that were more abundant in IBD than controls (propan-1-ol and phenol) returned to levels similar to controls following treatment (figure 1).

Within IBD, the subtype (CD versus colitis (UC and IBD-unclassified)) described a small amount of variation (3%, p=0.006), with three faecal VOCs (6-methylhept-5-en-2-one; benzaldehyde; 4-methylphenol) significantly different in abundance between CD and colitis (t-test, p<0.05).

Conclusion/Interpretation Characterisation of faecal VOCs may advance the understanding of the pathogenesis of IBD, disease sub-types and response to treatment.

P86 PERMANENT STOMA FORMATION IN CROHN'S DISEASE IS ASSOCIATED WITH INCREASED RATES OF ANTIDEPRESSANT USE

[1,2,3]Jonathan Blackwell*, [2]Prof Sonia Saxena, [1,2,3]Nishani Jayasooriya, [4]Christopher Alexakis, [6]Matthew Hotopf, [1,3]Richard Pollok. *[1]St George's University of London, UK; [2]Imperial College London, UK; [3]St George's Hospitals NHS Foundation Trust, Dept Gastroenterology, London, UK; [4]Royal Surrey Hospital, Guildford, UK; [5]University College London, UK; [6]Institute of Psychiatry Psychology and Neuroscience, King's College London, UK*

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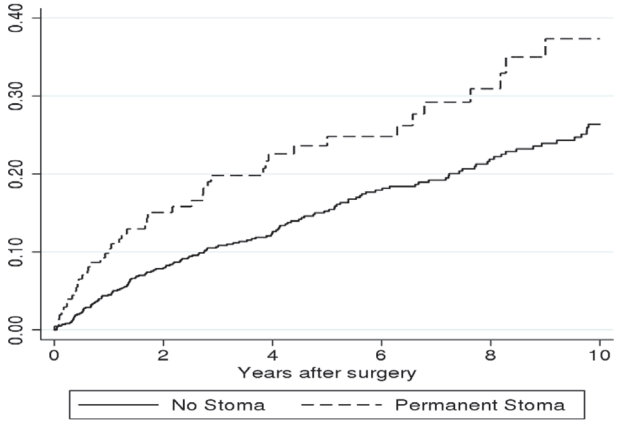
Introduction 50% of patients with Crohn's Disease (CD) will require surgery within the first 10 years after being diagnosed. The impact of having a temporary or permanent stoma on mental health in IBD is unknown.

Aim To examine the impact of intestinal surgery and stoma formation on antidepressant medication (ADM) use.

Methods Using the Clinical Practice Research Datalink, a nationally representative research database, we identified patients with CD who underwent their first intestinal surgery between 1998–2018. We identified all prescriptions for the 7 most commonly prescribed antidepressant medications: escitalopram, sertraline, citalopram, fluoxetine, paroxetine, venlafaxine, and mirtazapine. Tricyclic antidepressants were excluded since we have previously found they are rarely used for mood disorders and given at low dose for other conditions. Patients were excluded if they had a prescription for an ADM in the 6 months before surgery. Those undergoing intestinal surgery were stratified into three patient groups: without a stoma, temporary stoma, and permanent stoma. We used survival analysis to generate Kaplan-Meier curves to estimate the risk of ADM use in the 10 years after intestinal surgery. We used multiple Cox regression to identify risk factors for ADM use after intestinal surgery. We adjusted for the following covariates within the regression model: sex, age at surgery, smoking status, socio-economic status (index of multiple deprivation) and early surgery within the first year of diagnosis.



Abstract P86 Figure 1 Risk of antidepressant medication use after first intestinal surgery stratified by stoma status

Results We identified 1,367 cases of CD undergoing their first intestinal surgery. 71% did not have a stoma (n=974), 14% had a temporary stoma (n=190), and 15% received a permanent stoma (n=203). The 10-year risk of ADM use in each group was 26.4%, 33.4% and 37.3% respectively. Patients with a permanent stoma were 67% more likely to require an ADM than patients undergoing intestinal surgery without a stoma (HR 1.67, 95% CI 1.15–2.42, **Abstract P86 figure 1**). Patients with a temporary stoma had a similar risk of requiring an ADM to patients undergoing intestinal surgery without stoma formation (HR 1.18, 95% CI 0.82–1.68).

Conclusion Permanent stoma formation is associated with significantly increased ADM use after intestinal surgery and is like to be associated with increased anxiety and depression. More research to understand how having a stoma impacts on mental health is warranted.

