

0.68 cumulative HF hospitalizations on average. In total, 44% of patients were hospitalized at least once for HF, and 33% experienced cardiovascular death. In addition, patients experienced an average of 0.24 hyperkalemia events and 0.14 composite renal endpoint events. From age 72, the model estimated 7.5 additional life years, which was most sensitive to non-cardiovascular mortality, cardiovascular mortality, and mortality risk associated with HF hospitalizations in one-way sensitivity analysis. **Conclusions:** HFpEF is associated with high rates of HF hospitalization and risk of cardiovascular death. Even with newer treatments in HFpEF, there is still significant unmet clinical need. Continuing to optimize care and treatment for HFpEF may reduce the clinical burden for this highly prevalent condition and improve population health.

#### CO42

##### 4P CARE AND ADJUSTING THERAPY FOR HYPOTHYROIDISM – A POTENTIAL TO REDUCE COSTS OF HEALTHCARE AND LOSS OF PRODUCTIVITY

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**Objectives:** Hypothyroidism affects 25 million people in the US, causing health complications and increased healthcare utilization for many patients despite well-established hormone replacement therapy. A significant effort goes into understanding how personalized care for chronic patients can improve health outcomes, and reduce associated healthcare costs. We focused on two complications frequently affecting hypothyroid patients: (I) fatigue – known to increase workplace absenteeism and the economic burden on healthcare payers; (II) excessive body weight – known to increase the risk of health complications and total cost of care. Our research explored the impact of fatigue and excess weight in hypothyroid patients. **Methods:** We used the Paloma Health virtual solution to deliver comprehensive thyroid care: consultations with clinicians; condition management tools; lifestyle change courses; and a patient community. We followed 127 patients for 3 months to assess the fatigue. BMI was calculated for 254 patients at 9-15 months after starting care. We used a mixed methods approach: (I) to determine fatigue intensity, we used PRO on energy and tiredness, with responses recorded on a 5-point intensity scale at the time of the treatment start (t0) and at 3-month later (t1); (II) data on BMI were extracted from the EHR. Finally, we used current published information on healthcare and productivity costs of fatigue and high body mass index. **Results:** We observed a significant improvement in fatigue for 70.51% of the patients; and BMI reduction significantly reduced for 21.6% of patients. Fatigue costs ~\$1400 per employee/year in absenteeism, diminished productivity, and healthcare costs. A 5% increase in BMI costs healthcare ~ \$556 per person. **Conclusions:** Both fatigue and high BMI contribute to increased healthcare expenditures, and are prevalent in hypothyroidism. Taking in consideration the prevalence of hypothyroidism in the general population, reducing BMI and fatigue can lead to significant health expenditures savings.



#### CO43

##### PROJECTING CARDIOVASCULAR BENEFITS ASSOCIATED WITH TIRZEPATIDE'S EFFECTS ON CARDIOVASCULAR RISK FACTORS IN PATIENTS WITH TYPE 2 DIABETES IN FRANCE: A SIMULATION STUDY

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**Objectives:** Tirzepatide is a GIP/GLP-1 receptor agonist approved for the treatment of type 2 diabetes (T2D) that is associated with superior reductions in glycated hemoglobin and body weight versus a range of existing therapies. The present analysis aimed to model the benefits on cardiovascular (CV) outcomes associated with tirzepatide from demonstrated improvements in CV risk factors (RF) versus no change in RF, with a focus on major adverse cardiovascular events (MACE) as the primary outcome. **Methods:** CV outcomes associated with improvements in RF with tirzepatide 5, 10 and 15 mg versus no change were projected over 5 years. SURPASS-2 was used to provide cohort characteristics (CV event history in 8% of patients) and the effects of tirzepatide on glycated hemoglobin, blood pressure, serum lipids and body mass index. In the base case, the risk of diabetes-related CV complications was evaluated using risk equations from the BRAVO Model. In a supporting scenario, the PRIME T2D Model (model averaging) was used to evaluate risk of complications. Progressions of RF over time were modeled using equations from the UKPDS OM2 (conservative scenario) or were assumed to remain constant from years 1 to 5 (optimistic scenario). **Results:** Using BRAVO Model risk equations, improvements in RF associated with tirzepatide 5, 10 and 15 mg resulted in mean risk ratios for 3-point MACE of 0.90, 0.89, and 0.88 versus no change, respectively, in the conservative scenario, and 0.82, 0.80, and 0.80, respectively, in the optimistic scenario. Comparable risk ratios for MACE were projected using the PRIME T2D Model approach. **Conclusions:** Improvements in conventional CV RF associated with tirzepatide were projected to reduce the risk of CV complications over 5 years versus no change in several different scenarios. Simulations based on conventional RF may not fully predict tirzepatide's overall effect on CV outcomes.



