

the electronic journal Diabetes Care and gray literature. Several combinations of terms were used, including disease terms, interventions and type of study. The results evaluated were: glycosylated hemoglobin; weight gain; occurrence of severe hypoglycemia; total insulin dose; and, fasting capillary glycemia. Methodological quality was assessed using the Newcastle scale. The meta-analyses were performed in Review Manager® 5.2 software using a random effects model. Protocol number CRD42017054925 (International Prospective Register of Ongoing Systematic Reviews).

RESULTS:

A total of 705 publications, eight cohort studies were included. The quality of included studies was classified as high. In the meta-analysis, the results for episodes of severe hypoglycemia ($p = 0.002$), measurements of fasting capillary glycemia ($p = 0.01$), and weight gain ($p = 0.001$) were favorable for detemir. The glycosylated hemoglobin endpoint ($p = 0.49$, heterogeneity = 89 percent) revealed high heterogeneity and no statistically significant difference between groups, showing no difference between the interventions for glycemic control.

CONCLUSIONS:

Although some results are favorable to detemir, it was not possible to identify significant differences in effectiveness and safety between the two analogues evaluated, requiring new long term studies and better quality of methodological studies.

PP46 When Composite Measures Or Indices Fail: Data Processing Lessons

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INTRODUCTION:

Index mining is a new discipline that aims to search for the composite measures or indices most relevant to the contexts or outcomes. After reviewing three frailty indices and principal component (PC)-based indices, we hereby show certain occasions that can lead to ineffective indices, which consist of bias or fail to represent the theories.

METHODS:

We reproduced and reviewed the three frailty indices and the 134,689 PC (principal component) -based indices from previous publications. The impact of aggregating the input variables on the final indices was analyzed using forward stepwise regression.

RESULTS:

Several methods to combine the input variables were related to ineffective projection of information onto the indices. The most common causes leading to ineffective summation of input variables were shown in three examples involving different types of input variables, which were positively or negatively correlated or uncorrelated to the outcome. Ineffective indices were created often because of the summation of redundant information or uncorrelated variables.

CONCLUSIONS:

The creation of ineffective indices can be avoided if the relationships between input variables and outcomes are properly scrutinized. The creation of composite measures and indices is still a discipline under active development. The three examples we identified are the mistakes that may be repeated unintentionally and need to be addressed with explicit rules. A reporting guide for the creation of composite measures has been proposed. A proper review of index objectives, data characteristics, and data limitations before creating composite measures or indices is recommended.

PP47 Defining The Needs And Preferences Of Patients With Dry Eye Disease

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INTRODUCTION:

Dry eye disease (DED) is a common condition that significantly impacts patients' quality of life. Previous studies have explored the impact of DED on patients' lives qualitatively; however, patients' preference structures have not been thoroughly explored quantitatively.