P87 THE IBD REGISTRY AS A PLATFORM FOR STEROID THERAPY AUDIT: TIME TRENDS IN TREATMENT DURATION

[1]Mustafa Shawihdi*, [2]Sarah Miles, [2]Liz Dobson, [2,3]Fraser Cummings, [2,4]Stuart Bloom, [2]Stephen Grainger, [1,2,5]Keith Bodger. *[1]University Of Liverpool, Liverpool, UK; [2]UK IBD Registry, UK; [3]University Hospitals Southampton, Southampton, UK; [4]University College London Hospital, London, UK; [5]Aintree University Hospital, UK*

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Introduction Oral corticosteroids continue to play a key role in inducing remission in inflammatory bowel disease (IBD) but are not effective as maintenance agents. Avoiding prolonged courses of treatment is an important strategy to minimise side effects. The UK IBD Registry has established an infrastructure capable of recording prescribing at point-of-care using a range of different local systems and software, including direct capture from local operational records. We investigated the feasibility of extracting data to undertake audit of steroid prescribing for hospitals participating in the Registry.

Methods Data submitted to the UK IBD Registry were analysed over three consecutive fiscal years (2016/17, 2017/18 and 2018/19). All prescriptions for oral steroids (prednisolone or budesonide) with a record of both a start and stop date were extracted and linked to patient characteristics. We compared the mean duration of steroid courses initiated in each year and the proportion lasting eight weeks or less.

Results There were 2,156 prescriptions (prednisolone 83%; budesonide 17%) with a start and stop date, relating to 1,591 patients treated at 42 hospitals. Three quarters (77.4%) of cases had a single steroid prescription recorded over the three year time period (5.8% had >2). Results are summarised in the table 1. There was a year-on-year reduction in the mean duration of recorded steroid courses from 13.0 to 8.4 weeks (p<0.01, ANOVA).

Conclusion IBD teams participating in the UK IBD Registry have achieved a reduction in the duration of steroid treatment courses, suggesting progress in efforts to avoid prolonged

Abstract P87 Table 1

	2016/17		2017/18		2018/19	
Prescriptions	666		883		607	
1. Prednisolone	519	77.9%	749	84.8%	521	85.8%
- Budesonide**	147	22.1%	134	15.2%	86	14.2%
Age, mean (SD)	40	19	39	19	39	20
Gender						
Male, n (%)	360	54.1%	470	53.2%	325	53.5%
Diagnosis, n (%)						
- Crohn's disease	315	47.3%	362	41.0%	237	39.0%
- IBD-U	43	6.5%	44	5.0%	34	5.6%
- Ulcerative colitis	308	46.2%	477	54.0%	336	55.4%
Steroid courses						
Duration, mean (sd)	**13.02***	14.00	**9.90***	9.40	**8.40***	7.10
≤ 8 weeks, n(%)	355	53.3%	573	64.9%	386	63.6%
> 8 weeks, n(%)	311	46.7%	310	35.1%	221	36.4%

* p<0.01, ANOVA ** 78% of budesonide prescriptions were for CD

steroid exposure. The Registry has established an infrastructure capable of serving as a platform for future nationwide prospective steroid audit.

P88 THE IMPACT OF NOD2 DEFICIENCY ON THE GUT MYCOBIOTA IN CROHN'S DISEASE PATIENTS IN REMISSION

[1,2]S Bridge*, [1]A Nelson, [3,4]N Kennedy, [1]J Lodge, [1]H Morgan, [5]S Berry, [6]R Simpkins, [7]M Tremelling, [6]S Nutland, [8]C Probert, [9]M Parkes, [2,10]J Mansfield, [1,2]D Smith, [5,11]G Hold, [4]C Lees, [2]C Stewart, [2,10]C Lamb. *[1]Northumbria University, Newcastle Upon Tyne, UK; [2]Newcastle University, Newcastle upon Tyne, UK; [3]Exeter University, Exeter, UK; [4]Edinburgh University, Edinburgh, UK; [5]Aberdeen University, Aberdeen, UK; [6]Cambridge BioResource, Cambridge, UK; [7]Norfolk and Norwich University Hospital, Norwich, UK; [8]Liverpool University, Liverpool, UK; [9]Addenbrookes Hospital, Cambridge, UK; [10]Royal Victoria Infirmary, Newcastle upon Tyne, UK; [11]University of New South Wales, Sydney, Australia*

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Introduction Crohn's disease (CD) is strongly associated with risk variants in *Nod2* and an imbalanced gut microbiome. Historical and emerging data indicate that gut fungi play an important role in CD pathogenesis, however a causal link between fungi and dysregulated immunity remains obscure. A recent study has shown that NOD2 acts beyond peptidoglycan sensing and is activated via a fungal chitin-dependent pathway to induce anti-inflammatory cytokine responses. Currently it is unknown what impact *Nod2* deficiency may have on the gut mycobiota in CD.

