

**PTH-113 CHANGE IN AWARENESS OF GLUTEN RELATED DISORDERS AMONGST CHEFS AND THE GENERAL PUBLIC IN THE UNITED KINGDOM: A 10 YEAR FOLLOW-ON STUDY**

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**Introduction** For individuals with gluten-related disorders (GRD) eating out has traditionally been difficult, and socially impacting, due to concern over the lack of public awareness regarding GRD and a gluten-free diet (GFD). However, the recent rise in media coverage highlighting these conditions may have altered knowledge amongst community members.

**Aims** To assess whether there has been a change in awareness of GRD, and a GFD, amongst the general public and chefs over a ten year period.

**Methods** A face-to-face questionnaire survey about coeliac disease (CD) and gluten sensitivity (GS) was performed on the general public and chefs based in Sheffield, United Kingdom. The assessment was first conducted in 2003 and repeated in 2013. Chefs were also asked about their workplace (takeaway or restaurant) and whether or not they had formal qualifications. Additional questions for the 2013 cohort included correct recognition of the cross-grain symbol to identify gluten-free products and whether they displayed a notice/sign for gluten-free products.

**Results** *Public survey:* 513 public members in year 2003 (mean age 49.2, 62% female) were compared to 575 public members in year 2013 (mean age 37.8, 57% female). Adjusting for age and sex, there was a significant rise in the awareness of GRD from the years 2003 to 2013; CD (44.2 to 74.4%, OR 3.94 [CI: 2.99–5.19]) and GS (58.2 to 89%, OR 7.09 [CI: 5–9.98]),  $p$  value < 0.0001.

*Chef Survey:* 322 chefs in year 2003 (mean age 37.6, 15.2% female, qualified 51.2%, restaurant chefs 50%) were compared to 265 chefs in year 2013 (mean age 27.1, 38.1% female, qualified 93.2%, restaurant chefs 83%),  $p$  < 0.0001. Adjusting for age, sex, workplace and qualifications, there was a significant rise in the awareness of GRD from the years 2003 to 2013; CD (17.1 to 78.1%, OR 12.5 [CI: 7.9–19.6]) and GS (9.3 to 87.5%, OR 65.7 CI: [35.4–122]),  $p$  < 0.001.

Whereas in 2003 the public were significantly more aware of GRD than chefs, by 2013 there was a similar prevalence of awareness in both groups. In addition, the correct recognition of the gluten-free symbol was 44% for the public and 40% for chefs ( $p$  0.28). Furthermore, in the year 2013, 41% of restaurants and 27% of takeaways displayed selling gluten-free products ( $p$  0.07).

**Conclusion** There has been a dramatic rise in both the public and chefs awareness of GRD. This suggests that individuals with GRD can take greater confidence discussing and ordering a GFD whilst eating out.

**Disclosure of Interest** None Declared.

**PTH-114 ASSESSING OSTEOPOROSIS IN COELIAC DISEASE: IS THE WHO FRAX TOOL A GOOD SCREENER?**

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**Introduction** Osteoporosis is a well-recognised complication of intestinal malabsorption related to Coeliac Disease. It is diagnosed by dual energy x-ray absorptiometry (DXA). While referral for DXA scanning in other conditions is widely based on 10-year fracture risk calculated by the FRAX tool designed by the WHO, the 2007 BSG guidelines advise screening patients with a higher risk of osteoporosis with a DXA scan, irrespective of 10-year fracture risk as calculated by FRAX.

**Methods** **Aim:** We aimed to establish whether the FRAX and linked NOGG tool was a good screener to determine the need for DXA scan in patients with coeliac disease who are at risk of osteoporosis.

**Methods:** We used the Hospital Nuclear Medicine database to retrieve the records of 50 patients with a diagnosis of coeliac disease who had been investigated with a DXA scan to assess osteoporosis. Using their medical records, we then calculated their FRAX score for risk of major osteoporotic fracture and hip fracture, and the corresponding NOGG guidance. A 10-year fracture risk of 10% or the linked NOGG guidance was considered to be significant to have a DXA scan.

**Results** Of the 50 patients with Coeliac disease who had DXA scans, 10 had osteoporosis and 40 had either a normal result or osteopaenia. Of these 10 cases, 9 would have also been referred on the basis of a calculated FRAX score and only one case would have been falsely reassured. Of the 40 cases with either a normal DXA scan or osteopaenia, 31 would have been referred for DXA on the basis of the FRAX score, resulting in an unnecessary test. We concluded that a positive FRAX score does not accurately predict osteoporosis in Coeliac disease. The positive predictive value of the FRAX tool to detect osteoporosis in Coeliac disease is low at 22.5%; however the negative predictive value is high, 90%.

**Conclusion** The use of FRAX to identify patients with Coeliac disease at risk of osteoporosis has a high negative predictive value. It therefore has merit as a screening tool but has little value as a diagnostic test. Although the sample size was too small to show statistical significance, we suggest that FRAX tool could potentially be adopted as a screener in the context of celiac disease to prevent unnecessary DXA scanning. A osteoporosis risk of <10% or a NOGG guidance of reassurance is likely to be associated with a normal DXA scan. Further large studies are needed to validate this hypothesis and also to determine cost benefit of a FRAX driven strategy for osteoporosis in Coeliac Disease.

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**PTH-115 PREVALENCE RATES AND RISK FACTORS FOR OSTEOPOROSIS IN PATIENTS WITH COELIAC DISEASE**

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**Introduction** The optimal timing for performing a baseline bone mineral density (BMD) in Coeliac disease (CD) patients is controversial. European guidelines published in 1998 recommended a baseline BMD at diagnosis. One study in 2005 demonstrated a low incidence of BMD abnormalities amongst