's reporting of hip arthroplasty procedures, the current study aims at testing the validity of HDD in reporting procedure type for *knee* arthroplasties using the homologous information collected by RIAP in MDS as gold standard.

Materials and Methods

Each HDD record includes eleven fields related to the procedures (1 principal, 10 secondary). All knee arthroplasties (primary and revision) collected by RIAP in 2019 and passing quality check were considered for analysis (n=26,297). For each record, the procedure collected in MDS was compared with the ICD9-codes registered in all eleven HDD procedures' fields.

Results

Preliminary results show high accuracy of HDD in reporting knee procedures, with reference to the corresponding MDS value. Specifically, HDD correctly reported a presence of knee-related procedure in 100% of the tested records. On a more detailed level, we observed 99.2% and 94.8% accuracy of HDD in reporting primary and revision procedures, respectively.

Discussion/Conclusion

Our analysis indicates that HDD data on knee replacements is highly accurate, at least on a macro level (knee procedures in general). This encourages further utilization of HDD in epidemiological studies. On the other hand, more detailed analyses are required to verify the micro-level accuracy of HDD in reporting knee arthroplasty procedures.

<u>*Notes*</u>