Methods CD patients of known *Nod2* genotype were identified from the UK IBD genetics consortium. Patients in remission were selected if they carried 2 of the common *Nod2* variants (homozygotes or compound heterozygotes). Each *Nod2* mutant patient was matched to a *Nod2* wild-type patient. Participants without CD and of a known *Nod2* genotype were recruited from the Cambridge BioResource. DNA was extracted from stool samples using the DNeasy PowerLyzer PowerSoil kit. The ITS1 region of the eukaryotic ribosomal cluster was amplified and sequenced using the illumina MiSeq. Sequence data was processed using Mothur and reads were assigned taxonomy using the UNITE database (v8). 16S rRNA gene sequences of participants were used from a previous study.[1]

Results 81/109 individuals were included in the analysis (34 CD patients [53% *Nod2* mutant] and 47 non-CD individuals [39% *Nod2* mutant]. No differences were found in α diversity metrics (OTU richness and Shannon diversity) in samples from CD patients *vs.* non-CD or *Nod2* wild type *vs.* mutant individuals. The phylum *Ascomycota* was the most abundant in CD *vs.* non-CD (FDR-Adj. $P = 0.00096$), whereas *Basidiomycota* was the most abundant phylum in non-CD *vs.* CD (FDR-Adj. $P = 0.019$). An inverse relationship was found between bacterial and fungal Shannon diversity metrics in *Nod2* wild type individuals that was independent of CD ($r = -0.349$; $P = 0.029$). Principal coordinates analysis using weighted Bray-Curtis dissimilarities of fungal taxa showed separation in fungal community composition between CD and non-CD individuals ($R^2 = 0.021$; $P = 0.01$; PERMANOVA). The genus *Candida* showed the greatest effect on fungal community composition in CD, whereas in non-CD individuals, the genus *Cryptococcus* exerted the greatest effect on the mycobiota composition.

Conclusions This study confirms previously identified compositional changes in the enteric mycobiota in CD patients. However, no differences were observed in the fungal community when stratified by *Nod2* genotype (wild type *vs.* mutant).

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P89 PATIENT PERCEPTIONS AND CONCERNS REGARDING PREGNANCY AND FERTILITY IN INFLAMMATORY BOWEL DISEASE

[1]Sophie Broad*, [1]Elena-Cristina Andreica*, [1]Sidra Giny*, [2]Michael Colwill, [2]Lucy Medcalf, [2]Guy Chung-Faye, [2]Patrick Dubois, [2]Bu'Hussain Hayee, [2]Alexandra Kent. *[1]King's College London, London, UK; [2]King's College Hospital NHS Trust, London, UK*

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Introduction Voluntary childlessness is recognised in Inflammatory Bowel Disease (IBD) patients, despite fertility being comparable to the general population. This may be due to misconceptions of medication safety and the impact on pregnancy. We aimed to:

1. Identify patients' specific concerns regarding IBD and having children

- Quantify the need for more information
- Determine a preferred information format
- Evaluate patient confidence in different clinicians' knowledge of IBD and pregnancy/fertility

Method A medical student led Quality Improvement Project over 11 consecutive weeks (Oct-Dec 2019). IBD patients attending outpatient clinics completed a self-administered survey, tailored to men (M), parous (P) or nulliparous (NP) women.

Results 156 participants completed the survey: 67 males (=37 yrs, range 17–65) and 89 females (=37 yrs, range 17–66, 43P, 46NP). The disease distribution was Crohn's Disease 36%, Ulcerative Colitis 50%, Indeterminate Colitis 3% and 11% were unsure. The mean disease duration was 109.5 months (5–540 months). 71% felt their disease was in remission.

66.2% felt they did not have enough information regarding the impact of IBD on raising a family, specifically fertility and pregnancy, including 63% of the male patients. 42.3% of