

Introduction. With the fast speed of aging, burden from non-communicable diseases (NCDs) is increasing in China, and will continue to increase to 2020 and beyond. This study aims to estimate the potential gains in health-adjusted life expectancy (HALE) after hypothetical elimination of four NCDs among Chinese elderly from 1990 to 2016, including cardiovascular diseases (CVD), cancers, chronic respiratory diseases (CRD) and diabetes mellitus (DM).

Methods. Based on data from Global Burden of Disease 2016, we generated life table by gender using Sullivan method to calculate HALE. Disease-deleted method was used to calculate cause-elimination HALE, after hypothetical elimination of specific diseases. This method could combine the impact of mortality and morbidity, which are particularly useful for estimating the impact of the disease and setting priorities for health planning to get ready for the new challenges in upcoming decade.

Results. From 1990 to 2016, HALE increased for all age groups. After hypothetically eliminating the four main NCDs, potential gain in HALE by CVD, DM and cancers increased, while CRD decreased from 1990 to 2016 for both genders. Among four main NCDs, potential gain in HALE after eliminating CVD was largest and increased most for both genders. Although elimination of DM led to the smallest gain in HALE, the increasing speed of gain in HALE by DM was faster than that by CVD and cancers from 1990 to 2016.

Conclusions. This study highlights the potential gains in HALE of NCDs among Chinese elderly from 1990 to 2016. HALE of Chinese elderly could further increase from the reduction of NCDs. Control measures and targeted prevention should be carried out to get ready for the new decade.

PP70 Identification Of Prostheses With Worse Than Expected Outcomes

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Introduction. Monitoring the effectiveness of knee and hip arthroplasties could be useful at the clinical, economic, and patient levels. In Catalonia, there is currently no systematic monitoring of the different prostheses available. The aims of this study were to propose an approach for the systematic identification of knee and hip prostheses with the highest revision rates, and to identify those with the poorest outcomes.

Methods. Data recorded from January 2005 to December 2016 were considered from 53 out of the 61 public hospitals in Catalonia included in the Catalan Arthroplasty Register (RACat). Specific prostheses were classified by joint, type, fixation, and, in total hip prostheses, the bearing surface. Prostheses with the worst outcomes were identified using a three-step approach, based on previous literature: (i) screening using Poisson models; (ii) comparison of prostheses using adjusted Cox models; and (iii) consensus-based

review by a panel of orthopedic surgeons to detect possible sources of bias. After this process, selected prostheses were provisionally labeled as having the poorest outcomes. This process will be repeated periodically within the RACat to definitively classify the prostheses.

Results. After first two steps, ten knee prostheses and eight hip prostheses were identified. After the panel discussion (third step), one knee and one hip prosthesis were excluded from the final list. The knee prosthesis was excluded because it was a uni-compartmental implant, while the hip prosthesis was excluded because it was a monoblock implant. Finally, nine knee prostheses and seven hip prostheses were provisionally identified as having the worst results relative to other available prostheses. These results await confirmation in subsequent analyses.

Conclusions. This study contributed to the current need to identify hip and knee prostheses whose outcomes might be worse than expected. This identification could have an impact at the patient, surgeon, industry, and stakeholder levels.

PP72 Using INTEGRATE-HTA On The Example Of Rasterstereography For Scoliosis

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Introduction. Full health technology assessment (HTA) reports discuss not only the safety and efficacy of a technology, but also the economic, ethical, legal, socio-cultural, and organizational aspects. INTEGRATE-HTA is a completed European Union project that developed concepts and methods for a patient-centered, integrated assessment of complex technologies. Technologies can be considered complex if they are characterized by a large number of interacting components, a wide variability of outcomes, or a high degree of flexibility. In contrast to the usual linear approach of addressing individual HTA domains separately, the INTEGRATE-HTA methodology is based on the assumption that different aspects of the domains interact. From the very beginning, these interactions are captured systematically using various tools. Continuous reflection and compaction of these relations can lead to an extended perspective on a technology. As a result, complexity and mechanisms of action open up, helping to channel public discussion and implementation. We investigated whether using the INTEGRATE-HTA methodology improves the understanding of individual domains and their interactions.

Methods. According to the methodology, an initial logic model for rasterstereography in patients with scoliosis was developed and successively expanded. A synoptic table, showing multiple maps of individual aspects to domains, and a complexity checklist were used. In addition, harvest plots were created and the socio-cultural impact of the disease was highlighted as a semantic complex. A final logic model and an interaction figure were established to initiate discussion.

Results. Having been classified as slightly complex in the beginning, rasterstereography turned out to be highly complex after using a variety of tools and a final graphical representation; the multiple mapping of individual aspects to domains resulted in a high density of interactions.