#### CO45

##### A SYSTEMATIC REVIEW OF QUALITY OF LIFE AND GASTROESOPHAGEAL REFLUX DISEASE

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**Objectives:** Gastroesophageal reflux disease (GERD) is a common condition associated with functional impairment and loss of productivity. Management and the patient perspective may be better understood when considering the quality of life patients experience. The purpose of this study was to perform a systematic review involving GERD and quality of life parameters. **Methods:** A literature search of MEDLINE, Embase and the Cochrane Library was performed for randomized controlled trials, case-control, and cohort studies published between 2013 and 2023. Eligible criteria included adult GERD patients with quality of life data from a disease-specific or generic assessment tool. Narrative synthesis of pre- and post-procedural total scores were included in data analysis. **Results:** Eight randomized controlled trials and 34 observational studies were included. Of these, only one publication used more than one quality of life instrument. The mean GERD Health-Related Quality of Life (GERD-HRQL) scores ranged from 13.3 to 37.1 at baseline, which decreased to 1.3 to 31.6 after treatment. Furthermore, the mean Gastrointestinal Quality of Life Index (GIQLI) ranged from 72.0 to 96.3 at baseline, which increased to 94.8 to 119.8 after treatment. GERD-HRQL was used in 35 of the studies and GIQLI was used in four studies. Other than the use of the Reflux Symptom Index (RSI) (n = 3), evaluation of the quality of life among GERD patients only included EQ-5D, Psychological General Well-Being (PGWB), SF-36, and Gastroesophageal Reflux Symptom Score (GERSS) in individual studies. The results of these assessments indicated post-treatment improvement. **Conclusions:** Patients with GERD have poor quality of life and active treatment seems to have a beneficial influence on quality of life, considering the pre-post analysis of GERD-HRQL and GIQLI scores. Despite this observation, the range of total scores was broad irrespective of the measurement point. Generic quality of life instruments are not often used.



#### CO48

##### A SYSTEMATIC REVIEW OF EFFECTIVENESS AND SAFETY OF ACUPUNCTURE ON SUICIDAL BEHAVIOR

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**Objectives:** In situations where death by suicide is a major global issue and effective prevention and management approaches are lacking, acupuncture improves some risk factors for suicide, including depression, substance abuse, and post-traumatic stress disorder and has been used for a long time in clinical settings. This review aimed to investigate the effectiveness and safety of acupuncture for suicidal behaviors. **Methods:** Fourteen electronic databases were searched for studies published up to September 7, 2022. Original interventional studies of acupuncture in suicide prevention were included. The primary outcome was the validated measure of suicidal ideation. The risk of bias in the included studies was assessed using an appropriate assessment tool according to the study design. For example, the risk of bias tool-2 tool developed by the Cochrane Group was used to assess the quality of included randomized controlled trials. Due to the heterogeneity of the included studies, only qualitative analyses were conducted. **Results:** Total eight studies on manual acupuncture (50%), electroacupuncture (25%), and acupressure (25%) were included. In particular, three studies (37.5%) used the National Acupuncture Detoxification Association (NADA) protocol to stimulate the bilateral Sympathetic, Shenmen, Kidney, Liver, and Lung auricular points. Acupuncture was effective in direct and indirect outcomes related to suicidal behavior, not only for participants with suicidal behavior and/or self-harm but also for those with other conditions, including depression. However, the methodological quality of the included studies was not optimal. **Conclusions:** The included studies found that acupuncture, including the NADA protocol, may help reduce the risk of suicidal behavior and/or self-harm in clinical or non-clinical populations. Interestingly, there has been a case where self-administered acupuncture has been used as an alternative behavior to self-harm. However, owing to the low methodological quality and clinical heterogeneity of the included studies, the findings of this review cannot lead to firm conclusions.



#### CO49

##### A MATCHING-ADJUSTED INDIRECT COMPARISON OF THE EFFICACY OF BIMEKIZUMAB AND IXEKIZUMAB AT 52 WEEKS FOR THE TREATMENT OF RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS

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**Objectives:** Bimekizumab, a monoclonal IgG1 antibody, selectively inhibits IL-17F in addition to IL-17A. A previously presented network meta-analysis established similar relative efficacy for ASAS outcomes at Week (Wk)16 with subcutaneous bimekizumab 160mg every four weeks (Q4W) versus subcutaneous ixekizumab 80mg Q4W,

