patient. For all CD patients a household control was approached. Healthy volunteers stratified by *NOD2* genotype were recruited from the Cambridge Bioresource.

Faecal samples were frozen within 24h of collection. DNA was extracted using the FASTDNA Spin Kit for Soil. The V1–3 region of the 16S rRNA gene was amplified and amplicons were sequenced with Illumina MiSeq. Sequence data was processed in Mothur. Calprotectin was measured in all samples by ELISA.

Results 97/107 individuals were included in the primary analysis (40 CD patients [58% *NOD2* mutant], 32 bioresource volunteers [50% *NOD2* mutant], 25 household controls). The minimum reads per sample were 3953, mean 21216.

There was a significant reduction in diversity (inverse Simpson index), *Ruminococcaceae* including *Faecalibacteria* and increase in *Enterobacteriaceae* in samples from CD patients vs. controls (all p < 0.0001). There were no differences in diversity or relative abundance of any bacterial families when stratified by *NOD2* status, either within the CD patients or bioresource controls.

Conclusion This study confirms previously identified shifts in gut microbiota in CD patients. However, no significant differences in gut microbiota were seen when analysed by *NOD2* status. This may be a reflection of sample size or of studying gut bacteria in stool as opposed to the mucosally-associated compartment. We are presently recruiting additional cases and controls to increase study power for additional analysis.

Disclosure of Interest None Declared.

DISTINGUISHING BETWEEN POSSIBLE MENTAL HEALTH DISORDERS AND PSYCHOLOGICAL DISTRESS BY SCREENING FOR ACCEPTANCE AND ADJUSTMENT ISSUES

[1]N Swart*, [1]D Wellsted, [1]K Friedli, [2]G Wood, [3]T Price, [3]K Lithgo, [3]M Johnson. [1]*Centre for Lifespan and Chronic Illness Research, University of Hertfordshire, Hatfield, UK;* [2]*Clinical Health Psychology Service, South Essex Partnership Trust, Bedford, UK;* [3]*Gastroenterology, Luton and Dunstable University Hospital, Luton, UK*

Introduction A recent study indicated that 30% of IBD patients suffer from psychological distress, and that poor acceptance and adjustment is a predictor of distress (Swart *et al*. 2013). Psychological distress encompasses the symptoms of depression, anxiety, emotional difficulty and poor adjustment, but is not the same as mental illnesses such as Major Depressive Disorder or Generalised Anxiety Disorder. Early indications suggest IBD patients are particularly susceptible to adjustment disorders, which may be the cause of much distress.

Methods As part of a service evaluation, 2400 IBD patients in the Luton and Dunstable catchment area were invited to participate in a web-based psychological and quality of life assessment. The "Acceptance and Action Questionnaire" (AAQ-II) was used for acceptance/adjustment, as well as the "Patient Health Questionnaire" (PHQ-9) for depression, and the "Generalised Anxiety Disorder Questionnaire" (GAD-7) for anxiety.

Results 360 patients completed the assessment (45% male, mean age = 53; SD = 17). 31% of patients scored highly on the PHQ-9; 27% of patients scored highly on the GAD-7; and 27% of patients also scored highly on the AAQ-II. Linear regression, after taking account of relevant clinical factors, showed that poor acceptance was associated with high depression and anxiety. Cross tabulation indicated 20% of patients showed high depression and poor acceptance, and 11% of patients showed high depression and good acceptance/adjustment. Anxiety sees a similar picture with 18% high anxiety and poor acceptance/adjustment, and 8% high anxiety and good acceptance/adjustment.

Conclusion The self-report prevalence rates of depression and anxiety we found are typical of chronic illness poplations, however the cross-tabulation results suggest a more complex picture. While further research is needed, theory suggests those 20% are struggling with depression which stems from their acceptance and adjustment issues. Similarly, those 11% with high depression and good acceptance are likely to have a mental health disorder like Major Depressive Disorder – 11% is a similar prevalence rate found when using diagnostic interviews. These groups of patients would likely benefit most from different treatment paths. Specifically, severe depressive symptoms stemming from acceptance/adjustment issues would likely benefit more from Acceptance and Commitment Therapy than standard procedures for treatment of depression with antidepressants and Cognitive Behavioural Therapy.

REFERENCE

Swart N, Wellsted D, Lithgo K, Price T, Johnson MW. PWE-110 acceptance and adjustment in a district general cohort of inflammatory bowel disease patients: findings and implications. *Gut* 2013;62:A175–A176

Disclosure of Interest None Declared.

NATIONWIDE LINKAGE ANALYSIS IN SCOTLAND – HAS MORTALITY FOR HOSPITAL ADMISSION FOR CROHN'S DISEASE CHANGED IN THE 21ST CENTURY?

[1]NT Ventham*, [1]NA Kennedy, [2]A Duffy, [2]DN Clark, [3]AM Crowe, [4]A Knight, [5]JR Nicholls, [1]J Satsangi. [1]*Molecular Medicine Centre, University of Edinburgh, Edinburgh, UK;* [2]*eData Research and Innovation Service (EDRIS), Information Services Division of NHS Scotland, Edinburgh, UK;* [3]*Corvus Ltd, Buxted, UK;* [4]*Evicom, Teddington, UK;* [5]*St Mark's Hospital, London, UK*

Introduction Data from patients hospitalised with Crohn's disease (CD) between 1998 and 2000 in Scotland indicate higher 3-year mortality rates than the general population. [1] We now have the opportunity of comparing these data with contemporary mortality data in patients admitted in Scotland between 2007–2009. We hypothesised key alterations in management of CD over the last decade may have reduced mortality.

Methods The Scottish Morbidity Records and linked datasets were used to assess 3-year crude mortality, standardised mortality ratio (SMR) and multivariate analyses of factors associated with 3-year mortality. The 3-year mortality was determined after four admission types: surgery-elective or emergency; medical-elective or emergency. Age-standardised mortality rates (ASR) were used to compare mortality rates between periods.

Results The number of patients hospitalised for 4 or more days with CD was 1460 [Period 1] to 1565 [Period 2] (15.6 to 14.5 per 100,000 Scottish population per year). There was no change in the crude or adjusted 3-year mortality rate between study periods (crude 9.0% to 9.1%, adjusted OR = 0.87 CI: 0.65–1.17; p = 0.355). In subgroup analysis, the adjusted 3-year mortality increased following elective surgery (OR 13.5, CI: 1.66 – 109.99) and decreased following emergency medical admission (OR = 0.68, CI: 0.47–0.97).

The directly age-standardised mortality rates (ASR) per 10,000 person years were unchanged between study periods ([Period 1 ASR 299, CI: 251–348][Period 2 ASR 281, CI: 233–328]).